STATE OF CALIFORNIA
DEPARTMENT OF CONSUMER AFFAIRS
BUSINESS, CONSUMER SERVICES, AND HOUSING AGENCY ▪ GAVIN NEWSOM, GOVERNOR
BOARD OF REGISTERED NURSING
PO Box 944210, Sacramento, CA 94244-2100
P (916) 322-3350 | www.rn.ca.gov

BOARD OF REGISTERED NURSING
Advance Practice Registered Nursing
Advisory Committee Meeting

February 20, 2020

AGENDA

Board of Registered Nursing
1625 N. Market Blvd
HQ-1 Hearing Room
1st Floor South, Ste.102
Sacramento, CA 95834
(916) 574-7600

MEMBERS OF THE PUBLIC MAY LISTEN TO THE MEETING BY CALLING: (877) 950-0357. USER ACCESS CODE: 2158678

Thursday, February 20, 2020 11:00am

10.0 Call to Order/Roll Call /Establishment of a Quorum/Approval of Minutes

10.0.1 Vote on Whether to Approve Previous Meeting's Minutes:
- September 26, 2019

10.1 **Discussion and Possible Action**: Title 16 CCR § 1486(c) – Discussion of methods to provide information to out-of-state programs regarding curriculum requirements as related to California-specific content and in-state preceptors required per 16 CCR § 1486(c) and make any recommendations to Board's Nursing Practice Committee.

10.2 **Discussion and Possible Action:** The potential impact of AB 5 (2019) on patient access and safe patient care as related to the practice of Advance Practice Registered Nurses and make any recommendations to Board's Nursing Practice Committee.

10.3 **Discussion and Possible Action:** Role of the APRN Advisory Committee on the implementation and content of the BRN Workforce Survey for all APRNs and whether to recommend to the Nursing Practice Committee to include revisions that address profession specific items.

10.4 **Discussion and Possible Action:** Process to periodically review the Board's current advisories related to Advance Practice Registered Nursing and possible recommendation to Nursing Practice Committee regarding such a process.

10.5 **Discussion and Possible Action:** Develop a standard process to make recommendations regarding potentially urgent items to the Nursing Practice Committee when scheduling an advisory committee meeting is not feasible.

10.6 **Discussion and Possible Action:** Meeting schedule for 2020 calendar year and possible recommendation to Nursing Practice Committee to recommend to the Board allowance for one additional meeting by teleconference.

10.7 **Discussion and Possible Action:** Develop recommendation to Nursing Practice Committee to recommend to the Board a position on AB 890.

10.8 **Public Comment for Items Not on the Agenda; Items for Future Agendas**

10.9 **Adjournment**

NOTICE:

All times are approximate and subject to change. Items may be taken out of order to maintain a quorum, accommodate a speaker, or for convenience. The meeting may be canceled without notice. For verification of the meeting, call Brazil Smith at (916) 574-7600 or access the Board's Web Site at http://www.rn.ca.gov. Action may be taken on any item listed on this agenda, including information only items.

Public comments will be taken on agenda items at the time the item is heard. Total time allocated for public comment may be limited.

The meeting is accessible to the physically disabled. A person who needs a disability-related accommodation or modification in order to participate in the meeting may make a request by contacting the Administration Unit at (916) 574-7600 or email webmasterbrn@dca.ca.gov, or send a written request to the Board of Registered Nursing at 1747 N. Market Blvd., Ste. 150, Sacramento, CA 95834. (Hearing impaired: California Relay Service: TDD phone # (800) 326-2297.) Providing your request at least five (5) business days before the meeting will help to ensure the availability of the requested accommodation. Board members who are not members of this committee may attend meetings as observers only, and may not participate or vote.

BOARD OF REGISTERED NURSING
ADVANCED PRACTICE REGISTERED NURSING
ADVISORY COMMITTEE
MEETING MINUTES

DRAFT

DATE:	September 26, 2019
START TIME:	11:01 a.m.
MAIN LOCATION:	Board of Registered Nursing 1625 N. Market Blvd HQ-1 Hearing Room, Ste. S-102 Sacramento, CA 95834 (916) 574-7600
TELECONFERENCE SITE(S):	Petaluma Community Hospital, Room 269 400 N. McDowell Blvd Petaluma, CA 94954 (707) 778-1111
COMMITTEE MEMBERS:	Mitchel Erickson, NP-Chair Karyn Karp, CRNA-Vice Chair Charlotte Gullap-Moore, NP Garrett Chan, CNS Jane Perlas, NP Sandra Bordi, CRNA Danielle Blum, CNM Elissa Brown, CNS Ruth Rosenblum, NP Hilary Reyes, CNM
STAFF MEMBERS PRESENT:	Janette Wackerly, MBA, BSN, RN, Supervising Nursing Education Consultant-Nursing Practice Liaison
EXECUTIVE OFFICER:	Dr. Joseph Morris, PhD, MSN, RN

10.0 **Call to Order/Roll Call/Establishment of a Quorum**

Mitchel Erickson, NP-Chair, meeting to order at 11:01a.m.
Quorum established.

MEMBERS PRESENT:

Mitchel Erickson, NP-Chair
Karyn Karp, CRNA-Vice Chair- via teleconference
Charlotte Gullap-Moore, NP
Garrett Chan, CNS

Jane Perlas, NP
Sandra Bordi, CRNA
Danielle Blum, CNM
Elissa Brown, CNS- via teleconference
Ruth Rosenblum, NP
Hilary Reyes, CNM

NOT PRESENT: None

10.0.1 **Review and Vote on Whether to Approve Previous Meeting's Minutes:**

- June 27, 2019

MOTION: **Danielle Blum:** Motion to approve previous meeting minutes
SECOND: **Karyn Karp**

VOTE:	**ME:**	**KK:**	**GC:**	**HR:**	**DB:**	**CGM:**	**JP:**	**EB:**	**SB:**	**RR:**
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

PUBLIC COMMENT: **None**

10.1 **Discussion Only:** Present and update to the APRN Advisory Committee regarding any new developments for legal parameters and guidance around requests for a BRN licensee list under the Information Practices Act.

BACKGROUND:

The purpose of this discussion is to provide an update to the APRN Advisory Committee and the Public around the status of administering this type of request for public information.

In the February 7, 2019 Advanced Practice Registered Nurse Committee, there was a request from a public member about getting email addresses along with the names and mailing addresses when purchasing a Licensee List from the Board of Registered Nursing according to the Information Practices Act, Civil Code Section 1798.61 and Business and Professions Code Section 161, that states that the Licensee List is public information.

RESOURCES:

The Business and Professions Code Section 161 states:

The department, or any board in the department, may sell copies of any part of its respective public records, or compilations, extracts, or summaries of information contained in its public records, at a charge sufficient to pay the actual cost thereof. Such charge, and the conditions under which sales may be made, shall be determined by the director with the approval of the Department of General Services.
(Amended by Stats. 1965, Ch. 371.)

The Civil Code Section 1798.61 states:

(a) Nothing in this chapter shall prohibit the release of only names and

addresses of persons possessing licenses to engage in professional occupations.
(b) Nothing in this chapter shall prohibit the release of only names and addresses of persons applying for licenses to engage in professional occupations for the sole purpose of providing those persons with informational materials relating to available professional educational materials or courses.
(Amended by Stats. 2000, Ch. 962, Sec. 1. Effective January 1, 2001.)

PUBLIC COMMENT: **None**

10.2 **Discussion and Possible Action:** Discuss and present a draft letter to be submitted to the BRN Practice Committee seeking BRN support for AB890 which permits nurse practitioners full scope of practice authority in California. The purpose is to ensure BRN support as the bill proceeds and will be shared with Assembly Member Jim Woods if support is secured. This 2-year bill was approved by the Assembly Committee on Business and Professions and currently sits with the Appropriations Committee. The APRN Advisory Committee will vote to approve the letter to the BRN Board.

BACKGROUND: The submission of AB 890 represents the ongoing struggle for APRNs to seek full scope of practice authority in California. This discussion will provide reference around some of the looming concerns around health care professional workforces, access to health care in California, and health delivery solutions.

The attached letters represent the position of the APRN Advisory Committee that seeks BRN Board Support and submission.

MOTION: **Mitchel Erickson, NP-Chair:** Amended motion to accept the draft letter for submission to the NP Committee after revising the language.

SECOND: **Danielle Blum, CNM**

VOTE:

ME:	**KK:**	**GC:**	**HR:**	**DB:**	**CGM:**	**JP:**	**EB:**	**SB:**	**RR:**
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

PUBLIC COMMENT:
Louanne Anderson- Dept. of Mental Health, Los Angeles
Alexis Curtis-CA Association of Nurse Practitioners
Lucita Diaz-Northern Health Services Poverty Medical Center
Jane (No last name provided)
Marcy-CUSC

10.3 **Discussion and Possible Action:** Following a discussion at the June 27th, 2019 meeting it was recommended to draft revised language to the current statement on the BRN website and update the resources for First Assisting. The revisions take into consideration options for health-system based training and competency versus the option of utilizing formal certification agency in standardizing core competency. Make a recommendation to the BRN Practice Committee and vote to adopt the language revision and updated resources to be presented at their next meeting.

BACKGROUND:	**Revision language:** AORN Standards for APRN/RN First Assistant are the basis for most first assist certification curricula. The purpose of this policy statement is to provide guidelines to health systems and nursing professionals around the acquisition of the core competencies in the role of first assistant (such as: aseptic technique, retraction and cutting tissue, hemostasis, suturing and other wound management, and other surgical tasks). Acquisition of the core competencies in the role of first assistant would occur through health system training or formal certification. The first assistant may provide other advanced assistance, such as mobilization of tissue, patient positioning and directing other surgical team members with specific individual tasks. The first assistant functions intraoperatively in a coordinated manner with the surgeon while using instruments and medical devices. The first assistant must have acquired the specific knowledge, skills and judgment to perform this role. To perform these functions, considered to be first assistant to the surgeon, the RN/APRN must adhere to the privilege outlined in their standardized procedures. The first assistant may not perform the functions of the scrub or circulating nurse while functioning as the surgical first assistant. Resources are identified below for RN and APRN professionals seeking certification or for health systems wanting to develop their own internal core competencies. **RESOURCES:** **Current BRN Language** **https://www.rn.ca.gov/pdfs/regulations/npr-b-18.pdf** **Resources:** **Association of periOperative Registered Nurses, AORN Standards and Recommended Practices:** https://www.aorn.org/ **AORN Course Curriculum:** https://www.aorn.org/education/facility-solutions/periop-101/course-outcomes#OR **National Institute of First Assisting (NIFA)** http://www.nifa.com/index_current.html **AORN - APRNs in the Perioperative Environment** https://www.aorn.org/-/media/aorn/guidelines/position-statements/posstat-rnfa-advanced-practice-rn.pdf **AORN – RN First Assistants** https://www.aorn.org/-/media/aorn/guidelines/position-statements/aorn_position_statement_rnfa.pdf
MOTION:	**Danielle Blum:** Motion to recommend to keep current language and guidance without the proposed revisions.
SECOND:	**Hilary Reyes**
VOTE:	**ME: KK: GC: HR: DB: CGM: JP: EB: SB: RR:**

N Y Y Y Y Y Y Y Y Y

PUBLIC COMMENT: **Holly Smith-** CA Nurse-Midwife Association

10.4 **Discussion Only:** Present current status of the framework for an updated BRN workforce survey of all APRNs (NPs, CNSs, CRNAs, CNMs) that is more comprehensive than the 2017 NP/CNM Survey. APRN Advisory Committee requests oversight of survey content development. There will be a coordination of effort with other health care professionals not licensed by the BRN but will be a coordination of effort with other health care professionals not licensed by the BRN but will not be included in the BRN Survey. The purpose is to collect demographic as will as clinical site information and outcome metrics as possible. It would act as a partner document of the California Future Workforce Commission Report. The APRN Advisory Committee would like to participate in the survey question content and administration with the vendor.

BACKGROUND: **RESOURCES:**

Current BRN Language
https://www.rn.ca.gov/pdfs/regulations/npr-b-18.pdf

Resources:
Association of periOperative Registered Nurses, AORN Standards and Recommended Practices:
https://www.aorn.org/
AORN Course Curriculum:
https://www.aorn.org/education/facility-solutions/periop-101/course-outcomes#OR
National Institute of First Assisting (NIFA)
http://www.nifa.com/index_current.html
AORN - APRNs in the Perioperative Environment
https://www.aorn.org/-/media/aorn/guidelines/position-statements/posstat-rnfa-advanced-practice-rn.pdf
AORN – RN First Assistants
https://www.aorn.org/-/media/aorn/guidelines/position-statements/aorn_position_statement_rnfa.pdf

PUBLIC COMMENT: **None**

10.5 **Discussion Only:** Request that the Executive Officer of the BRN initiate a conversation with the Executive Director of the Department of Health and Human Services regarding language amendment to Title 22 of the California Code of Regulations (22 CCR Section 70703 (a) Organized Medical Staff that limits the inclusion, per interpretation of “Medical Staff” which currently clearly states that medical staff are restricted to physicians and surgeons and where appropriate, dentists, podiatrists, and clinical psychologists. APRNs as part of the medical staff of health systems and are required to meet the details of the Bylaws of Medical Staff but have no

voice or vote. This restriction is not consistent with other states in the US where APPs are voting members. Title 22 section also is inconsistent with the less restrictive B & P language.

BACKGROUND:

RESOURCES:

Title 22 of the California Code of Regulations (22 CCR Section 70703 (a) Organized Medical Staff
https://govt.westlaw.com/calregs/Document/IE030AF205F7A11DFBF84F211BF18441D?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1

22CCR Section 70706 Interdisciplinary Practice and Responsibility for Patient Care outlines the requirement for an Interdisciplinary Practice Committee to credential and privilege RNs who are functioning in APRN roles.
https://govt.westlaw.com/calregs/Document/IE0BF0C705F7A11DFBF84F211BF18441D?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)

22 CCR Section 70706.1 Granting of Nonphysician Privileges outlines the responsibility for IDP committees regarding RNs and PAs.
(https://govt.westlaw.com/calregs/Document/IAB1281B0941F11E29091E6B951DDF6CE?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1.
Section 2282 of the Business and Professions Code is amended to read:
2282. The regular practice of medicine in a licensed general or specialized hospital having five or more physicians and surgeons on the medical staff, which does not have rules established by the board of directors thereof of the hospital to govern the operation of the hospital, which rules include, among other provisions, all the following, constitutes unprofessional conduct:
(a) Provision for the organization of physicians and surgeons licensed to practice in this state who are permitted to practice in the hospital into a formal medical staff with appropriate officers and bylaws and with staff appointments on an annual or biennial basis.
(b) Provision that membership on the medical staff shall be restricted to physicians and surgeons and other licensed practitioners competent in their respective fields and worthy in professional ethics. In this respect, the division of profits from professional fees in any manner shall be prohibited and any such division shall be cause for exclusion from the staff.

PUBLIC COMMENT:

Holly Smith- CA Nurse-Midwife Association

10.6	**Discussion and Possible Action:** Review the 2020 Practice Committee and BRN Board Meeting dates and times and coordinate the APRN Advisory Committee Meeting dates and times accordingly. In 2020 there are 5 BRN committee meetings that will meet in Jan/Mar/May/August/October.
BACKGROUND:	The APRN Advisory Committee needs to establish a meeting schedule for the remainder of 2019 and 2020 to enhance agenda planning and opportunity for public attendance and input. The current mandate of 3 meetings per calendar year is too restrictive and Advisory Committee seeks approval from the BRN Board via the Practice Committee to create greater flexibility by approving Option 1): 4 quarterly in person meetings per year and 2 optional teleconference meetings TBA or Option 2) 3 in person meetings per year and 3 optional teleconference meetings TBA. **RESOURCES:** APRN Advisory Committee will establish the dates for 2020 which was originally based on the availability of BRN funding support for a 3 in person meeting per year schedule and available meeting room. We are proposing a change to quarterly and option for 2 teleconference meetings per year based on APRN Advisory Committee request or option of 3 meetings and 3 teleconference meetings per request. BRN Board and Committee Meeting Schedule for 2020 https://www.rn.ca.gov/pdfs/meetings/2020meetings.pdf
MOTION:	**Mitch Erickson**-Motion to maintain the three (3) existing in-person meeting schedule with the option to one (1) additional teleconference meeting.
SECOND:	**Elissa Brown**

VOTE:	**ME:**	**KK:**	**GC:**	**HR:**	**DB:**	**CGM:**	**JP:**	**EB:**	**SB:**	**RR:**
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

PUBLIC COMMENT:	**None**
10.7	**Public Comment for Items Not on the Agenda**
PUBLIC COMMENT:	**Lucita Diaz**-Northern Health Services Poverty Medical Center
10.8	**ADJOURNMENT** ➢ **Adjournment at 1:36pm**

Submitted by:	**Signature:**	**Date:**
_____	_____	_____
Approved by:	**Signature:**	**Date:**
_____	_____	_____

BOARD OF REGISTERED NURSING
Nursing Practice Committee
Agenda Item Summary

AGENDA ITEM: 10.1
DATE: February 20, 2020

ACTION REQUESTED: **Discussion Only**: Title 16 CCR § 1486(c) – This agenda item seeks to discuss best ways to provide information to out-of-state programs regarding curriculum requirements as related to California-specific content required per regulation and in-state preceptors.

REQUESTED BY: Garrett Chan

BACKGROUND: Examples of curriculum requirements needing clarification to out-of-state programs and how to implement in a curriculum structure.

1486. Requirements for Clinical Practice Experience for Nurse Practitioner Students Enrolled in Non-California based Nurse Practitioner Education Programs.
(e) Clinical preceptor functions and responsibilities shall be clearly documented in a written agreement between the agency, the preceptor, and the nurse practitioner education program including the clinical preceptor's role to teach, supervise and evaluate students in the nurse practitioner education program.

1486. Requirements for Clinical Practice Experience for Nurse Practitioner Students Enrolled in Non-California based Nurse Practitioner Education Programs.
(c) The nurse practitioner education program shall demonstrate evidence that the curriculum includes content related to legal aspects of California certified nurse practitioner laws and regulations.
(1) The curriculum shall include content related to California Nursing Practice Act, Business & Professions Code, Division 2, Chapter 6, Article 8, "Nurse Practitioners" and California Code of Regulations Title 16, Division 14, Article 7, "Standardized Procedure Guidelines" and Article 8, "Standards for Nurse Practitioners", including, but not limited to:
(A) Section 2835.7 of Business & Professions Code, "Additional authorized acts; implementation of standardized procedures";
(B) Section 2836.1 of Business & Professions Code, "Furnishing or ordering of drugs or devices".
(d) The nurse practitioner education program shall notify the board of pertinent changes within 30 days.
(e) The board may withdraw authorization for program clinical placements in California, at any time.
Note: Authority cited: Section 2715, Business and Professions Code. Reference: Sections 2729, 2835, 2835.5 and 2836, Business and Professions Code.

RESOURCES:
Board

NEXT STEPS:

FISCAL IMPACT, IF ANY: None

PERSON(S) TO CONTACT:
Janette Wackerly, MBA, BSN, RN
Supervising Nursing Education Consultant
Phone: 916-574-7686
Email: janette.wackerly@dca.ca.gov

BOARD OF REGISTERED NURSING
Nursing Practice Committee
Agenda Item Summary

AGENDA ITEM: 10.2
DATE: February 20, 2020

ACTION REQUESTED: **Discussion and Possible Action:** The APRN Advisory Committee will discuss the potential impact on patient access and safe patient care of Assembly Bill 5 (Gonzalez) as related to the practice of Advance Practice Registered Nurses.

REQUESTED BY: Karyn Karp, CRNA

BACKGROUND:

The passage of AB 5 (2019, Gonzalez) has had a significant and negative impact on patient access and safe patient care. The APRN Advisory Committee will discuss the impact of AB 5 on APRNs and patients/families.

RESOURCES: Board

NEXT STEPS:

FISCAL IMPACT, IF ANY: None

PERSON(S) TO CONTACT:
Janette Wackerly, MBA, BSN, RN
Supervising Nursing Education Consultant
Phone: 916-574-7686
Email: janette.wackerly@dca.ca.gov

BOARD OF REGISTERED NURSING
Nursing Practice Committee
Agenda Item Summary

AGENDA ITEM: 10.3
DATE: February 20, 2020

ACTION REQUESTED: **Discussion and Possible Action:** The APRN Advisory Committee will discuss the role of the APRN Advisory Committee on the implementation and content of the BRN Workforce Survey for all APRNs and whether to include revisions that address unique profession specific items such as those relating to CRNAs.

REQUESTED BY: Sandra Bordi, CRNA

BACKGROUND: The content in the 2017 Survey of Nurse Practitioners and Certified Nurse Midwives (BRN Workforce Survey) requires revision to include CNSs and CRNAs. This would provide a more accurate picture of the APRN availability and healthcare professional workforce in California. The workforce survey needs to be reviewed by appointed APRNs (NP, CNS, CNM, and CRNA) by the APRN Advisory Committee to ensure inclusiveness and accuracy amongst the APRN subspecialties, that will inevitably better support California's healthcare needs of its residents.

RESOURCES: BRN Workforce Survey Results: (attachment)
https://www.rn.ca.gov/pdfs/forms/survey2017npcnm-final.pdf
BRN Workforce Survey: (attachment)

NEXT STEPS: Request the Practice Committee to send out request for proposals to the BRN Board for vendor(s); request that the APRN Advisory Committee, that is providing oversight of the survey content, to include at least 1 member of each subspecialty to evaluate accuracy of survey items in regard to scope of practice.

FISCAL IMPACT, IF ANY: If approved the BRN will need to appropriate the funds for the cost of the survey design, distribution, and data analysis.

PERSON(S) TO CONTACT:
Janette Wackerly, MBA, BSN, RN
Supervising Nursing Education Consultant
Phone: 916-574-7686
Email: janette.wackerly@dca.ca.gov

2017 Survey of Nurse Practitioners and Certified Nurse Midwives

by Joanne Spetz, Lisel Blash, Matthew Jura, and Lela Chu

Philip R. Lee Institute for Health Policy Studies

& Healthforce Center at UCSF

April 11, 2018

Abstract

This study of Nurse Practitioners (NPs) and Certified Nurse Midwives (CNMs) with California licenses is the second survey of these nurses conducted by the California Board of Registered Nursing. The first survey was conducted in 2010 to understand the roles NPs and CNMs play in the delivery of health care and assess their potential to meet the health care needs of Californians in the future, and the 2017 survey provides new data and information about NPs' and CNMs' education, demographics, and employment.

To obtain a copy please contact:
California Board of Registered Nursing
1625 North Market Blvd, Suite N217
Sacramento, CA 95834-1924
(916) 322-3350

The report is also available on the Board's website: www.rn.ca.gov

Acknowledgements

This study was conducted for the California Board of Registered Nursing. Amy Shinoki and Betty Lew provided valuable assistance. The authors thank Lena Libatique, Ginachukwu Amah, and Jackie Miller for their review of earlier drafts of this report.

Contents

Table of Tables

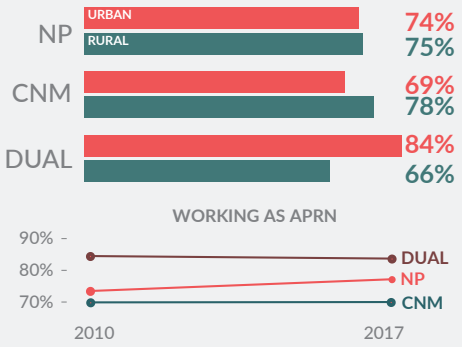
Table of Figures

NURSE PRACTITIONERS AND CERTIFIED NURSE-MIDWIVES
in California

ABOUT THIS SURVEY

This study of California nurse practitioners (NPs) and certified nurse-midwives (CNMs) was conducted in early 2017. In November 2016, there were 20,337 NPs living in California, of whom 569 also were CNMs ("dual certified"). Another 582 people had CNM-only certification. Surveys were mailed to 2,500 NPs and CNMs, and the response rate was 64% of the eligible population, producing data from 1,588 NPs and CNMs. All analyses were weighted to ensure the results represent the total population of NPs and CNMs with California licenses.

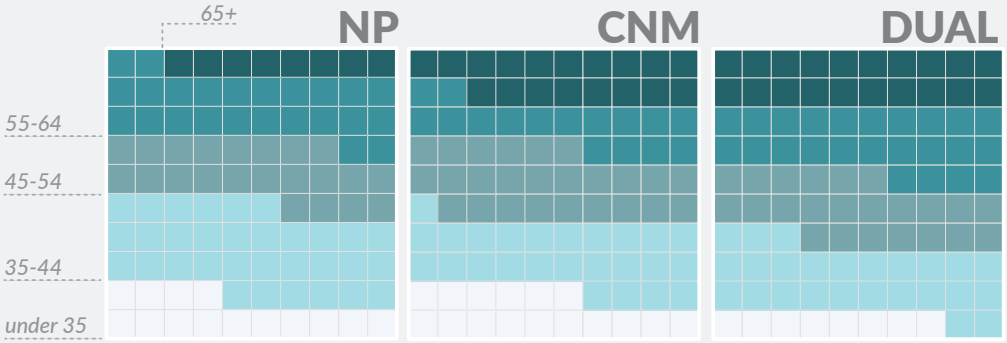
EMPLOYMENT RATES

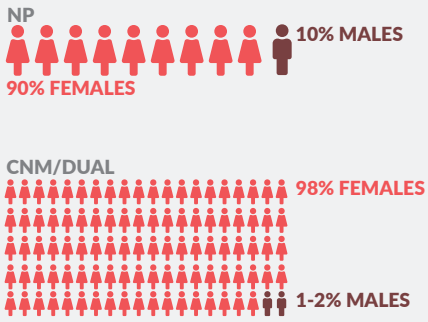


35 HOURS PER WEEK
ON AVERAGE IN 2010-2017

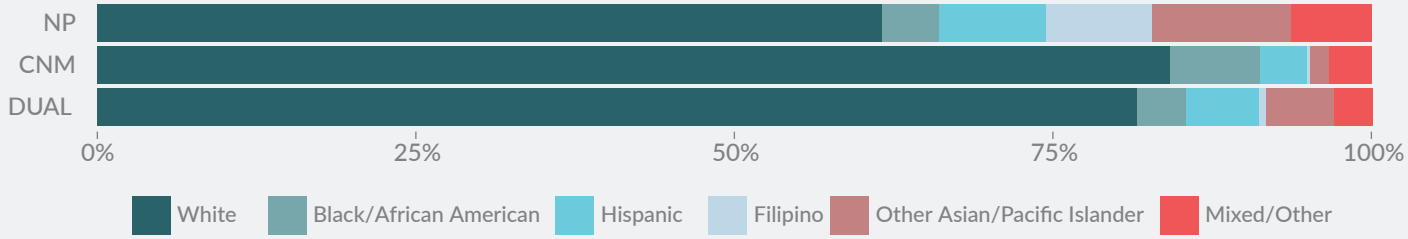
The complete report is available at:
http://www.rn.ca.gov/forms/reports.shtml

AGE AND GENDER COMPOSITION



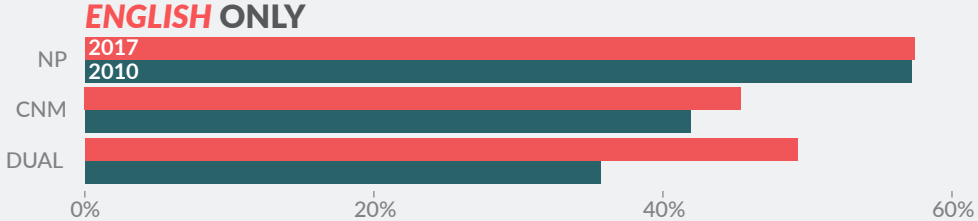


RACE AND ETHNICITY COMPOSITION



LANGUAGES SPOKEN

ENGLISH ONLY



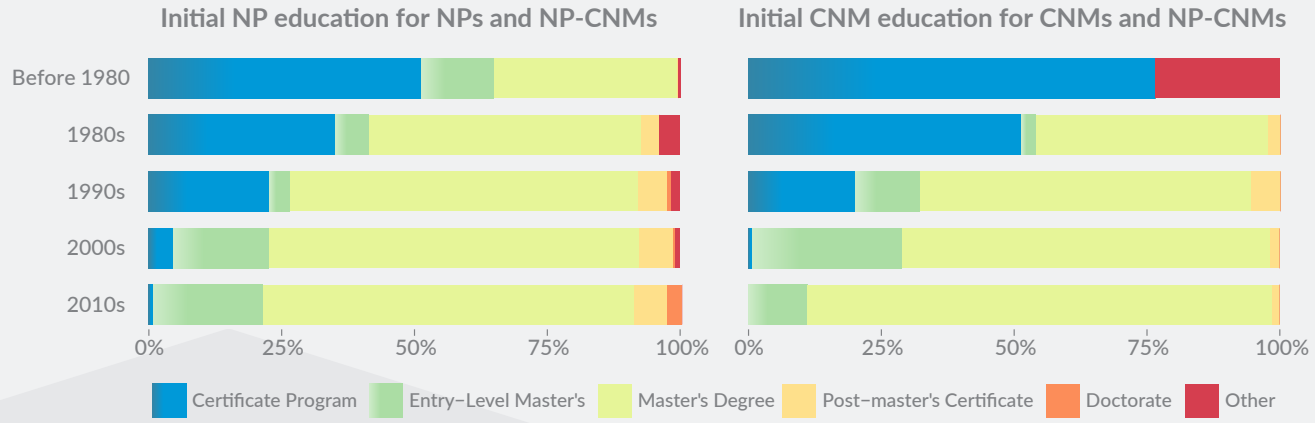
FOREIGN LANGUAGES

	NP	CNM	DUAL
Spanish	62.0%	92.7%	90.4%
Korean	3.6%	–	–
Vietnamese	3.1%	–	3.8%
Tagalog/Other Filipino Dialect	12.6%	–	–
French	0.7%	6.9%	6.5%
Hindi/Urdu/Punjabi	4.7%	1.4%	–
Mandarin	5.3%	1.4%	–
Cantonese	2.6%	1.4%	–
Other Chinese dialect	1.4%	1.4%	–
German	1.0%	2.8%	2.5%
Other	14.8%	9.5%	9.0%

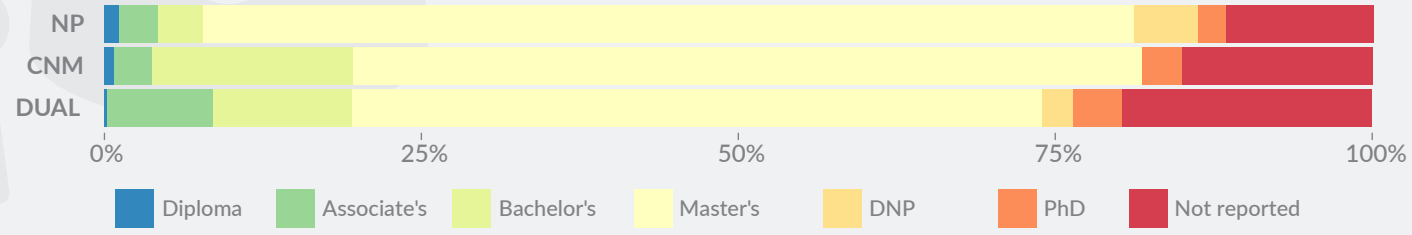
NURSE PRACTITIONERS AND CERTIFIED NURSE-MIDWIVES *in California*

EDUCATION

INITIAL *EDUCATION*



HIGHEST *NURSING EDUCATION*



FIELD OF *EDUCATIONAL SPECIALIZATION*

FIELD OF SPECIALIZATION	NP	CNM	DUAL
Family / individual	62.8%	18.0%	22.8%
Adult primary care	24.6%	20.6%	13.0%
Geriatric primary care	13.6%	2.4%	2.0%
Pediatric primary care	16.2%	3.7%	5.4%
Women's health / gender-related	15.8%	94.4%	92.7%
Neonatology	1.0%	12.9%	4.1%
Psychiatric / mental health	7.8%	4.1%	5.5%
Acute care – adult / geriatric	9.7%	5.4%	4.2%
Acute care – pediatric	2.9%	2.4%	1.9%
Perinatal	1.8%	53.1%	30.3%
Occupational health	3.0%	–	–
Oncology	2.1%	1.2%	–
Palliative care / hospice	2.2%	–	0.5%
Midwifery	0.3%	98.9%	95.6%
Other	5.1%	3.9%	1.0%

NURSE PRACTITIONERS AND CERTIFIED NURSE-MIDWIVES
in California

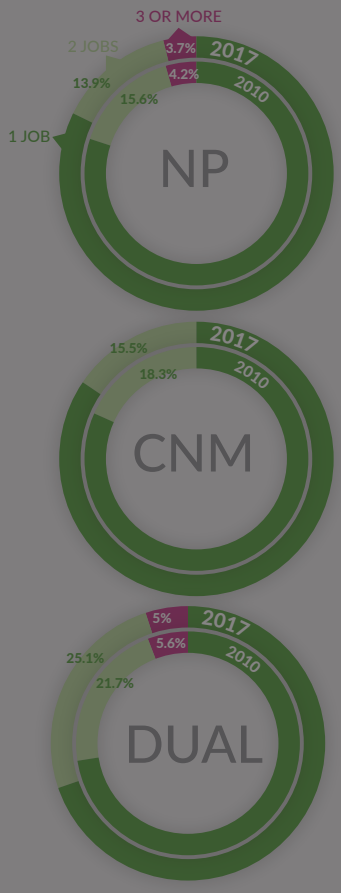
JOB TITLES
WORK SETTINGS

APRN *JOB TITLES*

	NP		CNM		DUAL	
	2010	2017	2010	2017	2010	2017
Nurse Practitioner	89.8%	94.8%	0.6%	–	30.0%	20.1%
Nurse-Midwife	0.1%	0.0%	92.6%	96.4%	65.8%	74.1%
Management / Administration	0.2%	1.9%	1.8%	1.9%	–	–
Faculty in NP education program	2.1%	1.9%	3.3%	–	2.1%	1.0%
Faculty in CNM education program	0.5%	–	–	–	–	–
Faculty in RN education program	0.2%	0.1%	0.0%	0.3%	0.6%	1.0%
Other	7.1%	1.3%	1.7%	–	1.5%	1.8%

APRN *WORK SETTING*

NUMBER OF JOBS HELD BY NPS AND CNMS

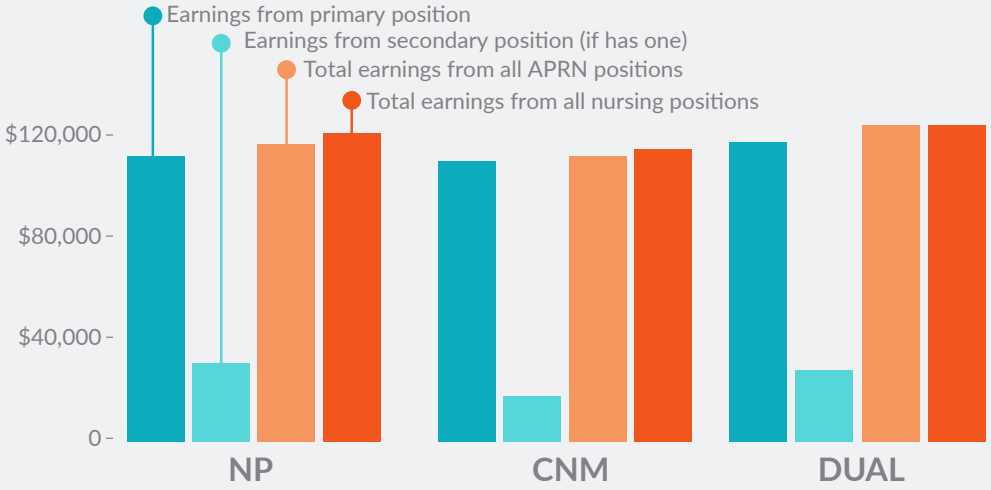


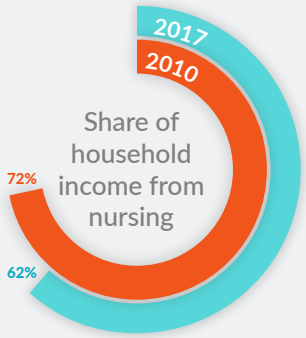
	NP CALIFORNIA 2017	NP NATIONAL 2012	CNM CALIFORNIA 2017
Ambulatory Setting	**61.1%**	**56.7%**	**48.9%**
Private physician-led practice	24.7%	31.6%	12.3%
HMO-based practice	9.5%	1.1%	9.5%
NP/CNM-led health clinic	1.8%	0.6%	1.6%
Private NP office/practice	–	4.1%	–
Community Health Center/FQHC	11.4%	10.7%	12.2%
VA health center (outpatient)	1.1%	–	5.0%
Public Health clinic	1.0%	–	–
Family Planning Center	1.7%	–	1.5%
Rural Health Center	2.5%	1.%	–
Retail based clinic	1.3%	2.2%	–
Urgent Care	1.0%	1.8%	–
College health service	1.4%	2.2%	–
School-based health center	2.3%	–	–
Home birth	0.2%	–	1.2%
Ambulatory surgery center	–	0.5%	
Other type of ambulatory care clinic	1.2%	0.8%	0.8%
Freestanding birthing center	–	–	1.8%
Alternative birth sites	–	–	3.0%
Hospital Setting	**25.7%**	**31.6%**	**40.2%**
Hospital, acute/critical care	10.5%	13.4%	1.4%
Hospital, outpatient services	10.6%	10.8%	1.4%
Hospital, emergency room/urgent care	4.2%	3.0%	0.5%
Hospital, labor and delivery	0.2%	4.4%	36.9%
Hospital, other type of department	0.2%	–	11.3%
Long-Term and Elder Care	**2.6%**	**4.7%**	
Extended care/long term facility	1.0%	3.4%	–
Hospice/Palliative care	0.8%	0.6%	–
Home Health agency	0.8%	0.7%	–
Other Type of Setting	**10.6%**	**7.1%**	
Public Health Department	0.8%	1.3%	–
Correctional system	1.9%	0.8%	–
Academic education program	1.8%	3.1%	–
Occupational/Employee health center	1.2%	1.1%	–
HMO/Managed care company	1.3%	0.8%	–
Mental Health Facility	1.0%	–	–
Other	2.6%	2.6%	–

NURSE PRACTITIONERS AND CERTIFIED NURSE-MIDWIVES *in California*

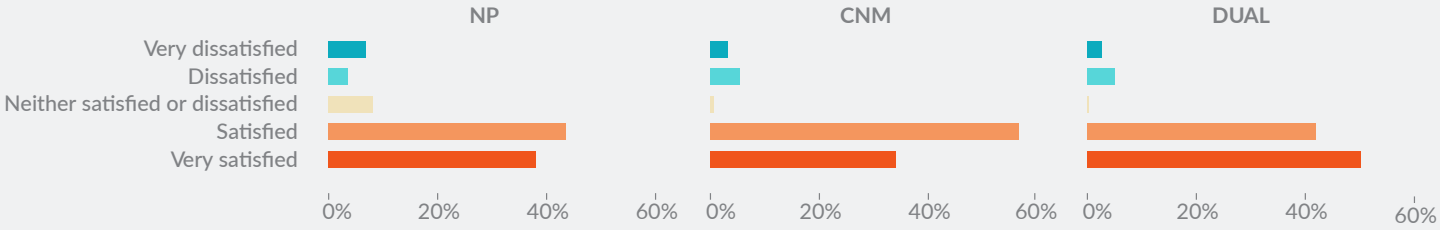
JOB SATISFACTION FUTURE PLANS

EARNINGS BY *NURSING PRACTICE*

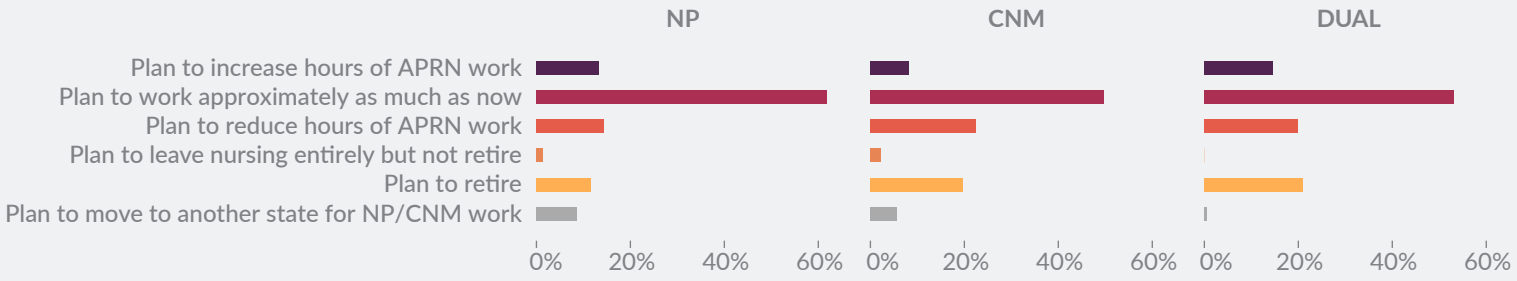




CAREER *SATISFACTION*



EMPLOYMENT PLANS *IN 5 YEARS*

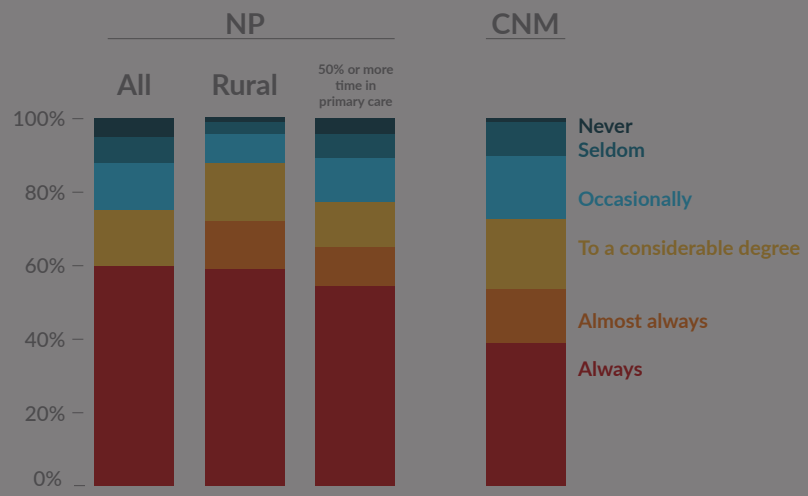


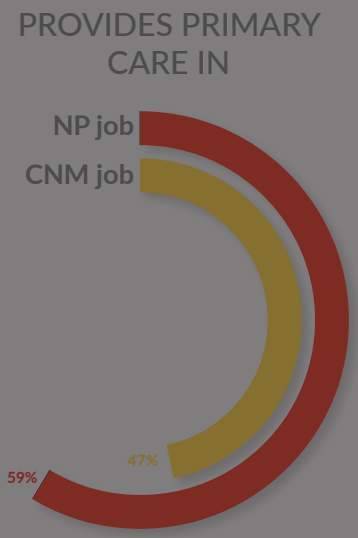
Plans for next five years	<35 years	35-44 years	45-54 years	55-64 years	65+ years
Plan to increase hours of APRN work	18.2%	15.7%	17.1%	7.2%	3.4%
Plan to work approximately as much as now	60.7%	68.3%	66.8%	57.2%	31.7%
Plan to reduce hours of APRN work	18.3%	13.0%	13.1%	14.7%	20.2%
Plan to leave nursing entirely but not retire	4.1%	1.2%	0.3%	1.5%	<0.1%
Plan to retire	0.1%	–	3.8%	28.1%	54.8%
Plan to move to another state for NP/CNM work	12.5%	10.1%	8.0%	6.5%	0.9%

NURSE PRACTITIONERS AND CERTIFIED NURSE-MIDWIVES

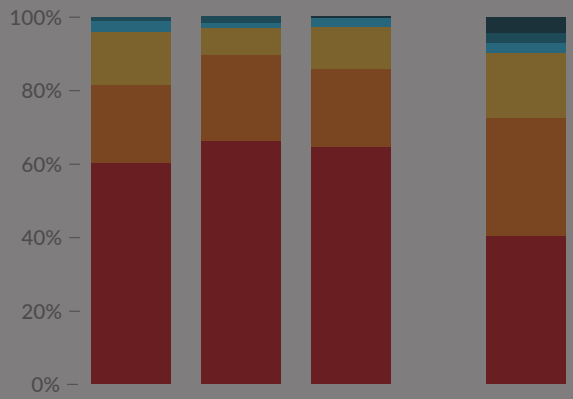
in California

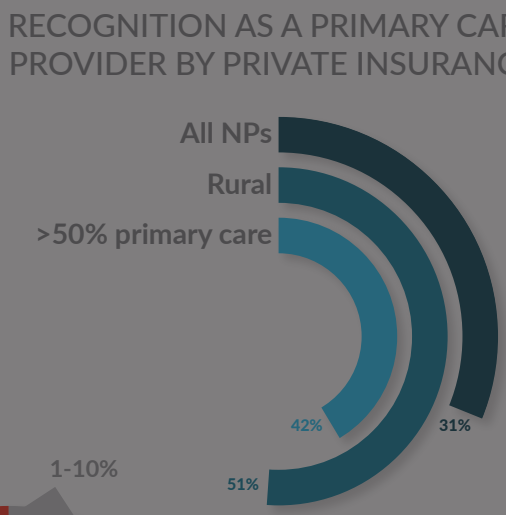
EXTENT OF WORK WITH *UNDERSERVED POPULATIONS*

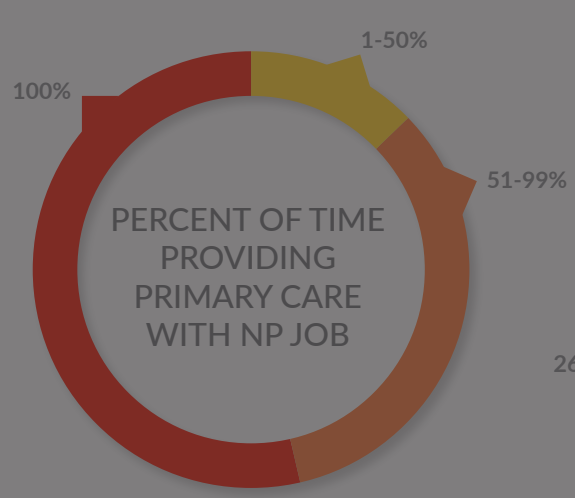


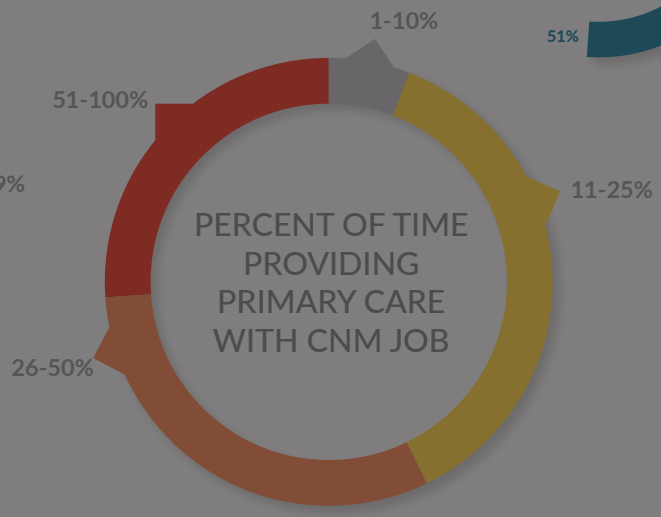


PRACTICE TO *FULL EXTENT OF LEGAL SCOPE*





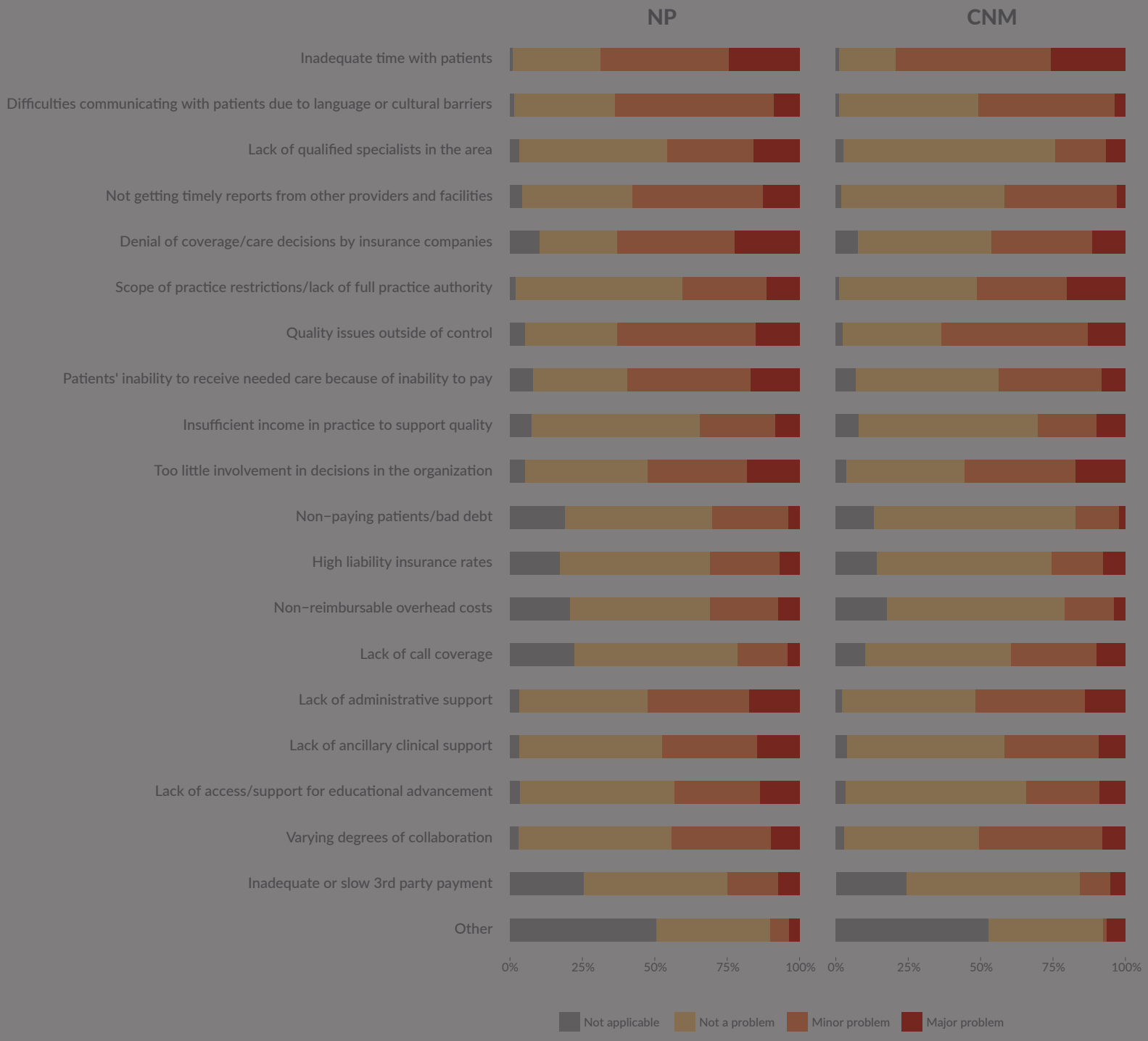




NURSE PRACTITIONERS AND CERTIFIED NURSE-MIDWIVES
in California

QUALITY OF CARE

BARRIERS TO *HIGH QUALITY CARE*



Chapter 1: Introduction and Methodology

This study of Nurse Practitioners (NPs) and Certified Nurse Midwives (CNMs) with California licenses is the second survey of these nurses conducted by the California Board of Registered Nursing. The first survey was conducted in 2010 to understand the roles NPs and CNMs play in the delivery of health care and assess their potential to meet the health care needs of Californians in the future, and the 2017 survey provides new data and information about changes since 2010.

NPs and CNMs are nurses who have received education beyond their initial registered nurse (RN) education to work in a specialized role in the delivery of health care services. NPs are prepared to provide care in a variety of settings and for many types of patients, although most focus on primary care in ambulatory settings. CNMs focus on maternal and women's health care, and about half of CNMs also have an NP license. NPs and CNMs are two of the four types of advanced practice registered nurses (APRNs) in the United States; the others are certified registered nurse anesthetists (CRNAs) and clinical nurse specialists (CNSs).

After completing an approved education program and, in some cases, national certification, an RN can apply for certification from the State of California Board of Registered Nursing to practice as an NP or CNM. As with RN licensure, each state establishes its own criteria for licensure or certification of APRNs.

Purpose and Objectives of the Survey

The purpose of the 2017 Survey of Nurse Practitioners and Certified Nurse Midwives was to collect and evaluate nursing workforce data to understand their demographics, education, and employment. In 2010, NPs and CNMs who also held certificates as Clinical Nurse Specialists (CNSs) or Certified Registered Nurse Anesthetists (CRNAs) were excluded from the survey; in 2017 these NPs and CNMs were included. Questions about perceptions of the work environment, scope of practice, satisfaction with advanced practice, reasons for not working in advanced practice, and plans for future employment are included in the surveys. The survey questions were based on the 2010 BRN survey of NPs and CNMs[1] and the 2012 National Sample Survey of Nurse Practitioners conducted by the U.S. Bureau of Health Workforce.[2] The questionnaire included a space for respondents to provide comments or share observations with the Board of Registered Nursing. These narrative comments are analyzed in Chapter 8 of this report.

Survey Development

UCSF worked with the BRN to develop the survey questionnaire for 2017. The survey development process was:

- A review of the 2010 BRN Survey of NPs and CNMs;
- A review of the National Sample Survey of Nurse Practitioners, 2012, conducted by the United States Bureau of Health Workforce;
- Collaboration with staff at the BRN to identify current issues and draft the survey questionnaire;
- A review of draft questions by the BRN staff, UCSF staff, and other experts;
- Revision of the surveys based on feedback from BRN and UCSF staff, and other experts;
- Development of formatted survey instruments;
- Cognitive testing of the survey instruments by NPs and CNMs recruited by UCSF;

[1] Spetz, J, Keane, D, Herrera, C, Chu, L. 2010 Survey of Nurse Practitioners and Certified Nurse Midwives. Sacramento, CA: California Board of Registered Nursing, December 2011.

[2] U.S. Bureau of Health Workforce, Health Resources and Services Administration. Highlights from the 2012 National Sample Survey of Nurse Practitioners. Rockville, MD: U.S. Department of Health and Human Services, 2014.

- Development of the web-based surveys;
- Testing of the web-based surveys by staff at the BRN and UCSF;
- Formatting the surveys for printing; and
- Editing the surveys for an online format.

Survey Sample, Distribution, and Response

The NP and CNM survey was sent to 2,500 NPs and CNMs with addresses in California. The Board of Registered Nursing created a file of NPs and CNMs on November 29, 2016, and delivered this file to UCSF. The data fields in the file included name, mailing address, email address, birth date, date of licensure in California, date of last renewal, and license status. There were 569 people certified by the BRN as both an NP and a CNM in November 2016, 582 certified as a CNM only, and 19,768 certified as an NP only.

We divided the sample into groups based on certification type (CNM only, NP only, and dual), rural/urban category, and age group. The rural/urban categories were based on Rural-Urban Commuting Areas, which classify U.S. census tracts using measures of population density, urbanization, and daily commuting.[3] There are 10 general categories of RUCAs, some of which have sub-categories. We grouped these into 5 categories following prior work by Spetz, Skillman, and Andrilla (2017):[4]

- Large urban area
- Urban commuter area
- Large rural area
- Small rural area
- Isolated small rural area

We grouped CNMs and NPs into 5 age groups: under 35 years, 35-44 years, 45-54 years, 55-64 years, and 65 years and older. Table 1.1 summarizes the population of NPs and CNMs with California addresses, within these groupings. The vast majority of NPs and CNMs live in large urban areas. In order to describe the population of NPs and CNMs residing in rural areas, we oversampled these areas. We also oversampled nurses in younger age groups, because younger nurses are less likely to respond to BRN surveys as has been found in prior biennial Surveys of California Registered Nurses. Table 1.2 describes the sample of NPs and CNMs selected for the survey.

All NPs and CNMs selected for the surveys who had email addresses in the BRN database were emailed a cover letter and invitation to participate in the survey via a unique web link. Emails were sent on December 20, 2016, and reminders were automatically sent to non-respondents. Approximately 550 of those sampled did not have a valid email address. By January 4, 2017, there were 630 responses to the survey, and 12 people stated that they declined to participate.

Paper versions of the survey were mailed to 1,858 NPs and CNMs on January 24, 2017. All mailings were sent by first-class mail. The surveys included a cover letter from the Board of Registered Nursing, which included information about how to complete the survey online, the survey, and a postage-paid return envelope. Outgoing surveys were coded with a tracking number and completed surveys, along with uncertified and undeliverable cases, were logged into a response status file. The status file permitted close monitoring of the response rate. The web version of the survey was monitored as well. A reminder postcard was sent to all nurses selected for the survey on February 14, 2017, and the questionnaire was

[3] U.S. Department of Agriculture, Economic Research Service. Documentation: 2010 Rural-Urban Commuting Area (RUCA) Codes. https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/documentation/. Washington, DC: U.S. Department of Agriculture, 2016.

[4] Spetz, J, Skillman, SM, Andrilla, CH. Nurse Practitioner Autonomy and Satisfaction in Rural Settings. Medical Care Research and Review, 2017, 74 (2): 227-235. (Online January 29, 2016).

remailed on March 7, 2017 to non-respondents. Reminder postcards were sent on March 21 and March 31, 2017 to nonrespondents. Data collection ended on May 15, 2017.

Table 1.1. Population of Nurse Practitioners and Certified Nurse-Midwives with California Addresses, November 2016

	under 35 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65+ yrs	Total
Nurse Practitioners (not dual-certified)						
Large Urban	3,091	4,791	4,053	4,586	2,344	18,865
Urban Commuter	33	52	78	161	112	436
Large Rural	15	44	61	117	72	309
Small Rural	3	10	21	26	22	82
Isolated Small Rural	2	12	15	29	18	76
Total	**3,144**	**4,909**	**4,228**	**4,919**	**2,568**	**19,768**
Certified Nurse-Midwives (not dual-certified)						
Large Urban	62	116	119	157	87	541
Urban Commuter	2	2	2	7	5	18
Large Rural	1	4	0	6	4	15
Small Rural	0	1	1	0	2	4
Isolated Small Rural	0	2	1	1	0	4
Total	**65**	**125**	**123**	**171**	**98**	**582**
Dual-Certified NP-CNMs						
Large Urban	50	114	115	166	87	532
Urban Commuter	1	2	0	6	6	15
Large Rural	1	2	1	5	2	11
Small Rural	0	0	0	1	3	4
Isolated Small Rural	0	2	0	2	3	7
Total	**52**	**120**	**115**	**180**	**101**	**569**

Table 1.2. Sample of Nurse Practitioners and Certified Nurse-Midwives for 2017 Survey

	under 35 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65+ yrs	Total
Nurse Practitioners (not dual-certified)						
Large Urban	250	372	300	280	200	1,402
Urban Commuter	33	40	55	62	40	230
Large Rural	15	35	57	65	40	212
Small Rural	3	10	21	26	22	82
Isolated Small Rural	2	12	15	29	18	76
Total	**303**	**469**	**448**	**462**	**320**	**2,002**
Certified Nurse-Midwives (not dual-certified)						
Large Urban	40	42	42	45	40	209
Urban Commuter	2	2	2	7	5	18
Large Rural	1	4	0	6	4	15
Small Rural	0	1	1	0	2	4
Isolated Small Rural	0	2	1	1	0	4
Total	**43**	**51**	**46**	**59**	**51**	**250**
Dual-Certified NP-CNMs						
Large Urban	40	43	43	45	40	211
Urban Commuter	1	2	0	6	6	15
Large Rural	1	2	1	5	2	11
Small Rural	0	0	0	1	3	4
Isolated Small Rural	0	2	0	2	3	7
Total	**42**	**49**	**46**	**59**	**54**	**248**

Data from the web-based surveys were automatically entered into a database. All paper surveys were entered into a database by Office Remedies Inc., except the narrative comments, which were entered at UCSF. The paper data were entered twice, by two different people at two different times. The two entries for each survey respondent were compared, differences were checked against the paper survey, and corrections were made accordingly. After the comparisons were complete, discrepancies corrected, and

duplicate records deleted, the data were checked again by another computer program to ensure only valid codes were entered and logical checks on the data were met.

By the end of the data collection period, questionnaires were received from 1,588 of the 2,500 NPs and CNMs to whom the survey was sent. Seventy-eight respondents were determined ineligible for the survey, or unable to complete the survey due to being returned for lack of a current mailing address, reported death, or refusal to participate. Another 186 respondents were determined ineligible because they reported that they no longer live in California. The total number of usable responses from the NP and CNM survey was 1,430 of the 2,236 eligible certified nurses, which represents a 64% response rate for the eligible population and a 57.2% response rate when considering all surveys mailed (Table 1.3).

Table 1.3: Survey outcomes and response rates for NPs and CNMs, based on sampling scheme 2017

Questionnaires mailed	**2,500**
Refused or unable to participate	23
Returned with no forwarding address	55
Not a California resident	186
Eligible population	**2,236**
Total completed	1,430
Completed online	805
Completed paper	625
Response rate of eligible population	**64.0%**
Response rate of all sampled	**57.2%**

Response rates differed by age group, type of region, and type of license, as presented in Table 1.4. The response rates for CNMs (63.6%) and those with dual licenses (61.7%) were higher than that for NPs (55.8%). Response rates were lowest for NPs and CNMs under 35 years old, and highest for those 65 years and older. Response rates also were generally higher for those in rural and commuting areas than in large urban regions.

To address differential response rate by age group and region, post-stratification weights were used to ensure that all analyses reflect the full population of NP and CNMs with active California certificates. The post-stratification weights are based on the numbers of nurses in each age-region group and each analytical certificate type. The number of respondents was very small or zero for some age-region groups, so some of the original sampling groups were merged for the weighting:

- Nurse practitioners:
    - NPs under 35 years were grouped with those 35-44 years for all regions
    - NPs in isolated rural and small rural areas were merged for all age groups
- Nurse-midwives:
    - CNMs in urban commuter, large rural, small rural, and isolated small rural regions were grouped together
    - CNMs under 55 years were merged into a single group
    - CNMs 55 years and older were merged into a single group
- Dual-certified:
    - NP-CNMs in urban commuter, large rural, small rural, and isolated small rural regions were grouped together
    - NP-CNMs under 55 years were merged into a single group
    - NP-CNMs 55 years and older were merged into a single group

We used Stata SE 11.1, a commonly used statistical package, to analyze the data. The survey data analysis commands in this software (svy) were used with the weighted data to conduct all analyses for NPs and CNMs.

Table 1.4: California-Resident Respondents to 2017 Nurse Practitioner and Certified Nurse-Midwife Survey

	under 35 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65+ yrs	Total	Response rate
Nurse Practitioners (not dual-certified)							
Large Urban	78	181	155	185	149	748	53.4%
Urban Commuter	13	26	27	40	30	136	59.1%
Large Rural	5	22	29	47	37	140	66.0%
Small Rural	1	3	8	18	15	45	54.9%
Isolated Small Rural	0	7	9	16	17	49	64.5%
Total	**97**	**239**	**228**	**306**	**248**	**1,118**	**55.8%**
Response rate	32.0%	49.0%	50.9%	66.2%	77.5%	55.8%	
Certified Nurse-Midwives (not dual-certified)							
Large Urban	21	29	24	20	32	126	57.4%
Urban Commuter	1	1	2	6	3	13	72.2%
Large Rural	1	2	1	4	6	14	93.3%
Small Rural	0	0	1	0	2	3	75.0%
Isolated Small Rural	0	1	0	2	0	3	75.0%
Total	**23**	**33**	**28**	**32**	**43**	**159**	**63.6%**
Response rate	53.5%	64.7%	60.9%	54.2%	84.3%	63.6%	
Dual-Certified NP-CNMs							
Large Urban	19	21	31	24	32	127	60.2%
Urban Commuter	0	1	0	5	5	11	73.3%
Large Rural	0	1	1	4	2	8	72.7%
Small Rural	0	0	0	0	1	1	25.0%
Isolated Small Rural	0	2	0	1	3	6	85.7%
Total	**19**	**25**	**32**	**34**	**43**	**153**	**61.7%**
Response rate	45.2%	51.0%	69.6%	57.6%	79.6%	61.7%	

Precision of estimates

The size of the sample surveyed and high response rate contribute to this survey providing very precise estimates of the true values in the population. For NPs and CNMs, discrepancies between the characteristics of the respondents to the survey and the population have been corrected by weighting the data, as discussed above. Unweighted tables based on the dataset of 1,118 NPs may vary from the true population values by +/-2.85 percentage points from the values presented, with 95% confidence. Tables based on the dataset of 159 CNMs may differ from the true population values by +/-6.63 percentage points, and tables based on the dataset of 153 dual-certified respondents may differ by +/-6.78 percentage points.

Chapter 2: Demographics of California's Nurse Practitioners and Certified Nurse-Midwives

In 2017, there were 20,919 NPs and CNMs licensed and living in California; in 2010, the population was 17,757. As the NP and CNM population has grown, it also has become more diverse.

Age Distribution of California NPs and CNMs

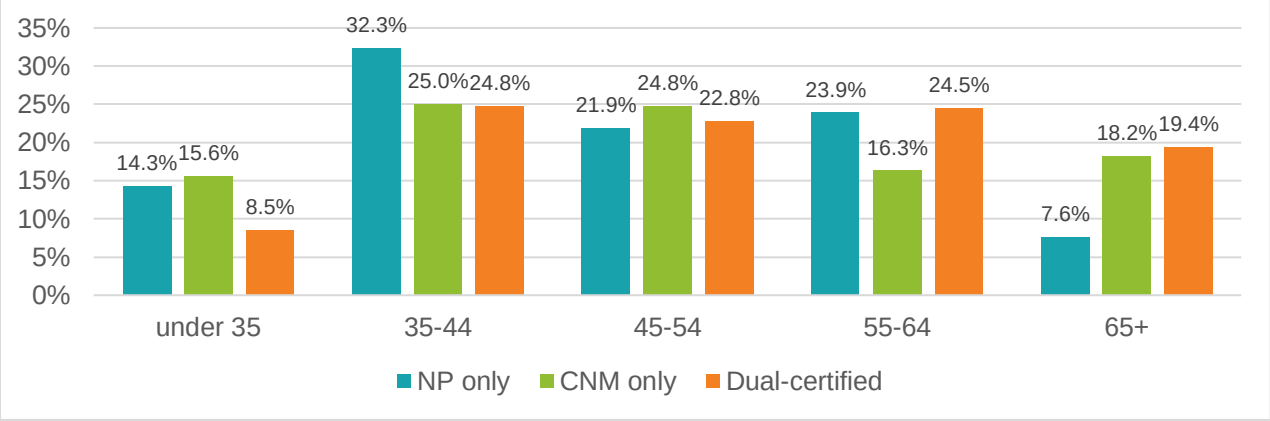
As seen in Figure 2.1, the average age of NPs was 49.8 years in 2017, which is slightly younger than in 2010, when it was 50.1 years. The average age of CNMs and those with dual certification has risen since 2010. For CNMs, it was 51.7 years in 2010, and 52.7 years in 2017. For dual-certified NP-CNMs, it was 51.5 years in 2010, and 53.3 years in 2017. This is higher than the average age of employed RNs residing in California in 2016, which was 45 years,[5] and also slightly higher than the national average age of NPs in 2012, which was 48 years.[6]

Figure 2.1: Average age of NPs and CNMs residing in California, 2017

Note: Total number of observations=1,430. Total NPs-only=1,118. Total CNMs-only=159. Total dual-certified cases=153. Data are weighted to represent all NPs and CNMs with active licenses.

The largest age group for NPs in 2017 was 35-44 years, accounting for 32.3% of the population (Figure 2.2). This also was the largest age group for CNMs and NP-CNMs, although it accounted for only one-quarter of the population of these nurses.

Figure 2.2: Age distribution of NPs and CNMs, 2017



Note: Total APRN all cases=1,430. Total NPs-only=1,118. Total CNMs-only=159. Total dual-certified cases=153. Data are weighted to represent all NPs and CNMs with active licenses.

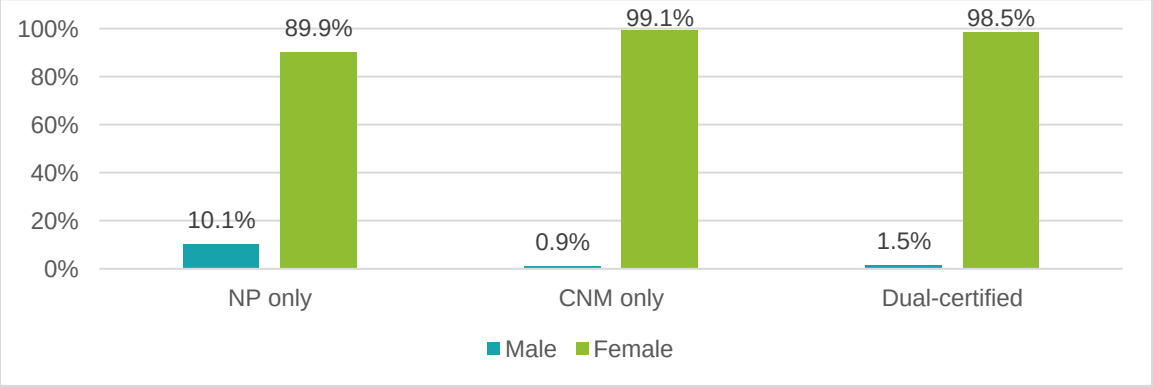
[5] Spetz, J, Chu, L, Jura, M, Miller, J. 2016 Survey of Registered Nurses. Sacramento, CA: California Board of Registered Nursing, September 2017.

[6] Health Resources and Services Administration. 2014. Highlights from the 2012 National Sample Survey of Nurse Practitioners. Rockville, MD: Health Resources and Services Administration.

Diversity of California NPs and CNMs

NPs and CNMs are predominantly female, as seen in Figure 2.3. In 2017, 10.1% of NPs were male, which is an increase from 7.1% in 2010. Only 0.9% of CNMs were male in 2017, which is similar to the share in 2010 (0.8%). About 1.5% of dual-certified NP-CNMs were male in 2017, which is a small increase from 0.8% in 2010. In 2016, about 11.9% of all employed RNs residing and working in California were male.[7]

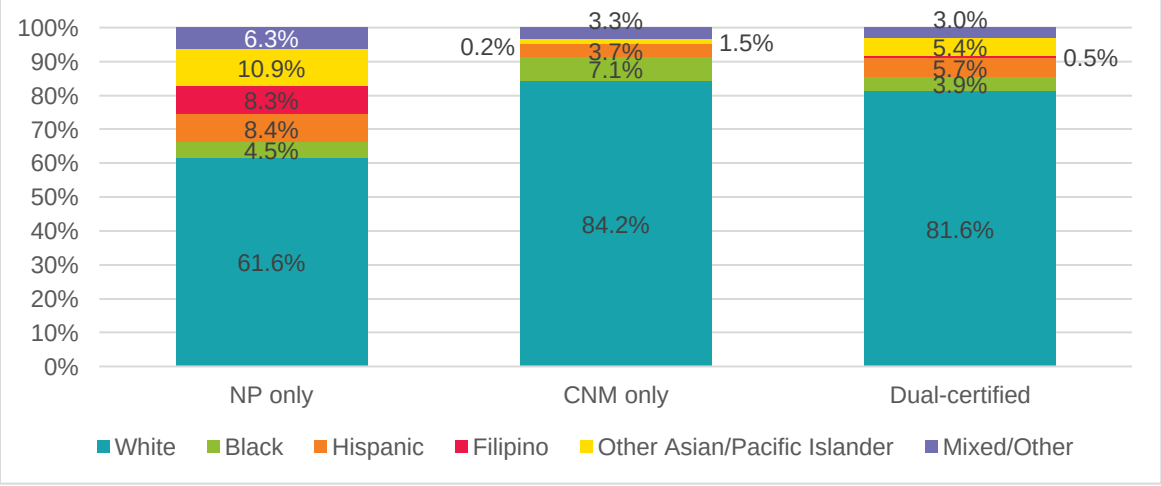
Figure 2.3: Gender of NPs and CNMs residing in California, 2017



Note: Total number of APRN cases=1,428. Total number of NP-only cases=1,116. Total number of CNMs-only cases=159. Total number of dual-certified cases=153. Data are weighted to represent all NPs and CNMs with active licenses.

As seen in Figure 2.4, slightly more than 61% of NPs are non-Hispanic white, while more than 80% of CNMs and dual-certified NP-CNMs are non-Hispanic white. There are relatively large shares of Filipino (8.3%) and other Asian/Pacific Islander NPs (10.9%), but very small shares of CNMs from these groups. Blacks represent a higher share of CNMs (7.1%) than they do NPs (4.5%) or NP-CNMs (3.9%).

Figure 2.4: Ethnic distribution of NPs and CNMs residing in California, 2017

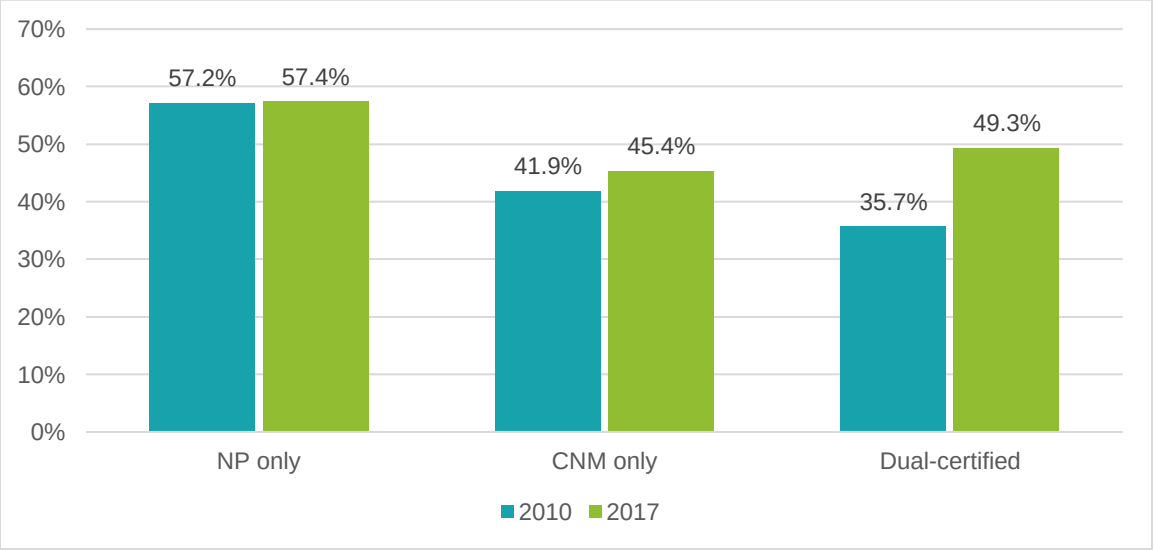


Note: Total number of NP cases=1,103. Total number of CNM cases=157. Total number of dual-certified cases=152. Data are weighted to represent all NPs and CNMs with active licenses.

[7] Spetz, J, Chu, L, Jura, M, Miller, J. 2016 Survey of Registered Nurses. Sacramento, CA: California Board of Registered Nursing, September 2017.

Ethnic diversity is associated with language diversity among California's NPs and CNMs. As seen in Figure 2.5, 57.4% of NPs spoke only English in 2017, which was similar to 2010 when 57.2% spoke only English. In 2017, 45.4% of CNMs spoke only English, which was an increase from 41.9% in 2010. Nearly half of dual-certified NP-CNMs spoke only English in 2017 (49.3%), compared with 35.7% in 2010.

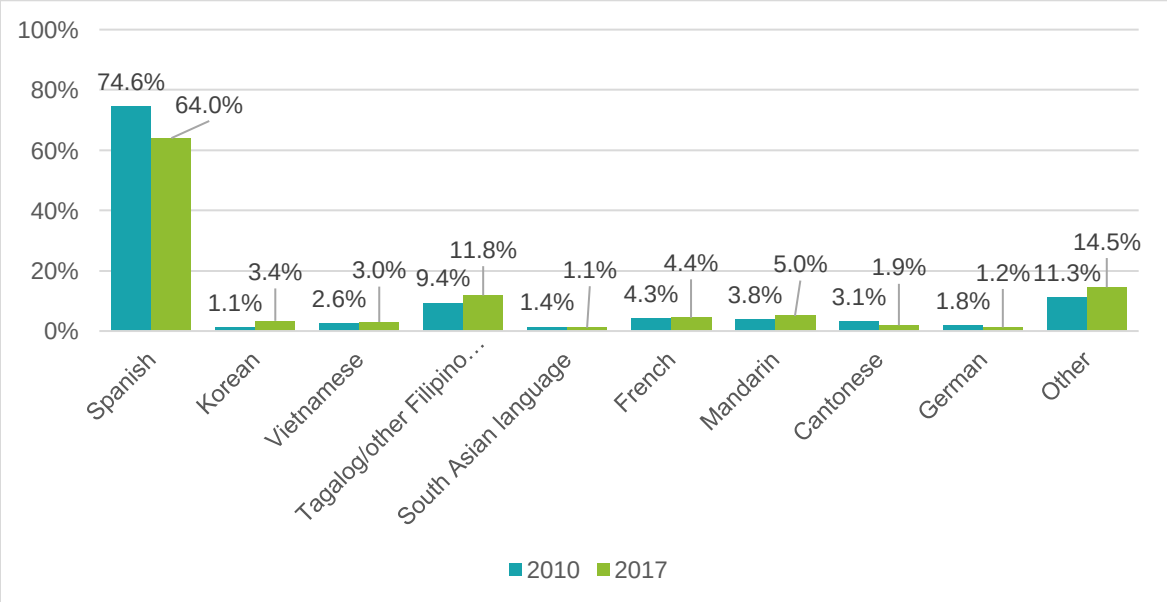
Figure 2.5: California-residing NPs and CNMs who only speak English, 2010 and 2017



Note: Total NP-only cases=1,052. Total CNMs-only cases=155. Total dual-certified cases=146. Data are weighted to represent all NPs and CNMs with active licenses.

Figure 2.6 presents the languages spoken by NPs and CNMs who are fluent in languages other than English. In 2010, nearly 75% of foreign language-speaking NPs and CNMs spoke Spanish; the share was 64% in 2017. In 2017, 14.5% spoke "other" languages and 11.8% spoke Tagalog or another Filipino language. Between 2010 and 2017, there were notable increases in the shares of NPs and CNMs speaking Korean and Mandarin, but a decline in the share speaking Cantonese.

Figure 2.6: Languages spoken by California-residing NPs and CNMs who are fluent in languages other than English, 2010 and 2017



Note: Total number of cases=638. Data are weighted to represent all NPs and CNMs with active licenses.

Table 2.1 details the languages spoken by NPs and CNMs who speak any foreign language. NPs are generally more likely than CNMs to speak Asian languages, including Tagalog, South Asian languages (e.g., Hindi), Mandarin, and Korean. CNMs and those with dual certification are somewhat more likely to speak European languages – specifically, German and French. Note, however, that the numbers of NPs and CNMs reporting speaking some languages were small and thus the estimates are subject to a larger potential error.

Table 2.1. Languages Spoken by NPs and CNMs

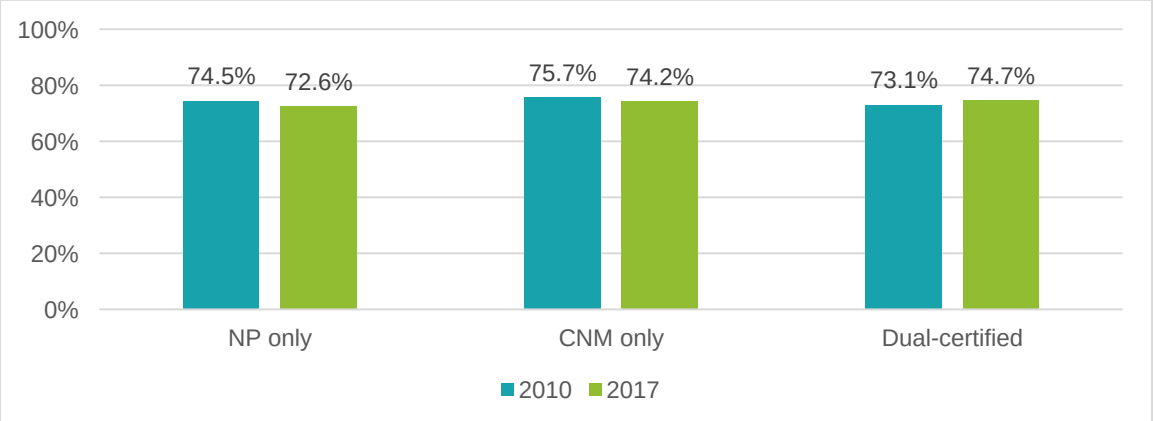
	NP only	CNM only	Dual-certified	Number of cases
Spanish	62.0%	92.7%	90.4%	435
Korean	3.6%	0.0%	0.0%	10
Vietnamese	3.1%	0.0%	3.8%	12
Tagalog/Other Filipino Dialect	12.6%	0.0%	0.0%	41
French	0.7%	6.9%	6.5%	19
Hindi/Urdu/Punjabi/other South Asian language	4.7%	1.4%	0.0%	15
Mandarin	5.3%	1.4%	0.0%	17
Cantonese	2.6%	1.4%	0.0%	9
Other Chinese dialect	1.4%	1.4%	0.0%	5
German	1.0%	2.8%	2.5%	10
Other	14.8%	9.5%	9.0%	66
Number of cases	**405**	**87**	**79**	

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Family Structure of California NPs and CNMs

As seen in Figure 2.7, the share of NPs that was married or in a domestic partner relationship in 2017 was 72.6%, which was slightly lower than in 2010 (74.5%). The share of CNMs that was married or in a domestic partner relationship declined slightly from 75.7% in 2010 to 74.2% in 2017, while the share of NP-CNMs increased from 73.1% to 74.7%.

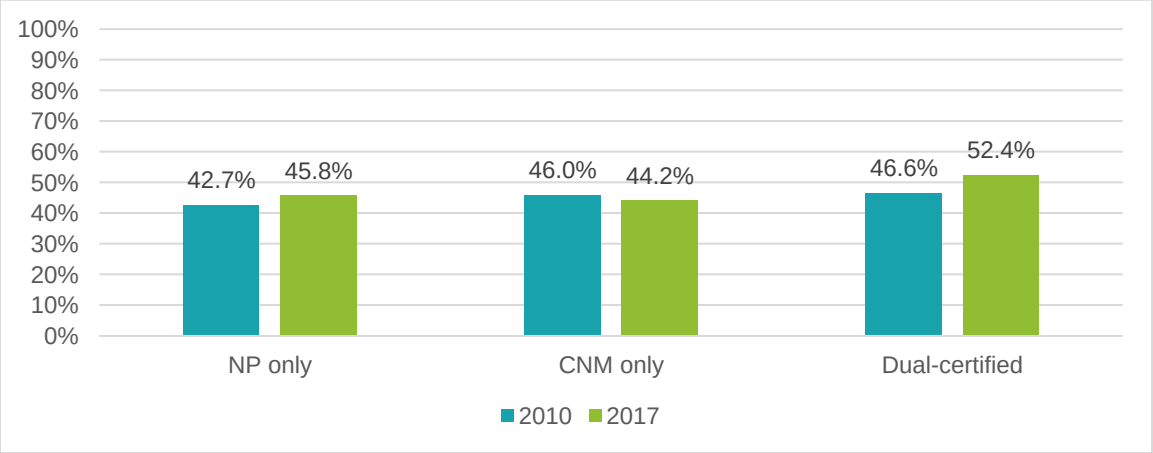
Figure 2.7: California-residing NPs and CNMs currently married or in a domestic partner relationship, 2010 and 2017



Note: Total number NPs-only cases=1,108 in 2017. Total number of CNMs-only cases=159. Total number of dual-certified=151. Data are weighted to represent all NPs and CNMs with active licenses.

Many of California's NPs and CNMs have children living at home, as seen in Figure 2.8. About 45% of NPs and CNMs had children living at home in 2017 while 52.4% of those with dual-certification had children at home. There were small increases in the shares of NPs and NP-CNMs with children at home between 2010 and 2017, and a small decline in the share of CNMs with children at home.

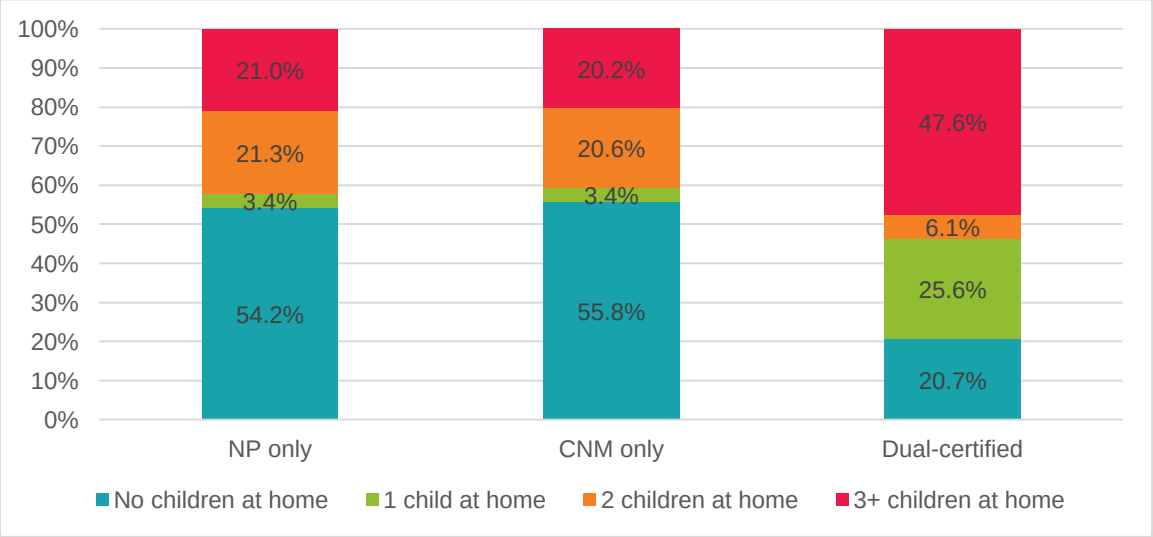
Figure 2.8: California-residing NPs and CNMs with children, 2010 and 2017



Note: Total APRN cases in 2017=1,422. Total NPs-only cases=1,112. Total CNMs-only cases=158. Total dual-certified cases=152. Data are weighted to represent all NPs and CNMs with active licenses.

Figure 2.9 provides information about the number of children residing at home for NPs and CNMs in 2017. Among those with children at home, they most often have two at home, although nearly equal shares of NPs and CNMs have similar numbers of children living at home.

Figure 2.9: Number of children residing at home for NPs and CNMs residing in California, 2017



Note: Total APRN cases=1,422 Total NPs-only cases=1,112. Total CNMs-only cases=158. Total dual-certified cases=152. Data are weighted to represent all NPs and CNMs with active licenses.

NPs and CNMs were asked about the ages of children living at home; their responses are summarized in Table 2.2. The most common age group of children living at home for NPs was 6-12 years, with 38.1% reporting they had children in this age range. Among CNMs, the most common age group for children was 0-2 years (38.6%), and among dual-certified NP-CNMs, it was 6-12 years (35.5%). More than 26% of NPs and CNMs, and 24.4% of dual-certified NP-CNMs, have children 19 years and older living at home.

Table 2.2 Percent of RNs and CNMs with Children Living at Home in Specific Age Groups, 2017

	NPs-only	CNMs-only	Dual-certified	Number of cases
0-2 years	24.0%	38.6%	22.9%	147
3-5 years	24.9%	24.9%	18.0%	122
6-12 years	38.1%	28.8%	35.5%	218
13-18 years	23.3%	44.3%	33.7%	172
19+ years	26.8%	26.0%	24.4%	162
Total cases with children at home	454	65	76	

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Household Income

NPs and CNMs were asked to report their total household income, which is described in Table 2.3. The data reveal that total household income of NPs and CNMs has increased notably between 2010 and 2017. In 2017, more than one-third of NPs had household incomes of $200,000 or more (34.5%), as did 27% of CNMs and 41.2% of NP-CNMs. Household income below $100,000 was reported by only 7.6% of NPs, 14.3% of CNMs, and 9.7% of NP-CNMs.

Table 2.3: Total household income of NPs and CNMs residing in California, 2010 and 2017

		NP only		CNM only		Dual-certified	
	Income	2010	2017	2010	2017	2010	2017
$0-74,999	Less than $30,000	1.0%	2.5%	1.2%	6.9%	1.8%	3.9%
	$30,000 - 44,999	0.9%		1.2%		0.0%	
	$45,000 - 59,999	2.7%		2.0%		2.6%	
	$60,000 - 74,999	5.9%		6.4%		4.4%	
$75,000 - 99,999	$75,000 - 99,999	13.3%	5.1%	18.9%	7.4%	10.1%	5.8%
100,000 - 124,999	$100,000 - 124,999	19.6%	13.6%	17.0%	20.9%	24.0%	10.5%
$125,000 - 149,999	$125,000 - 149,999	13.9%	16.0%	13.9%	13.2%	15.6%	12.4%
$150,000 - 174,999	$150,000 - 174,999	12.9%	16.2%	11.5%	16.5%	12.0%	15.7%
$175,000 - 199,999	$175,000 - 199,999	9.2%	12.1%	7.0%	8.1%	11.1%	10.5%
$200,000 or more	$200,000 or more	20.4%	34.5%	21.1%	27.0%	18.3%	41.2%
	Number of cases	1,272	813	229	114	234	123

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Chapter 3: Education, Licensure, and Certification of Nurse Practitioners and Certified Nurse-Midwives

Initial NP and CNM Education

All NPs and CNMs are required to hold a certificate from the state of California in their specific advanced practice field. In order for an NP or CNM to furnish medications, they also must have a furnishing number issued by the BRN. Although California currently requires new NPs and CNMs to hold at least a post-baccalaureate certificate, in the past APRNs were educated in many types of education programs that conferred degrees or certificates. These NPs and CNMs are generally allowed to continue their practice in California if they maintain their certificate and complete continuing education units.

NPs and CNMs were asked to list any NP or CNM education received from degree or certificate programs. Some nurses in our sample had both NP and CNM certificates, and some who had only one type of certificate nonetheless had also completed education in the other field.

Table 3.1 details the initial NP education completed by NPs and CNMs. About three-quarters of NPs reported their initial NP education was at the master's degree level, 5.3% reported it was a post-master's certificate, and 1.2% reported it was a doctorate. CNMs were less likely to report their initial CNM education was a master's degree (61.4%) than were NPs, with 26.3% reporting their initial CNM education was a non-degree, non-post-master's certificate. Among dual-certified NP-CNMs, about half reported their initial NP education was at the master's level, and 57.3% reported their initial CNM education was a master's degree.

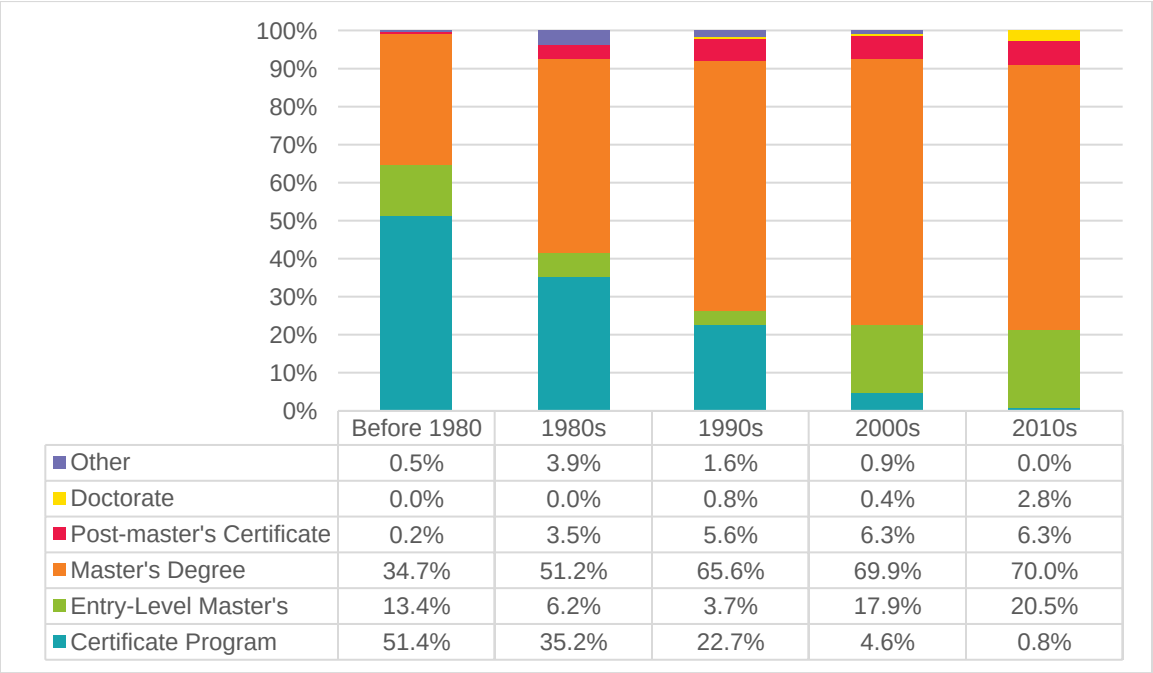
Table 3.1: Initial NP and CNM education completed by California NPs and CNMs

	NP only	CNM only	Dual-certified
NP education programs			
Entry-level Master's Program (ELM)	13.7%	4.3%	16.1%
Master's degree (MSN, non-ELM)	61.8%	8.0%	32.8%
Post-master's Certificate	5.3%	0.0%	4.2%
Other certificate program	10.0%	2.7%	19.7%
Doctor of Nursing Practice (DNP)	1.1%	0.0%	0.0%
Other Doctorate (PhD, DNSc, etc.)	0.1%	0.0%	0.0%
Other	0.9%	0.0%	0.8%
None reported / missing	7.2%	85.1%	26.4%
CNM education programs			
Entry-level Master's Program (ELM)	0.1%	21.5%	21.8%
Master's degree (MSN, non-ELM)	0.6%	39.9%	35.5%
Post-master's Certificate	0.0%	2.3%	7.5%
Other certificate program	0.1%	26.3%	25.4%
Doctor of Nursing Practice (DNP)	0.0%	0.0%	0.0%
Other Doctorate (PhD, DNSc, etc.)	0.0%	0.0%	0.0%
Other	0.0%	1.8%	0.8%
None	99.2%	8.2%	9.0%

Note: Number of observations=1,616. Data are weighted to represent all NPs and CNMs with active licenses.

There has been a shift in the types of initial education completed by NPs and CNMs over time, as presented in Figures 3.1 and 3.2. Prior to 1980, most NPs and CNMs received their initial education from non-degree certificate-granting programs. These programs have declined to a negligible share of programs currently producing NPs and CNMs. At the same time, master's degree programs have become the dominant initial education with more than 90% of initial NP education and nearly all initial CNM education at this level. There also has been growth in the share of initial NP education from doctoral programs, almost entirely due to the emergence and growth of doctor of nursing practice (DNP) programs since 2004, when the American Association of Colleges of Nursing recommended that the DNP become the standard for initial APRN education.

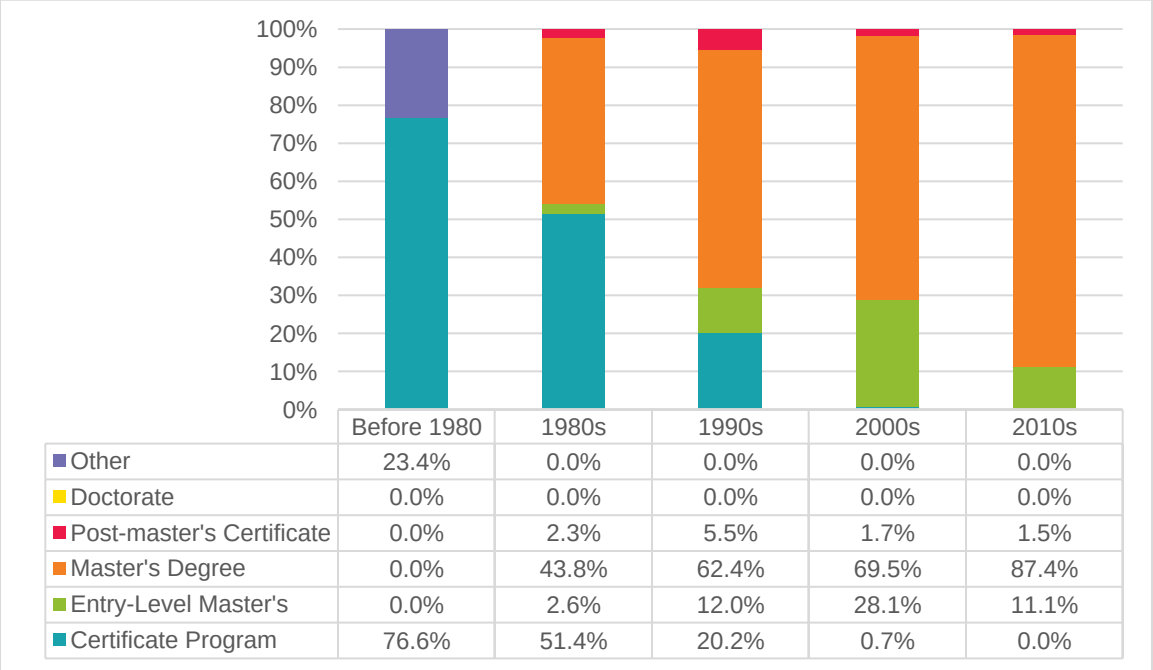
Figure 3.1: Initial NP education by decade, for NPs and NP-CNMs



	Before 1980	1980s	1990s	2000s	2010s
Other	0.5%	3.9%	1.6%	0.9%	0.0%
Doctorate	0.0%	0.0%	0.8%	0.4%	2.8%
Post-master's Certificate	0.2%	3.5%	5.6%	6.3%	6.3%
Master's Degree	34.7%	51.2%	65.6%	69.9%	70.0%
Entry-Level Master's	13.4%	6.2%	3.7%	17.9%	20.5%
Certificate Program	51.4%	35.2%	22.7%	4.6%	0.8%

Note: Number of cases=1,151. Data are weighted to represent all NPs and CNMs with active licenses.

Figure 3.2: Initial CNM education by decade, for CNMs and NP-CNMs

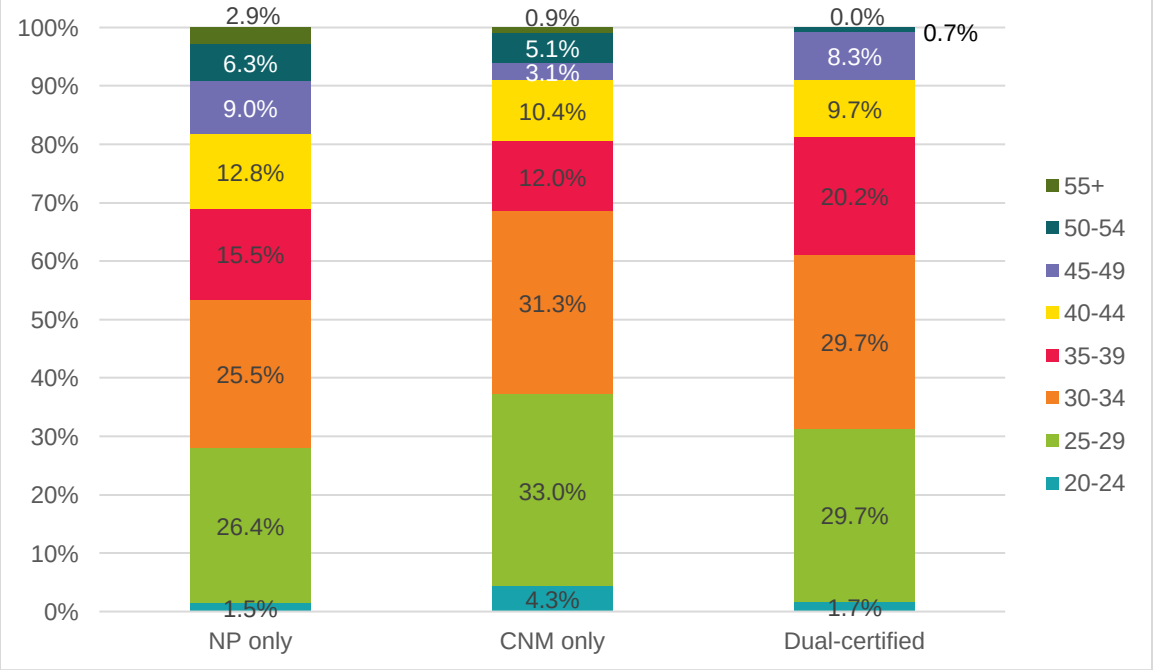


	Before 1980	1980s	1990s	2000s	2010s
Other	23.4%	0.0%	0.0%	0.0%	0.0%
Doctorate	0.0%	0.0%	0.0%	0.0%	0.0%
Post-master's Certificate	0.0%	2.3%	5.5%	1.7%	1.5%
Master's Degree	0.0%	43.8%	62.4%	69.5%	87.4%
Entry-Level Master's	0.0%	2.6%	12.0%	28.1%	11.1%
Certificate Program	76.6%	51.4%	20.2%	0.7%	0.0%

Note: Number of cases=151. Data are weighted to represent all NPs and CNMs with active licenses.

Many NPs and CNMs completed their initial education at older ages, as seen in Figure 3.3. More than 46% of NPs completed their initial NP education when they were 35 years or older; 9.2% did so at 50 years or older. CNMs reported younger initial graduation ages, on average, with 68.6% of CNMs and 61.1% of NP-CNMs completing their initial APRN education when younger than 35 years old.

Figure 3.3. Age at Graduation from initial NP or CNM education program



Note: Number of cases=151. Data are weighted to represent all NPs and CNMs with active licenses.

The average age of NPs and CNMs when they complete their initial APRN education has been rising over the decades, as seen in Table 3.2. Before 1980, the average age at graduation was 28.5 years for NPs and 27.2 years for CNMs. In the 1980s, the average age was near 32 years. Since 1990, the average age at completion of initial APRN education has been over 36 years.

Table 3.2: Average Age at Graduation from Initial APRN Education, by Decade of Graduation

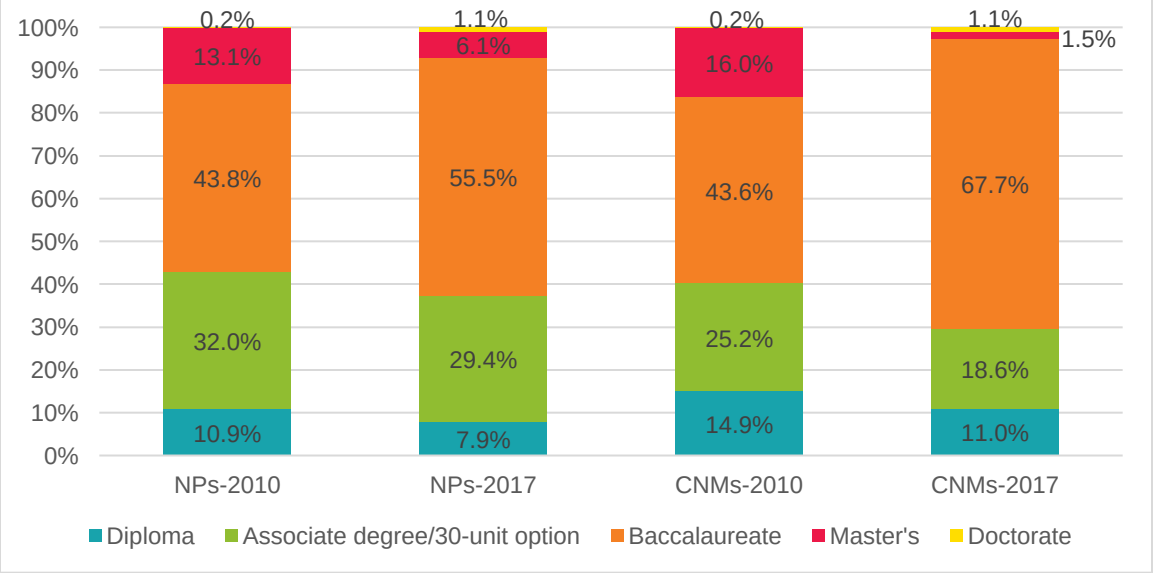
Year of Graduation	NP & NP-CNM	CNM & NP-CNM
Before 1980	28.5	27.2
1980-1989	31.7	31.6
1990-1999	37.1	37.6
2000-2009	36.0	36.1
2010-2017	36.8	44.2
Number of observations	1,175	298

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Initial RN Education

The educational background of NPs and CNMs, including those with both NP and CNM certificates, is presented in Figure 3.4. Most NPs and CNMs received a baccalaureate or graduate degree as their initial RN education. The share of NPs whose initial RN education was a bachelor's degree rose from 43.8% in 2010 to 55.5% in 2017, and the share of CNMs whose initial RN education was a bachelor's degree rose from 43.6% in 2010 to 67.7% in 2017.

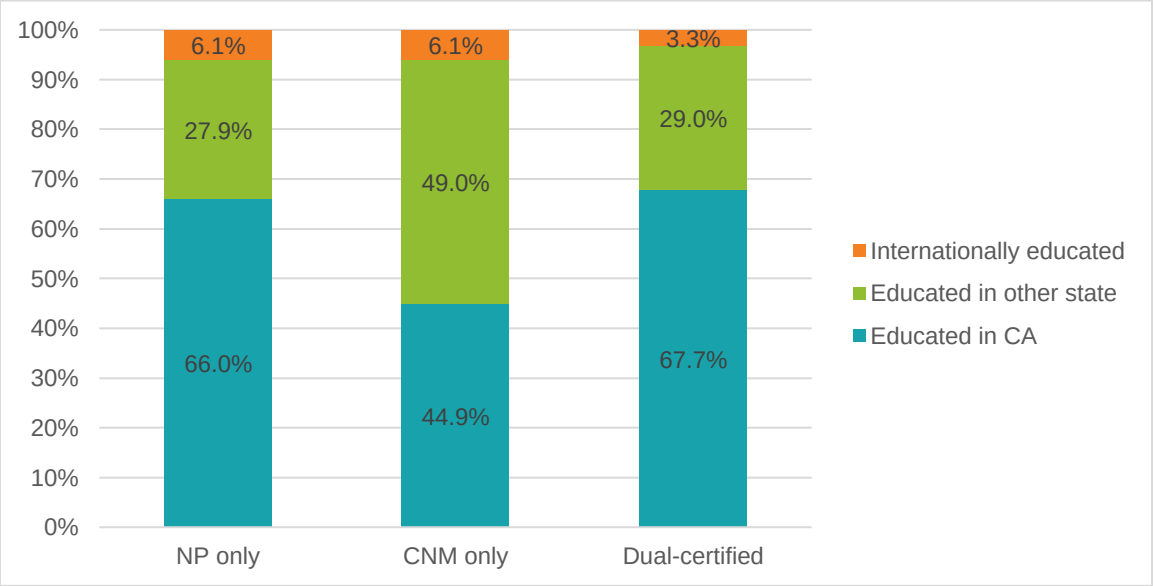
Figure 3.4: Initial RN education for NPs and CNMs residing in California



Note: Number of NP observations in 2017=994 and in 2010=1,119. Number of CNM observations in 2017=136 and in 2010=484. Data are weighted to represent all NPs and CNMs with active licenses.

About two-thirds of California's NPs received their basic RN education in California (66%), as seen in Figure 3.5. Only 6.1% were international RN graduates, which is the same share as for CNMs. CNMs were more likely to have been educated outside California than NPs (49% vs. 27.9%).

Figure 3.5: Location of initial RN education for NPs and CNMs residing in California



Note: Number of observations=1,408. Data are weighted to represent all NPs and CNMs with active licenses.

A comparison of initial NP education and initial RN education reveals that 29.8% of nurses whose initial RN education was a diploma report that their initial NP education was in a general certificate program. Nearly 24% report that their initial CNM education was a certificate (Table 3.3). Among diploma-educated RNs, 61.1% of NPs received their initial NP education and 66.9% of CNMs received initial CNM education in a master's program. Nearly three-quarters of nurses whose initial RN education was an associate degree (AD) completed their initial NP education in a master's program, but only 47.9% completed initial CNM education in a master's program. Among those whose initial RN education was a bachelor's degree, 86.1% of NPs completed a master's degree as initial NP education, and 64.4% of CNMs completed a master's degree as initial CNM education. Many NPs whose initial RN education was at the master's degree level report that their initial NP education was a general certificate (17%) or a post-master's certificate (23.9%).

Table 3.3: Initial APRN education by initial RN education for NPs and CNMs residing in California

	Initial RN education			
Initial NP education	Diploma	ADN	BSN	MSN
Certificate Programs (no master's degree)	29.8%	15.1%	8.3%	17.0%
Master's Degree (MSN, ELM, MEPN, etc.)	61.1%	74.6%	86.1%	59.1%
Post-Master's Certificate	4.8%	7.2%	4.7%	23.9%
Doctoral	1.7%	2.2%	1.0%	0.0%
Other	2.6%	0.8%	0.0%	0.0%
Number of cases	116	343	563	54
Initial CNM education				
Certificate Programs (no-master's degree)	23.7%	47.1%	28.4%	15.9%
Master Programs (MSN, ELM, MEPN, etc.)	66.9%	47.9%	64.4%	71.8%
Post-master's Certificate	9.3%	4.4%	5.6%	0.0%
Doctoral	0.0%	0.0%	0.0%	0.0%
Other	0.0%	0.5%	1.6%	12.3%
Number of cases	26	65	143	8

Note: Total number of NP cases=1,076. Total number of CNM cases=242. There were too few respondents with initial doctoral RN education to report. Data are weighted to represent all NPs and CNMs with active licenses.

NPs and CNMs were asked when they received their first RN license in the U.S. and when they completed their advanced practice education. Table 3.4 examines the average length of time between RN licensure and completing an initial NP or CNM education program. On average, respondents reported 9.6 years between initial RN licensure and completion of an NP program, and 6.9 years between licensure and completion of a CNM program. Those who received their RN initial education in bachelor's degree programs completed their NP or CNM education in fewer years than those whose initial RN education was an associate degree or diploma. The shortest times to completion were for those whose initial RN education was a master's degree.

Table 3.4: Years between initial RN licensure and APRN education for NPs and CNMs residing in California, by type of initial RN education

Initial RN education	Initial NP education	Initial CNM education
RN Diploma	13.6	10.3
RN Associate degree	11.4	8.1
RN Baccalaureate	9.1	7.0
RN Master's degree	5.7	2.8
Overall average	9.6	6.9
Number of cases	1,006	240

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Table 3.5 presents the highest level of advanced practice education received by NPs and CNMs. The data indicate that many NPs and CNMs whose initial education was a certificate eventually complete a master's or higher degree in advanced practice. In 2017, 73.3% of NPs and 49.8% of dual-certified NP-CNMs reported their highest NP education as a master's degree. Nearly two-thirds of CNMs and 54.5% of NP-CNMs reported their highest CNM education as a master's degree. Small shares of respondents indicated they had completed a DNP as their highest education; 4.4% of NPs reported this as their highest NP education and 0.5% of CNMs reported it as their highest CNM education. Among dual-certified NP-CNMs, 2.4% reported a DNP in the NP field, and 1.6% reported a DNP in the CNM field.

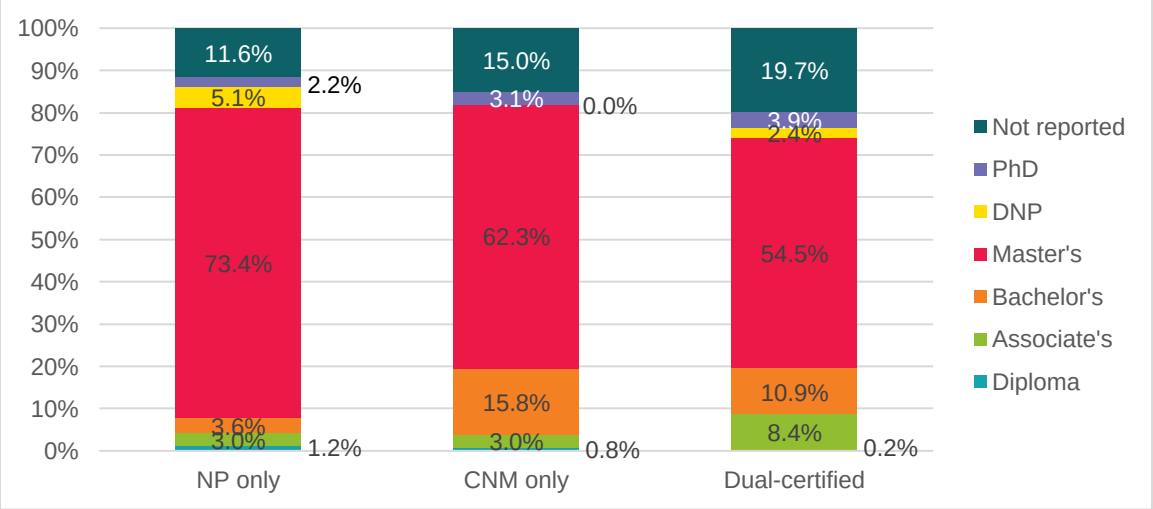
Table 3.5: Highest level of NP and CNM education completed by California NPs and CNMs

	NP only	CNM only	Dual-certified
NP education programs			
Certificate (non-master's degree)	8.8%	4.2%	20.5%
Master's degree (MSN, non-ELM)	73.3%	15.0%	49.8%
Post-master's Certificate	10.8%	0.0%	5.1%
Doctor of Nursing Practice (DNP)	4.4%	0.0%	2.4%
Other Doctorate (PhD, DNSc, etc.)	1.2%	0.0%	0.8%
Other program	0.4%	0.0%	0.8%
None reported / missing	1.2%	80.8%	20.6%
CNM education programs			
Certificate (non-master's degree)	0.1%	21.0%	25.2%
Master's degree (MSN, non-ELM)	0.6%	66.1%	54.5%
Post-master's Certificate	0.0%	4.4%	10.1%
Doctor of Nursing Practice (DNP)	0.0%	0.5%	1.6%
Other Doctorate (PhD, DNSc, etc.)	0.1%	0.0%	0.8%
Other program	0.0%	1.0%	1.6%
None reported / missing	99.3%	7.0%	6.3%

Note: Number of observations=1,430. Data are weighted to represent all NPs and CNMs with active licenses.

NPs and CNMs were asked about whether they had received any nursing degrees distinct from their advanced practice degrees. Figure 3.6 shows the highest education levels of NPs and CNMs from both general nursing and advanced practice programs. A highest education level of a master's degree was reported by 73.4% of NPs, 62.3% of CNMs, and 54.5% of NP-CNMs. Doctorates (both DNP and PhD) are held by 7.3% of NPs, 3.1% of CNMs, and 6.3% of NP-CNMs. The National Sample Survey of Nurse Practitioners reported that 94% of the national NP workforce had a graduate degree in some field in 2012,[8] which is slightly higher than the share of NPs in California whose highest education is at the graduate level.

Figure 3.6: Highest nursing education for NPs and CNMs residing in California



Note: Number of observations=1,430. Data are weighted to represent all NPs and CNMs with active licenses.

Registered nurses often obtain degrees from non-nursing education programs. These can include education pursued before nursing education, such as completing a general associate degree before transferring to a bachelor's program in nursing. Some RNs obtain their initial nursing education in a second-degree bachelor's program or entry-level master's program designed for those with a bachelor's degree in another field. RNs also can pursue undergraduate or graduate education in other fields including public health, business, psychology, and other fields. As seen in Table 3.6, many of California's NPs and CNMs hold degrees in non-nursing fields. More than one-quarter of NPs have a non-nursing bachelor's degree, and 39.2% of CNMs and 34.7% of NP-CNMs have a non-nursing bachelor's degree. Non-nursing master's degrees are held by 6.3% of NPs, 18.6% of CNMs, and 12.8% of NP-CNMs.

Table 3.6: Non-nursing degrees completed by NPs and CNMs residing in California

	NP only	CNM only	Dual-certified
Associate degree (non-nursing)	4.8%	3.7%	6.3%
Bachelor's degree (non-nursing)	25.3%	39.2%	34.7%
Master's degree (non-nursing)	6.3%	18.6%	12.8%
Doctoral degree (non-nursing)	2.6%	1.0%	2.4%

Note: Number of observations=1,372. Data are weighted to represent all NPs and CNMs with active licenses.

[8] Health Resources and Services Administration. 2014. Highlights from the 2012 National Sample Survey of Nurse Practitioners. Rockville, MD: Health Resources and Services Administration.

NPs residing in California reported their areas of educational specialization, as presented in Table 3.7. Over 62% of NPs reported education in family care. Other common fields of specialization for NPs are adult primary care (24.6%), pediatric primary care (16.2%), women's health (15.8%), and geriatric primary care (13.6%). Nearly 10% had an educational focus on adult acute care, and 2.9% had acute pediatric care. Psychiatric-mental health care was an educational focus of 7.8% of NPs. Certified nurse-midwives and dual-certified NP-CNMs predominantly focused their education on midwifery (98.9% and 95.6%), women's health (94.4% and 92.7%), perinatal (53.1% and 30.3%), adult primary care (20.6% and 13.0%), and family care (18.0% and 22.8%).

Table 3.7: Field of educational specialization for NPs and CNMs residing in California

Field of specialization	NP only	CNM only	Dual-certified	Number of cases
Family / individual	62.8%	18.0%	22.8%	1,344
Adult primary care	24.6%	20.6%	13.0%	1,344
Geriatric primary care	13.6%	2.4%	2.0%	1,344
Pediatric primary care	16.2%	3.7%	5.4%	1,344
Women's health / gender-related	15.8%	94.4%	92.7%	1,344
Neonatology	1.0%	12.9%	4.1%	1,344
Psychiatric / mental health	7.8%	4.1%	5.5%	1,344
Acute care – adult / geriatric	9.7%	5.4%	4.2%	1,344
Acute care – pediatric	2.9%	2.4%	1.9%	1,350
Perinatal	1.8%	53.1%	30.3%	1,349
Occupational health	3.0%	0.0%	0.0%	1,348
Oncology	2.1%	1.2%	0.0%	1,347
Palliative care / hospice	2.2%	0.0%	0.5%	1,347
Midwifery	0.3%	98.9%	95.6%	1,407
Other	5.1%	3.9%	1.0%	1,347

Note: Columns will total to more than 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

Many NPs and CNMs obtain national certification after completing their initial advanced practice education, and some choose to maintain their certification throughout their careers, although this is not required to maintain a certificate to practice in California. Table 3.8 presents data on whether NPs and CNMs are currently nationally certified by specific organizations.

NPs can be certified by several organizations. The American Academy of Nurse Practitioners offers a single NP certification, which is held by 39.8% of NPs in California. The American Nurses Credentialing Center offers NP certification in acute care, adult-gerontological care, family care, palliative care, pediatric care, psychiatric-mental health, school nursing, and advanced diabetes management; 47.9% of NPs are currently certified by this organization. The National Certification Corporation offers a women's health care NP certification, held by 6.2% of NPs in California. The Pediatric Nursing Certification Board provides certification in pediatric primary care and pediatric acute care, held by 8.3% of California NPs. The American Association of Critical Care Nurses provides a certification as an acute care NP, held by 1.9% of California NPs. Nearly all CNMs (99.1%) and NP-CNMs (98.5%) are currently certified by the American Midwifery Certification Board. In addition, 9% of CNMs and 21.2% of NP-CNMs are certified by the National Certification Corporation in women's health.

Table 3.8: Current national certifications held by NPs and CNMs residing in California

Certification	NP only	CNM only	Dual-certified
American Academy of Nurse Practitioners	39.8%	0.3%	6.5%
American Nurses Credentialing Center	47.9%	0.0%	7.6%
National Certification Corporation	6.2%	9.0%	21.2%
Pediatric Nursing Certification Board	8.3%	0.0%	0.0%
American Midwifery Certification Board	0.2%	99.1%	98.5%
American Assoc. of Critical Care Nurses	1.9%	0.0%	0.0%
Other	0.2%	0.0%	0.0%

Note: Number of observations=1,127. Columns will total to more than 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

Some NPs are educated in programs that also confer a physician assistant (PA) credential, and consequently obtain licensure or certification as both an NP and PA. As seen in Table 3.9, 4.6% of NPs and dual-certified NP-CNMs also have PA certification. Most of those with NP-PA certification are employed as NPs (63.1%), with 11.3% employed as both an NP and a PA. Only 5.4% report they are solely employed as a PA, and 20.3% are not employed in either field.

Table 3.9: Joint NP-PA certification and employment of NPs and NP-CNMs residing in California

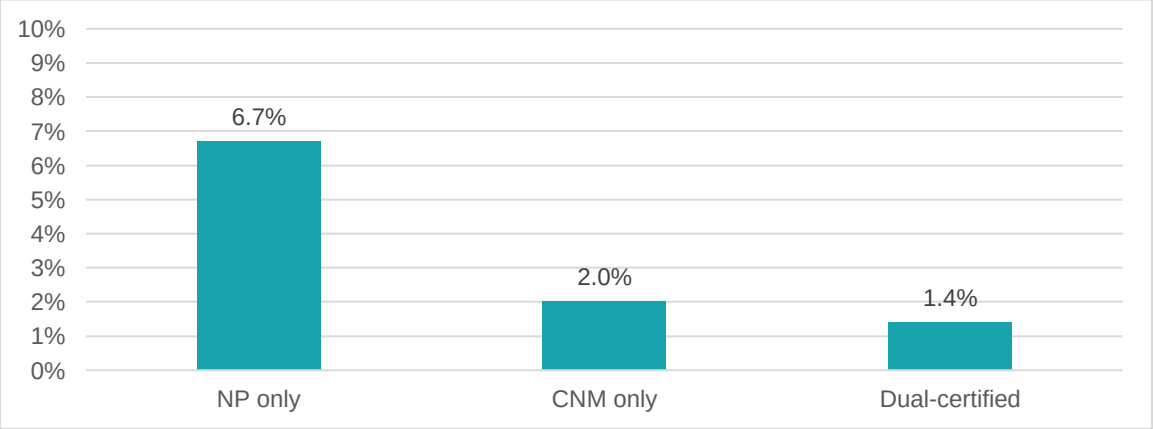
	NPs and NP-CNMs
Dual NP-PA certification	4.6%
For those dual-certified…	
Employed as NP	63.1%
Employed as PA	5.4%
Employed as both	11.3%
Not employed as either	20.3%

Note: Number of observations=1,418. Number certified as NP-PA=79. Data are weighted to represent all NPs and CNMs with active licenses.

Current Enrollment of NPs and CNMs

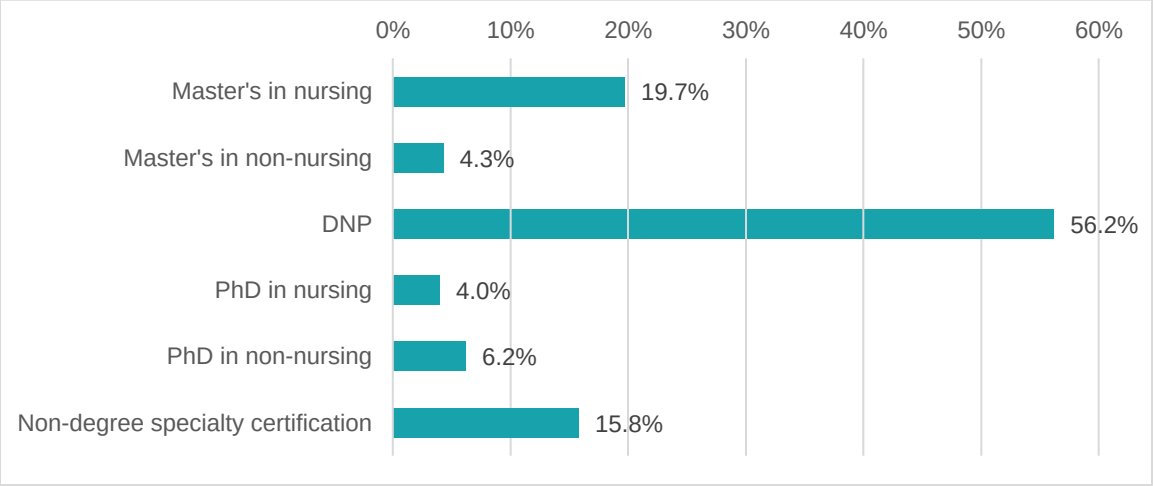
An estimated 1,171 NPs and CNMs are currently enrolled in an education program, accounting for 6.7% of NPs, 2% of CNMs, and 1.4% of NP-CNMs (Figure 3.7). When asked about their degree objectives, about 20% reported pursuing a master's degree in nursing, and 56.2% are pursuing a DNP (Figure 3.8).

Figure 3.7: Current enrollment in degree or certificate programs for NPs and CNMs residing in California



Note: Number of observations=1,413. Data are weighted to represent all NPs and CNMs with active licenses.

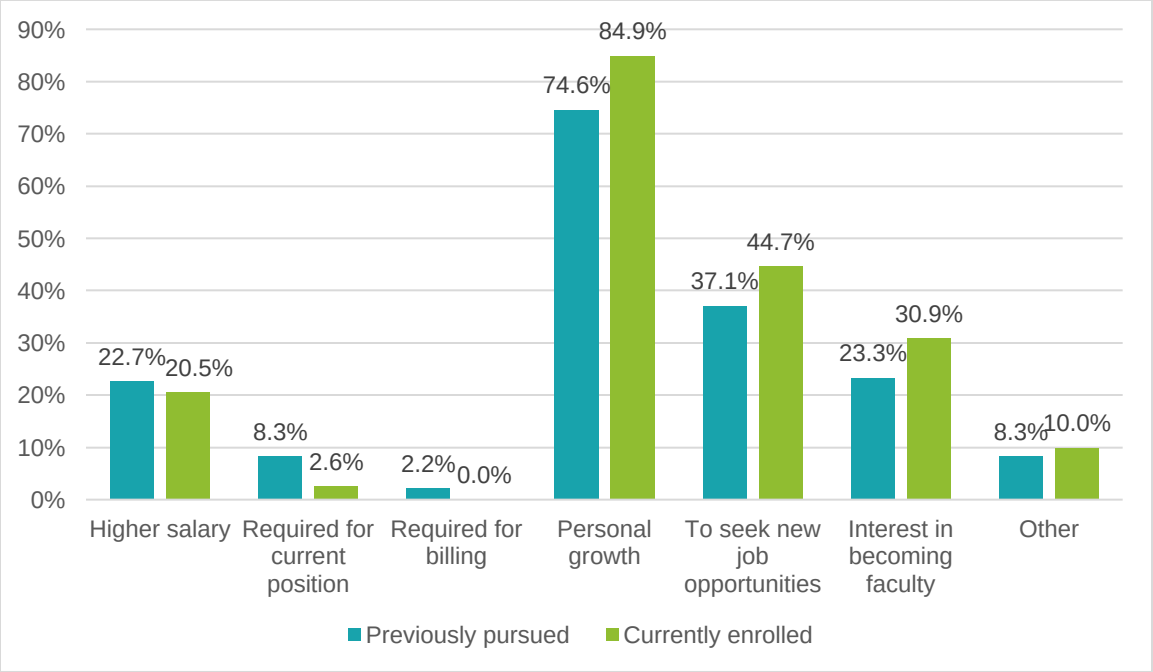
Figure 3.8: Types of degree and certificate programs in which NPs and CNMs are enrolled



Note: Number of observations=1,413. Data are weighted to represent all NPs and CNMs with active licenses.

NPs and CNMs were asked their reasons for pursuing post-NP/CNM education if they had ever done so or were currently enrolled. Their responses are presented in Figure 3.9. The most often-cited reason for pursuing additional education is personal growth and development, for both those who previously pursued education (74.6%) and those currently enrolled (84.9%). Interest in other job opportunities was noted by 37.1% of those who previously pursued additional education and 44.7% of those currently enrolled. Many were interested in becoming faculty, with 23.3% of those who previously pursued education and 30.9% of those currently enrolled indicating this was a reason.

Figure 3.9: Reasons for pursuing addition education after completing NP/CNM education



Note: Number of observations=1,413. Data can total more than 100% because respondents could select more than one reason. Data are weighted to represent all NPs and CNMs with active licenses.

Chapter 4: Nurse Practitioner and Certified Nurse-Midwife Employment

Of the 20,919 California-residing NPs and CNMs, approximately 16,129 (77.1%) were working in an advanced practice nursing position in 2017. This chapter reviews the employment of NPs, CNMs, and those with dual certification.

Employment Status of NPs and CNMs

As seen in Table 4.1, more than three-quarters of those with NP-only certificates were employed as APRNs in 2017 (77.2%), which was an increase compared with 2010 (73.5%). The share of CNMs employed as APRNs was 70% and was stable between 2010 and 2017. The share of those with dual-certification employed as APRNs was higher than for those with single certification, at 83.7% in 2017. The share of those with dual-certification employed as APRNs was stable over time.

Table 4.1: Employment of California-residing NPs and CNMs, 2010 and 2017

	NP only		CNM only		Dual-certified	
	2010	**2017**	**2010**	**2017**	**2010**	**2017**
Working as APRN	73.5%	77.2%	69.9%	70.0%	84.5%	83.7%
Number of cases	880	1,113	242	159	243	151

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Employment rates of NPs and CNMs vary somewhat between urban and rural areas (Table 4.2). NPs and CNMs with a single certification have higher employment rates in rural areas, while those with dual certification have a higher employment rate in urban areas.

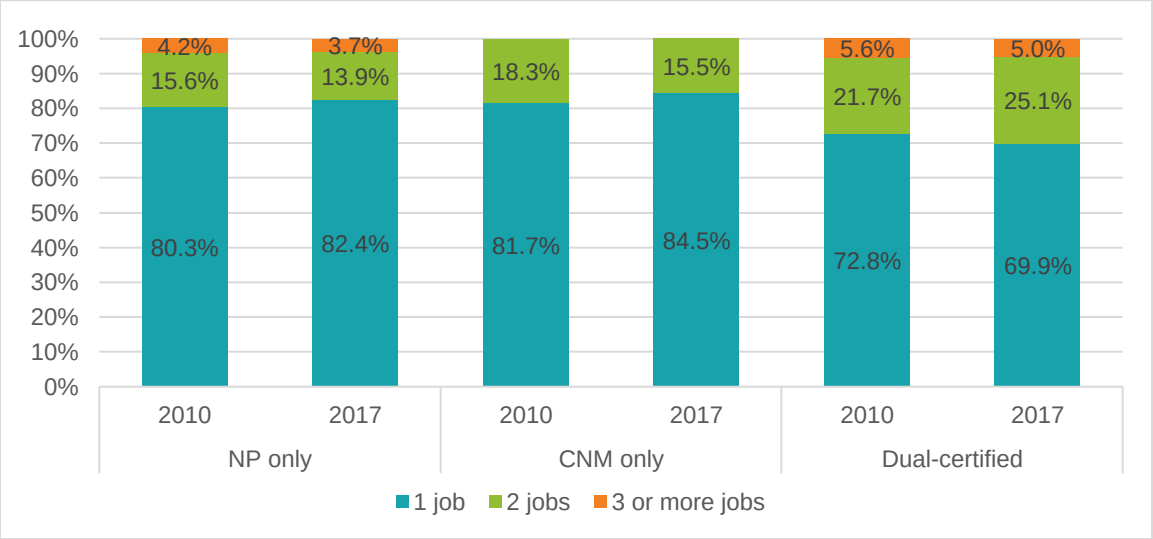
Table 4.2: Urban and Rural Employment Rates of California-residing NPs and CNMs, 2017

Percent Employed in…	**NP only**	**CNM only**	**Dual-certified**	**Number of cases**
Large urban area	77.4%	69.6%	84.3%	995
Commuting region for large urban area	71.2%			160
Large rural area	72.9%	78.7%	66.4%	161
Small rural area	79.0%			49
Isolated small rural area	74.7%			58
Number of cases	1,113	159	151	1,423

Note: Data are weighted to represent all NPs and CNMs with active licenses. Urban and rural categories were combined for CNMs and dual-certified NP-CNMs due to small sample sizes

Many APRNs report holding more than one job, as seen in Figure 4.1. Among those licensed only as NPs, 13.9% had two APRN positions and 3.7% reported three or more positions. Fewer NPs reported they held multiple APRN positions in 2017 than in 2010. CNMs were slightly less likely to report holding more than one APRN position (15.5% in 2017), and none of the survey respondents reported having three or more positions. Those with dual certification were more likely to hold multiple APRN positions, with about one-quarter reporting they held two positions and 5% holding three or more positions in 2017.

Figure 4.1: Number of jobs held by California-residing NPs and CNMs by certificates



Note: Total number of cases in 2017=1,055. Total NP-only cases=818. Total NM only cases=114. Total dual-certified cases=123. Data are weighted to represent all NPs and CNMs with active licenses.

How Much Do NPs and CNMs Work?

Table 4.3 presents the average hours worked per week for NPs and CNMs working as APRNs and residing in California. Average hours per week were around 35 in both 2010 and 2017.

Table 4.3: Average months per year, and total hours per week working as APRN for employed NPs and CNMs residing in California 2010 & 2017

	NP only		CNM only		Dual-certified	
	2010	2017	2010	2017	2010	2017
Total hours working per week as APRN	34.6	35.7	35.8	34.8	35.3	34.9
Number of cases	615	823	164	114	197	124

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Primary APRN Positions

NPs and CNMs were asked to provide information about their primary APRN position, which is the position in which they spend most of their working time. As reported in Table 4.4, NPs and CNMs worked nearly 12 months per year on average in their primary position. Average hours per week in the primary position were slightly less than for all APRN jobs worked combined. NPs averaged 34.4 hours in their primary position in 2017, which was a small increase from 2010 (32.3 hours). CNMs averaged 34 hours per week in 2017, which was similar to 2010. Those with dual certification averaged 32.5 hours per week in their primary position.

Table 4.4: Average months per year and total hours per week for primary APRN position, for APRNs residing in California, 2010 & 2017

	NP only		CNM only		Dual-certified	
	2010	**2017**	**2010**	**2017**	**2010**	**2017**
Total months per year in primary APRN position	**11.7**	**11.8**	**11.7**	**11.7**	**11.9**	**12.0**
Number of cases	610	823	166	114	197	124
Total hours per week in primary APRN position	**32.3**	**34.4**	**33.6**	**34.0**	**31.4**	**32.5**
Number of cases	615	823	164	114	197	124

Note: Data are weighted to represent all NPs and CNMs with active licenses.

The job titles that best describe APRNs' primary nursing positions are presented in Table 4.5. Nearly 95% of those with NP-only certificates reported they were employed as NPs in 2017, which was higher than in 2010 when the share was 89.8%. Another 1.9% of NPs reported their primary job had an administrative or management title, and 1.9% were faculty in an NP education program. Among those with CNM-only certificates, 96.4% reported their primary APRN job title was CNM in 2017, which was higher than the 92.6% with the same title in 2010. Another 1.9% reported administration or management job titles. Dual-certified NP-CNMs more often had a job title of CNM than NP in their principal position, and this share rose from 65.8% in 2010 to 74.1% in 2017. About 20% of NP-CNMs had an NP job title.

Table 4.5: Job titles of primary APRN positions held by employed NPs and CNMs residing in California, 2010 & 2017

	NP only		CNM only		Dual-certified	
	2010	**2017**	**2010**	**2017**	**2010**	**2017**
Nurse Practitioner	89.8%	94.8%	0.6%	0.0%	30.0%	20.1%
Nurse-Midwife	0.1%	0.0%	92.6%	96.4%	65.8%	74.1%
Management / Administration	0.2%	1.9%	1.8%	1.9%	0.0%	0.0%
Faculty in NP education program	2.1%	1.9%	3.3%	0.0%	2.1%	1.0%
Faculty in CNM education program	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Faculty in RN education program	0.2%	0.1%	0.0%	0.3%	0.6%	1.0%
Other	7.1%	1.3%	1.7%	0.0%	1.5%	1.8%
Number of cases	616	814	163	114	199	121

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Table 4.6 presents the job titles of NPs' and CNMs' secondary APRN positions if they reported one. Most NPs with a secondary position report that it has a job title of NP (76.2%), but 12.3% are faculty in an NP education program for their secondary position. Another 3.3% report their secondary job title is in management or administration. Similarly, the majority of CNMs report their secondary job title is nurse-midwife (59.7%). Another 10.4% are faculty in a CNM education program for their secondary position and 5.9% are faculty in an RN education program. About 5% have a secondary job title of management or administration. Surprisingly, 7.7% of CNMs report that their secondary job's title is nurse practitioner, which might indicate they are providing general primary care and their employer uses that job title generically. Among those who are dual-certified, 64.5% report that their secondary job title is nurse-midwife, and 17.4% report that it is NP. Another 8.3% have an administration or management title for their secondary position.

Table 4.6: Job titles of secondary APRN positions held by NPs and CNMs with more than one APRN position residing in California, 2017

	NP only	CNM only	Dual-certified
Nurse Practitioner	76.2%	7.7%	17.4%
Nurse-Midwife	0.1%	59.7%	64.5%
Management / Administration	3.3%	4.5%	8.3%
Faculty in NP education program	12.3%	0.0%	0.0%
Faculty in CNM education program	0.9%	10.4%	0.0%
Faculty in RN education program	1.9%	5.9%	0.0%
Other	5.3%	11.8%	9.8%
Number of cases	176	22	44

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Table 4.7 examines urban and rural differences in job titles of primary positions held by NPs without dual-certification. NPs residing in rural areas are slightly more likely to have the job title of NP, and less likely to be faculty or have a management/administration job title.

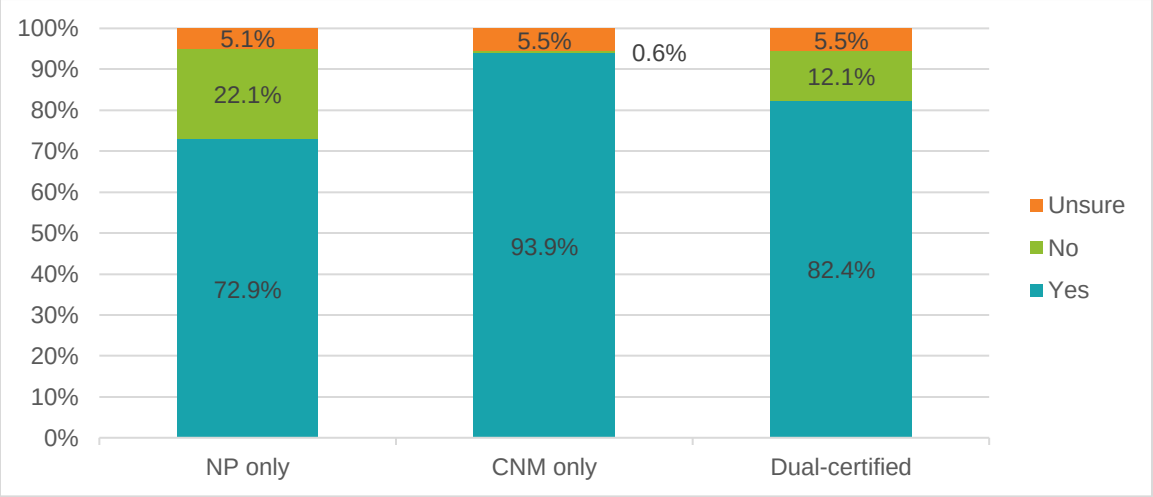
Table 4.7: Job titles of primary APRN positions held by NPs, by Urban/Rural Region, 2017

	Urban	Rural
Nurse Practitioner	94.8%	96.9%
Nurse-Midwife	0.0%	0.0%
Management / Administration	1.9%	0.6%
Faculty in NP education program	1.9%	0.8%
Faculty in CNM education program	0.0%	0.0%
Faculty in RN education program	0.1%	0.0%
Other	1.3%	1.7%
Number of cases	644	170

Note: Data are weighted to represent all NPs with active licenses.

The majority of employed NPs and CNMs are required to maintain their national certification for their primary position, as seen in Figure 4.2. This is more common for CNMs (93.9%) than for NP-CNMs (82.4%) or NPs (72.9%). Around 5% of respondents were unsure if they were required to maintain national certification for their primary APRN position.

Figure 4.2: Required to maintain national certification, employed NPs and CNMs residing in California 2017

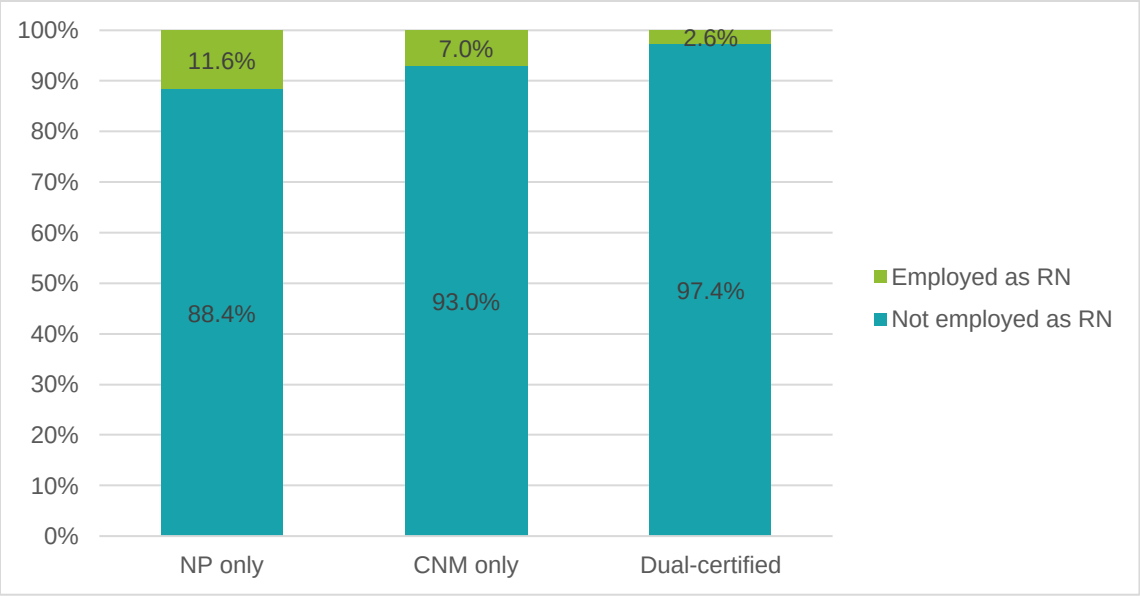


Note: Total number of cases=1,037. Cases for NP-only=802. Cases for NM-only=114. Cases for dual-certified=121. Data are weighted to represent all NPs and CNMs with active licenses.

RN Positions Held by NPs and CNMs Also Working as APRNs

APRNs may work as RNs in California because they are required to maintain an RN license in addition to their NP or CNM certificate. Some of these positions may be related to their APRN education and certification, but APRN certification is not required for the position. Figure 4.3 presents the shares of NPs and CNMs who are employed as APRNs and also employed in RN positions. This is more common among NPs than CNMs; 11.6% of NPs employed as APRNs also hold an RN position, compared with 7% of CNMs and 2.6% of NP-CNMs.

Figure 4.3: NPs and CNMs residing in California who are working as APRNs and also working as RNs



Note: Total number of cases=1,021. Data are weighted to represent all NPs and CNMs with active licenses.

About 11% of NPs who reported working as an RN in addition to as an APRN reported they held more than one RN position. On average, NPs who held an APRN position and reported working as an RN said they worked an average of 22 hours per week in their RN positions. The vast majority reported they worked in their RN position all year (89%). Respondents reported mean income from RN positions of $66,842 per year. There was not a sufficient number of observations to calculate these statistics for CNMs or those with dual certification.

Respondents who held RN positions were asked where they worked as RNs. Table 4.8 presents the most common settings for additional RN work among NPs. The most common setting was within a hospital (71.6%), followed by a medical practice, clinic, or surgery center (12.9%). About 5% worked in an academic department of a university or college, and 4.3% were employed in a school health service.

Table 4.8: Employment Settings of RN positions held by NPs also employed as APRNs and residing in California, 2017

	Percent
Hospital, any department	71.6%
Home health agency / home health service	3.5%
Nursing home, extended care, or skilled nursing facility	0.0%
Mental health / substance abuse	1.5%
Medical practice, clinic, physician office, surgery center	12.9%
Public health or community health agency	3.3%
Government agency other than public/community health or corrections	1.8%
School health service (K-12 or college)	4.3%
University or college (academic department)	4.9%
Case management/disease management	1.8%
Other	4.8%
Number of cases	75

Note: Column may not sum to 100% because respondents could select multiple items. Data are weighted to represent all NPs with active licenses.

NPs provided the job titles for their RN positions; as seen in Table 4.9, the most common was staff nurse or direct care nurse (74.4%). Other common titles were quality improvement nurse or utilization review nurse (6.9%), patient care coordinator-related titles (6.6%), and patient educator (6.5%). Five percent reported their job title was as an educator in an academic setting and 5.4% reported a job title of educator in a service setting (i.e., in-service educator).

Table 4.9: Job Titles of RN positions held by NPs also employed as APRNs and residing in California, 2017

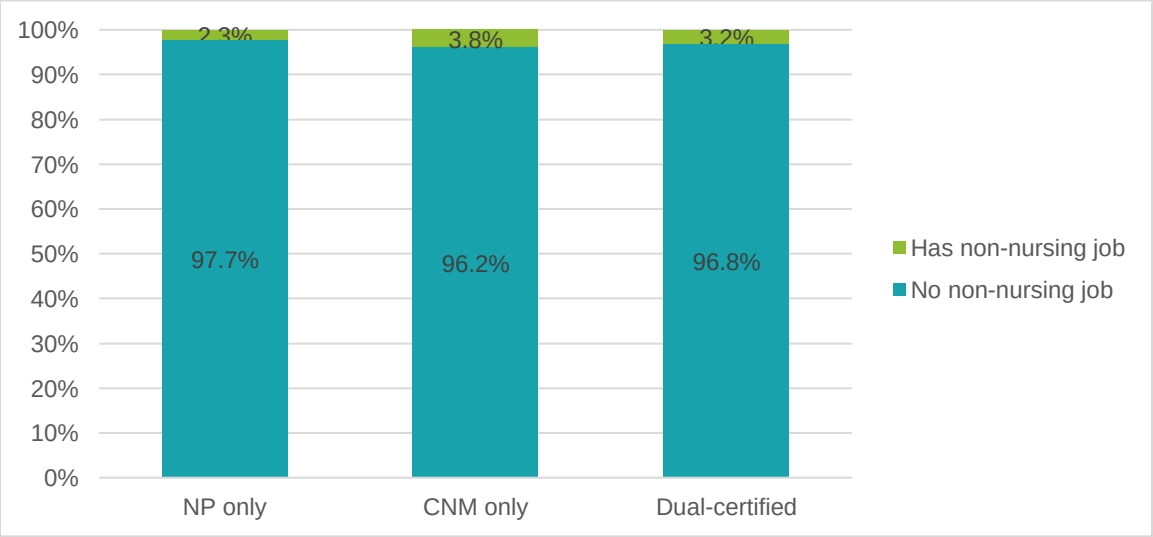
	Percent
Staff nurse / direct care nurse	74.4%
Clinical Nurse Specialist	1.7%
Patient care coordinator / case manager / discharge planner	6.6%
Management / administration	5.0%
Nurse Coordinator	3.8%
Quality improvement nurse, utilization review	6.9%
Telenursing	5.4%
Patient educator	6.5%
Educator, academic setting (professor, instructor)	5.0%
Educator, service setting (in-service educator)	5.4%
Other	2.0%
Number of cases	74

Note: Column may not sum to 100% because respondents could select multiple items. Data are weighted to represent all NPs with active licenses.

Work Outside of Nursing for Employed APRNs

Some NPs and CNMs are employed in non-nursing jobs, in addition to their APRN position. As seen in Figure 4.4, 2.3% of NPs, 3.8% of CNMs, and 3.2% of dual-certified NP-CNMs report holding a non-nursing position in addition to their APRN position. Overall, 75.5% of those with such jobs report that it utilizes some of their nursing knowledge.

Figure 4.4: Employment outside of nursing by NPs and CNMs working as an APRN and residing in California, 2017



Note: Number of cases=1,010. Data are weighted to represent all NPs and CNMs with active licenses.

Earnings

NPs and CNMs were also asked about their annual income from their APRN and RN positions. As seen in Table 4.10, average annual earnings from primary APRN positions were higher for those with dual-certification ($118,497) than with only NP certification ($112,820) or CNM certification ($110,768). Secondary positions paid an average of $18,045 to $31,053 per year. Total annual earnings from APRN positions and from all nursing positions also were greatest for those with dual-certification and lowest for those with only CNM certification.

Table 4.10: Average annual earnings of NPs and CNMs from APRN and RN positions, 2017

	NP only	CNM only	Dual-certified	Number of cases
Earnings from primary position	$112,820	$110,768	$118,497	968
Earnings from secondary position	$31,053	$18,045	$28,441	179
Total earnings from all APRN positions	$117,629	$113,143	$125,031	968
Total earnings from all nursing positions	$122,137	$115,751	$125,077	968

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Total nursing income for employed NPs and CNMs, including both APRN and RN positions, is detailed in Table 4.11. Average nursing income for NPs rose 31.2% between 2010 and 2017, from $93,095 to $122,137, and NPs' earnings averaged 71.9% of total household income in 2017. CNM earnings grew somewhat less, rising 20.6% from $95,976 to $115,751 and reaching 72.3% of total household income in 2017. Those with dual certification reported the highest average earnings, which rose from $98,821 in 2010 to $125,077 in 2017 (26.6% growth). NP-CNM earnings accounted for an average of 72.3% of their total household income.

Table 4.11: Total nursing income as share of family income for NPs and CNMs working in APRN positions and living in California 2010 & 2017

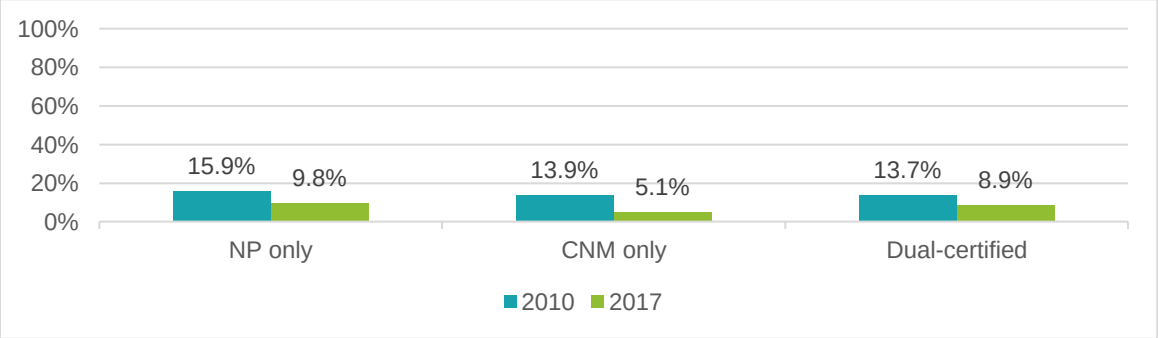
	NP only		CNM only		Dual-certified	
	2010	2017	2010	2017	2010	2017
Total nursing income	$93,095	$122,137	$95,976	$115,751	$98,821	$125,077
Percentage of household income from nursing	61.5%	71.9%	66.1%	72.3%	63.9%	72.3%

Note: Total number of cases for total nursing income=968. Data are weighted to represent all NPs and CNMs with active licenses.

APRNs' Charity Work

Employed NPs and CNMs were asked if they volunteer as APRNs. Those certified only as NPs had the highest rate of volunteering in 2017, at 9.8% (Figure 4.5). About 5% of CNMs volunteered as APRNs, and 8.9% of those with dual-certification volunteered. These rates are lower than in 2010, when more than 13% of NPs and CNMs reported volunteering as APRNs.

Figure 4.5: Charity care provided as an APRN by employed NPs and CNMs residing in California 2010 & 2017



Note: Total number of cases=1,044. Cases for NP-only=812. Cases for NM-only=110. Cases for dual-certified=122. Data are weighted to represent all NPs and CNMs with active licenses.

Precepting & National Certification

Respondents were asked if they precept students through direct clinical observation. More than one-third of the respondents did not answer this question, and also did not respond to the option to indicate they did not precept students. It is likely that the non-respondents do not precept students, and thus the responses over-estimate the rate of precepting. As presented in Table 4.12, among NPs who responded, 53% reported they precept NP students, 9.4% precept MD students, 4.8% precept PA students, and 1.3% precept CNM students. Those that precept average 1 to 4 of each type of student per month. Among CNMs who responded, 19.9% precept NP students, 62.9% precept CNM students, 48% precept MD students, and 5.7% precept PA students. The average number of each type of student for CNMs who precept ranges from 1 to 1.8. Respondents who are dual-certified most often precept CNM students (54.0%), followed by MD students (37.8%) and NP students (32.7%), with only 6.2% precepting PA students. The average number of students per month among NP-CNMs who precept ranges from 1 to 4.9 for each profession.

Table 4.12: Students precepted by employed NPs and CNMs residing in California, 2017

	NP only	CNM only	Dual-certified
Share of those responding who precept NP students	**53.0%**	**19.9%**	**32.7%**
Average number of NP students per month	**2**	**1**	**3.1**
Number of cases	241	15	30
Share of those responding who precept CNM students	**1.3%**	**62.9%**	**54.0%**
Average number of CNM students per month	**1**	**1.1**	**1.1**
Number of cases	6	51	48
Share of those responding who precept MD students	**9.4%**	**48.0%**	**37.8%**
Average number of MD students per month	**2.7**	**1.8**	**4.9**
Number of cases	35	36	34
Share of those responding who precept PA students	**4.8%**	**5.7%**	**6.2%**
Average number of PA students per month	**4**	**1**	**1**
Number of cases	25	4	6

Note: Total number of cases=669. No response was given by 392 APRNs; it is not known if these APRNs do any precepting, but it is likely that they do not.

NPs and CNMs were asked about barriers to precepting NP and/or CNM students from California-based APRN education programs; their responses are presented in Table 4.13. The most common barrier was a lack of time due to clinical demands, with more than half of those with solo NP and dual-certification reporting this barrier. The second-most important barrier was administrative constraints on accepting students to precept, with around 30% of respondents reporting this barrier. Other important barriers included a lack of physical space for students, a lack of interest in precepting, and that "too much paperwork" is required to precept. There was notable variation in reporting competition for precepting space from non-NP/CNM students across the certification types. Few NPs reported such competition (4.7%), but nearly one-quarter of CNMs (24.4%) and 17.1% of NP-CNMs reported competition from non-APRN students. A small number of respondents indicate that they precept students in distance-based programs based outside California, but these account for fewer than 1% of NPs and CNMs.

Table 4.13: Barriers to precepting students from California-based NP and CNM programs, for employed NPs and CNMs residing in California, 2017

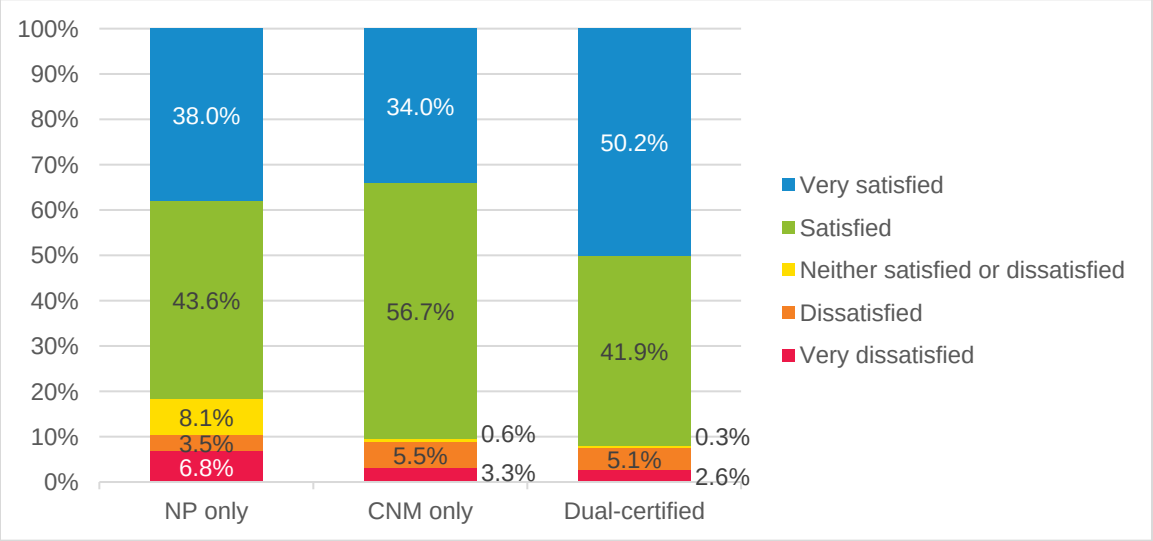
	NP only	CNM only	Dual-certified
Lack of time due to clinical demands	52.2%	43.9%	50.9%
Administrative constraints on accepting students	30.8%	30.2%	28.8%
Lack of physical space for students	20.9%	16.1%	16.3%
Not interested in precepting	14.9%	14.9%	16.2%
Too much paperwork required	7.8%	5.3%	10.7%
Competition for spots from non-NP/CNM students	4.7%	24.4%	17.1%
Not qualified/no experience	3.5%	7.8%	4.7%
Competition from out-of-state programs	0.9%	4.1%	7.9%
Not enough students asking for it	2.4%	1.9%	1.1%
Have not been asked	2.3%	1.5%	0.3%
Physicians oppose or employer does not allow	0.8%	3.2%	1.1%
Rural location of practice – no students nearby	0.6%	2.2%	0.3%
Takes out-of-state students	0.4%	1.4%	0.0%
Other	5.7%	10.2%	6.3%
Total number of cases	739	102	110

Note: Responses do not add to 100% because respondents could select more than one reason.

Satisfaction with APRN Career

APRNs were asked about their overall satisfaction with their NP/CNM career. As seen in Figure 4.6, most NPs and CNMs employed in APRN positions were satisfied with their careers. However, 10.3% of NPs, 8.8% of CNMs, and 7.7% of dual-certified NP-CNMs indicated they were dissatisfied with their APRN careers; 8.1% of NPs reported a neutral level of satisfaction.

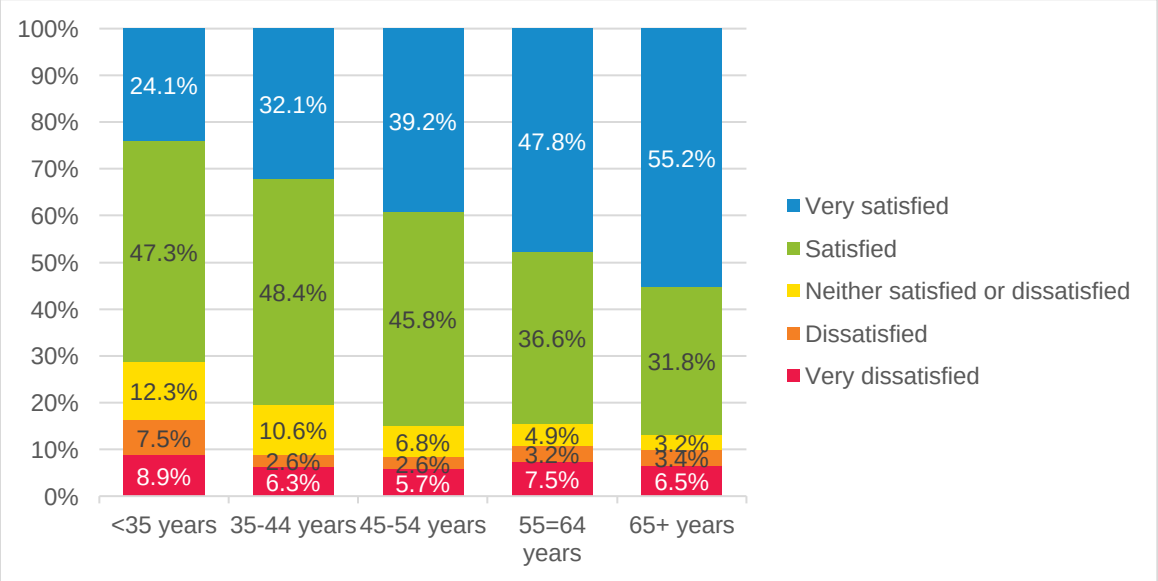
Figure 4.6: Satisfaction with overall APRN career, for employed NPs and CNMs residing in California, 2017



Note: Total number of cases=1,023. Data are weighted to represent all NPs and CNMs with active licenses.

Career satisfaction of NPs currently employed as APRNs varies by age group, as seen in Figure 4.7. Older NPs are notably more satisfied with their careers than younger NPs, with more than 84% of NPs 45 years and older being satisfied or very satisfied, compared with only 71.4% of NPs under 35 years old. The share of NPs reporting being “very satisfied” rises consistently with age. Conversely, 16.4% of NPs younger than 35 years old indicate they are dissatisfied with their NP career, compared with less than 11% of all other age groups.

Figure 4.7: Satisfaction with overall APRN career, for employed NPs residing in California, 2017



Note: Total number of cases=788. Data are weighted to represent all NPs and CNMs with active licenses.

Changes in Employment and Future Plans

APRNs were asked about employment status changes in the past three years. Around 40% of NPs, 31.7% of CNMs, and 35.4% of NP-CNMs reported no change in their employment. The most common changes reported were a change of employers, increasing hours worked, and decreasing hours worked. In addition, about 10% of NPs and CNMs and 7.4% of those dual-certified said their practice added services. Nearly 10% of NPs indicated they had changed their role at the same employer, as had 8.1% of CNMs; however, only 4.3% of NP-CNMs reported this type of change.

Table 4.14: Change in APRN employment over the past three years, for employed NPs and CNMs residing in California, 2017

Type of employment change	NP only	CNM only	Dual-certified
No change in NP/CNM employment	40.2%	31.7%	35.4%
Increased NP/CNM hours	17.6%	16.2%	24.9%
Decreased NP/CNM hours	11.7%	16.3%	13.2%
Changed employer(s)	30.2%	27.4%	29.0%
Added services in a practice	10.1%	10.4%	7.4%
Ceased offering specific services	1.3%	3.0%	4.9%
Closed practice(s)	1.7%	2.4%	3.9%
Opened practice(s)	1.0%	4.4%	2.1%
Changed roles at same employer	9.6%	8.1%	4.3%
Other	7.2%	17.4%	10.3%
Number of cases	779	112	117

Note: Columns do not total 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

NPs and CNMs were asked about their employment plans for the next five years. As seen in Table 4.15, at least half of each type of APRN plans to work approximately as much in 5 years as they do now. Nearly equal shares of NPs indicate they plan to reduce versus increase their hours of work, while more CNMs and dual-certified NP-CNMs plan to reduce hours as compared with increase hours. Nearly 20% of CNMs plan to retire in the next 5 years, as do 20.9% of NP-CNMs. This is consistent with the older age distribution of CNMs and NP-CNMs (Figure 2.2). Nearly 9% of NPs indicated they plan to move out of California for APRN work, and 1.4% plan to leave nursing work entirely but not retire. Only 5.6% of CNMs plan to leave California for APRN work, and only 2.3% plan to leave nursing without retiring. Less than 1% of dual-certified NP-CNMs plan to move out of California or leave nursing without retiring.

Table 4.15: Plans for next five years in APRN employment, for employed NPs and CNMs residing in California, 2017

Plans for next five years	NP only	CNM only	Dual-certified
Plan to increase hours of APRN work	13.4%	8.2%	14.5%
Plan to work approximately as much as now	61.8%	49.7%	53.1%
Plan to reduce hours of APRN work	14.4%	22.4%	19.8%
Plan to leave nursing entirely but not retire	1.4%	2.3%	0.0%
Plan to retire	11.5%	19.7%	20.9%
Plan to move to another state for NP/CNM work	8.7%	5.6%	0.6%
Number of cases	799	113	120

Note: Columns do not total 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

Table 4.16 explores the employment intentions of NPs and CNMs by age group, combining all three groups of certification type. Among NPs and CNMs under 35 years old, 60.7% plan to work approximately as much as they do now and approximately equal shares plan to increase or reduce their hours (18.2% and 18.3%). The share of APRNs among those 35-54 years old that plans to increase hours of APRN work is greater than the share that plans to reduce hours of work; this pattern reverses for those 55 years and older. About 55% of employed APRNs 65 years and older plan to retire in the next five years, as do 28.1% of APRNs 55 to 64 years. The share of APRNs that plan to move to another state for NP or CNM work is highest for those 35 years and younger (12.5%) and decreases consistently with age. Similarly, the share that plans to leave nursing but not retire is highest for those under 35 years (4.1%). Altogether, 16.7% of APRNs 35 years and younger plan to leave APRN practice in California, which may be cause for concern.

Table 4.16: Plans for next five years in APRN employment by age group, for employed NPs and CNMs residing in California, 2017

Plans for next five years	<35 years	35-44 years	45-54 years	55-64 years	65+ years
Plan to increase hours of APRN work	18.2%	15.7%	17.1%	7.2%	3.4%
Plan to work approximately as much as now	60.7%	68.3%	66.8%	57.2%	31.7%
Plan to reduce hours of APRN work	18.3%	13.0%	13.1%	14.7%	20.2%
Plan to leave nursing entirely but not retire	4.1%	1.2%	0.3%	1.5%	<0.1%
Plan to retire	0.1%	0.0%	3.8%	28.1%	54.8%
Plan to move to another state for NP/CNM work	12.5%	10.1%	8.0%	6.5%	0.9%
Number of cases	124	253	233	267	155

Note: Columns do not total 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

Chapter 5: Characteristics of Nurse Practitioner Jobs

An estimated 12,587 individuals were employed in primary positions with the job title “nurse practitioner” in 2017, including both those with NP-only certification and dual certification. This chapter examines the characteristics of those holding primary jobs that have this title.

Demographic and Regional Distribution of NP Jobs

Nurse practitioners live and work throughout California. Figure 5.1 presents the residential distribution those with NP licenses, in total and by employment status. The urban/rural distribution of employed NPs is similar to that of all certified NPs.

Figure 5.1: Regional residential distribution of certified NPs, employed NPs, and NP job titles, 2017

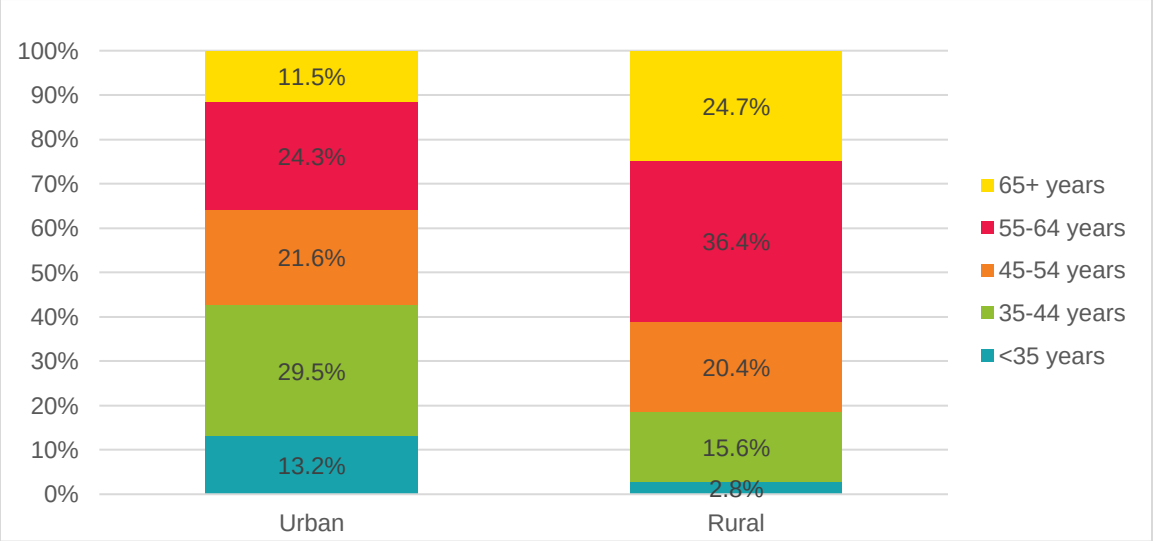
	All NP licenses	All Employed NPs	NP Job Titles
Isolated small rural	0.4%	0.4%	0.4%
Small rural	0.4%	0.4%	0.4%
Large rural	1.7%	1.6%	1.6%
Commute to urban	2.2%	2.1%	2.3%
Large urban	95.3%	95.6%	95.2%

Note: Number of cases for all licenses=1,271. Number of cases for employed NPs=947. Number of cases for NP job titles=802. Data are weighted to represent all NPs with active licenses.

Because the number of respondents living in each type of rural region is small, the rest of the tabulations in the paper combine large rural, small rural, and isolated small rural areas into a single “rural” group, and combine large urban and commuter areas into a single “urban” group.

Figure 5.2 presents the age distribution of those employed as NPs for urban and rural regions. NPs residing in urban locations are notably younger, on average, than those in rural areas. More than 60% of those with NP jobs in rural areas are 55 years and older, compared with only 36% of those in urban areas. Conversely, 13.2% of NPs in urban areas are under 35 years old, compared with 2.8% of those in rural areas.

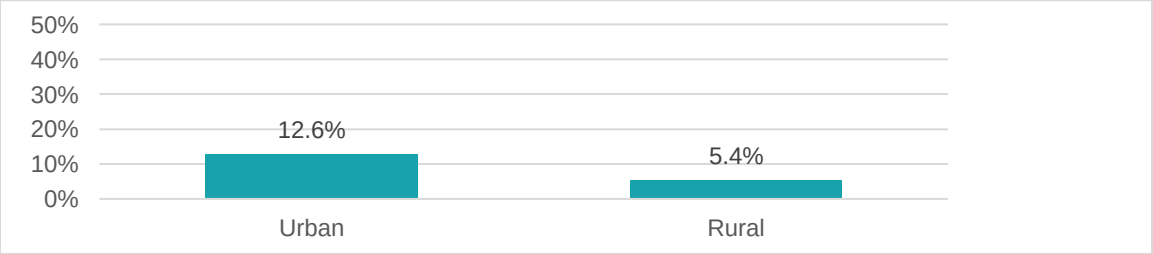
Figure 5.2: Age distribution of those employed as NPs, by urban and rural location, 2017



Note: Number of cases=802. Data are weighted to represent all NPs with active licenses.

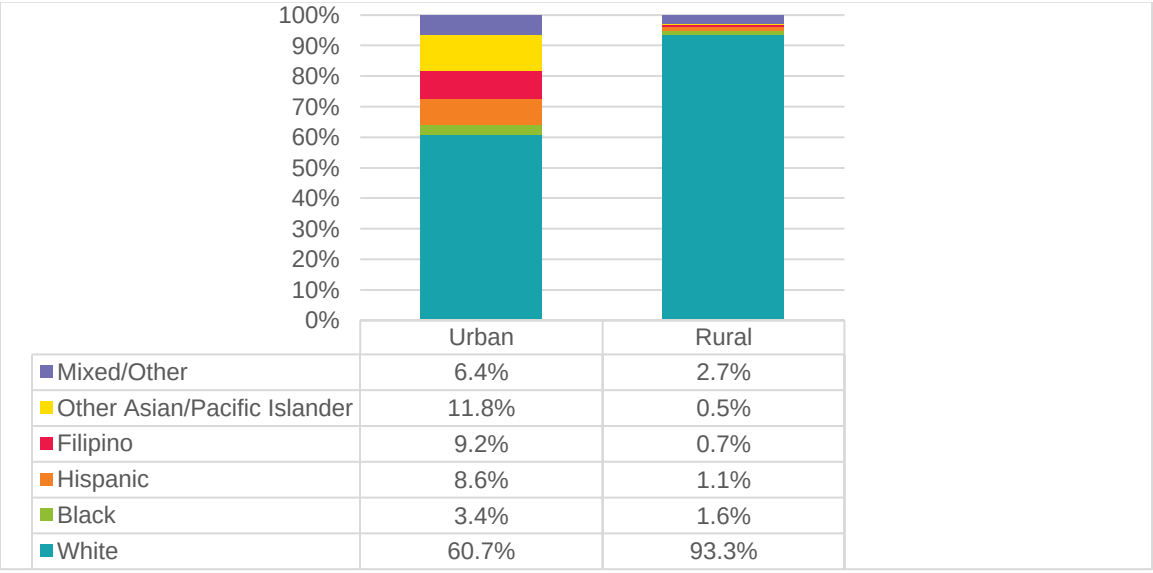
Those working as NPs in rural areas are less likely to be male, as compared with those employed in urban areas (Figure 5.3). They are also less racially and ethnically diverse, as seen in Figure 5.4. Only 6.7% of rural NPs are non-White, compared with 39.3% of urban NPs.

Figure 5.3: Percent male among those employed as NPs, by urban and rural location, 2017



Note: Number of cases=800. Data are weighted to represent all NPs with active licenses.

Figure 5.4: Racial/ethnic distribution of those employed as NPs, by urban and rural location, 2017



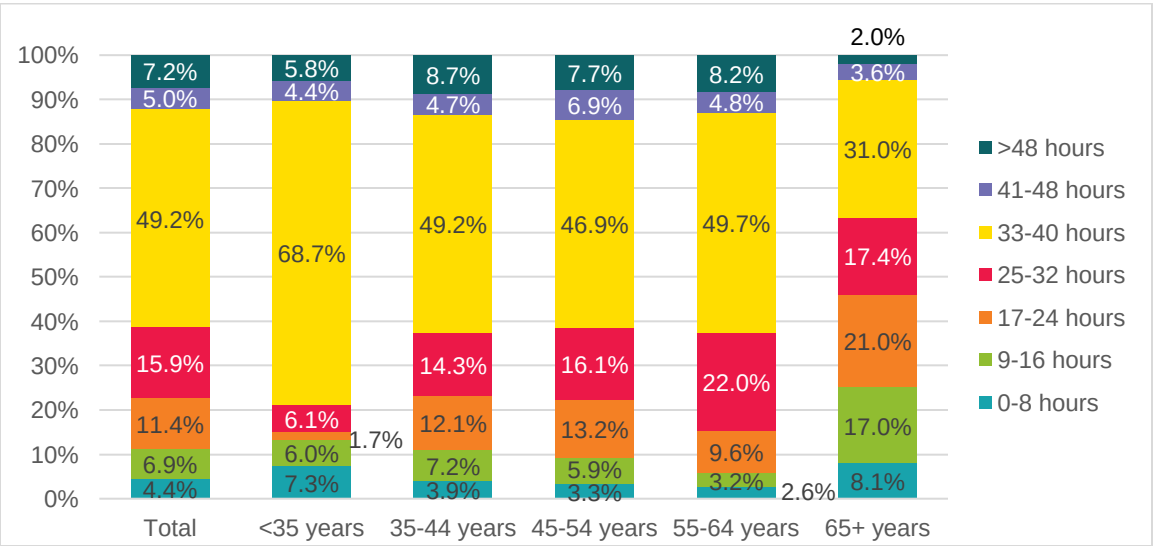
	Urban	Rural
Mixed/Other	6.4%	2.7%
Other Asian/Pacific Islander	11.8%	0.5%
Filipino	9.2%	0.7%
Hispanic	8.6%	1.1%
Black	3.4%	1.6%
White	60.7%	93.3%

Note: Number of cases=791. Data are weighted to represent all NPs with active licenses.

How Much Do Those in NP Jobs Work?

Nearly all NPs (95.5%) reported that they work 12 months per year if their primary position has an NP job title. The number of hours worked per week in primary NP jobs varies by age. Those under 35 years are much more likely to work at least 33 hours per week than those in all other age groups, with 78.9% working this much. About 10% of those under 35 years work more than 40 hours per week on average, which is lower than the shares for those 35-44 years old (13.4%), 45-54 years (14.6%), and 55-64 years (13.0%). Those under 35 years old are also more likely to work 16 or fewer hours per week as compared with those 35 to 64 years old. Those 65 years and older work notably fewer hours than all other age groups, with 46.1% averaging 24 hours per week or less.

Figure 5.5: Average hours worked per week in primary NP job, by age group, 2017



Note: Number of cases=792. Data are weighted to represent all NPs with active licenses.

Employment Settings and Clinical Fields of Those in NP Jobs

The employment settings of those with an NP job title employed in primary positions in California are presented in Table 5.1, and are compared with national data from the National Sample Survey of Nurse Practitioners (NSSNP) from 2012.[9] The most common employment setting for both California and national NP jobs is private physician-led practices with 24.7% of California NPs and 31.6% of national NPs in this setting. California NP jobs are more likely to be in HMO-based ambulatory care practices than are national jobs (9.5% vs. 1.1%, respectively), which is likely due to the size of the Kaiser Permanente health system. California NPs are also somewhat more likely than those in the rest of the nation to work in federally-funded and community health ambulatory care settings.

A smaller share of NP positions in California are in hospital settings than nationwide (25.7% vs. 31.6%, respectively). About 11% of NPs in both California and the nation are employed in outpatient services departments within hospitals. Small shares of NPs work in a variety of other settings, including extended/long-term care, correctional systems, and home health agencies.

Table 5.1: Work settings of those employed in NP positions, California 2017 and National 2012

	California 2017	National 2012
Ambulatory Setting	**61.1%**	**56.7%**
Private physician-led practice	24.7%	31.6%
HMO-based practice	9.5%	1.1%
NP/CNM-led health clinic	1.8%	0.6%
Private NP office/practice		4.1%
Community Health Center/FQHC	11.4%	10.7%
VA health center (outpatient)	1.1%	
Public Health clinic	1.0%	
Family Planning Center	1.7%	
Rural Health Center	2.5%	1.0%
Retail based clinic	1.3%	2.2%
Urgent Care	1.0%	1.8%
College health service	1.4%	2.2%
School-based health center	2.3%	
Home birth	0.2%	*
Ambulatory surgery center	*	0.5%
Other type of ambulatory care clinic	1.2%	0.8%
Hospital Setting	**25.7%**	**31.6%**
Hospital, acute/critical care	10.5%	13.4%
Hospital, outpatient services	10.6%	10.8%
Hospital, emergency room/urgent care	4.2%	3.0%
Hospital, labor and delivery	0.2%	4.4%
Hospital, other type of department	0.2%	
Long-Term and Elder Care	**2.6%**	**4.7%**
Extended care/long term facility	1.0%	3.4%
Hospice/Palliative care	0.8%	0.6%
Home Health agency	0.8%	0.7%
Other Type of Setting	**10.6%**	**7.1%**

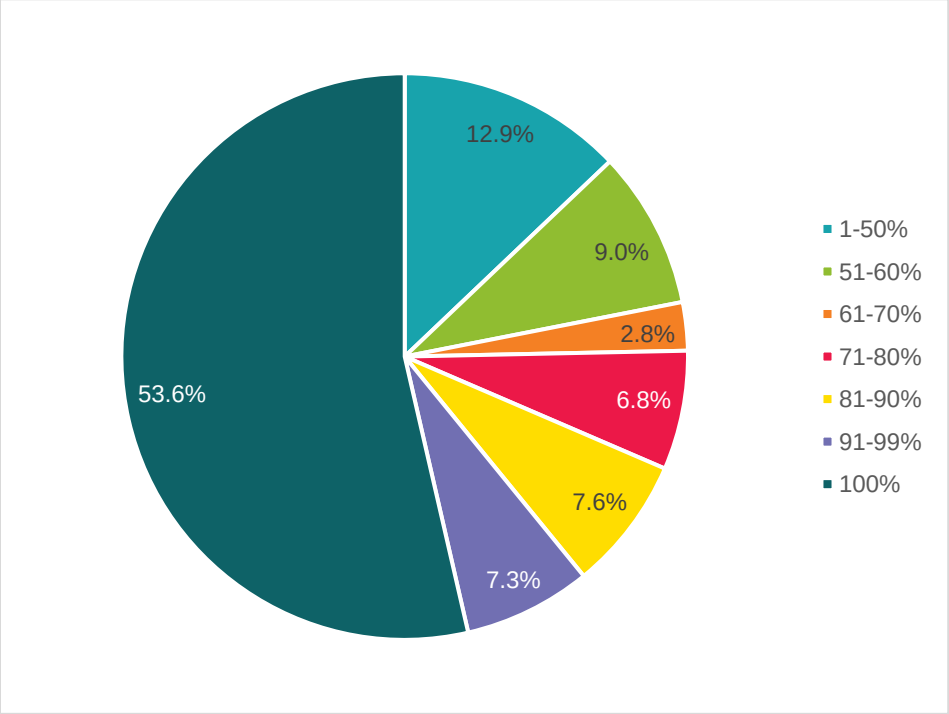
[9] Health Resources and Services Administration. 2014. Highlights from the 2012 National Sample Survey of Nurse Practitioners. Rockville, MD: Health Resources and Services Administration.

	California 2017	National 2012
Public Health Department	0.8%	1.3%
Correctional system	1.9%	0.8%
Academic education program	1.8%	3.1%
Occupational/Employee health center	1.2%	1.1%
HMO/Managed care company	1.3%	
Mental Health Facility	1.0%	0.8%
Other	2.6%	

Note: Number of cases=789. Data are weighted to represent all NPs with active licenses. * indicates that the item was not reported in the California survey or the NSSNP. Totals may be different by one decimal point due to rounding.

Respondents were asked if they provide primary care, involving common health problems and preventive measures, in their NP position. Among those employed with the job title of NP, 58.8% reported that they provide primary care (Figure 5.6). Among those, 53.6% reported that they spend 100% of their time delivering primary care, and another 7.3% provide primary care 91% to 99% of the time.

Figure 5.6: Percent of time providing primary care in a primary position with an NP job title, 2017



Note: Total number of cases=417. Data are weighted to represent all NPs with active licenses.

NPs were also asked in which clinical fields they practice (Table 5.2). Respondents could indicate multiple practice fields, leading to percentages that total more than 100% per position. Nearly 57% percent reported providing ambulatory/outpatient care, 16.9% gynecology/women's health, 11.5% geriatrics/gerontology, 9.5% each of newborn/pediatrics and psychiatry/mental health, and 9.1% community/public health. Among those who spend at least half of their time providing primary care, 71.1% reported providing ambulatory/outpatient care, 22.1% gynecology/women's health, 15.9% newborn/pediatrics, 15% community/public health, 9.8% endocrine/diabetes, and 8.8% psychiatry/mental health.

Table 5.2: Clinical fields in which direct patient care is most frequently provided in primary NP position, for all positions and for primary care focused positions, 2017

	All positions	50% or more time in primary care
Ambulatory/outpatient	56.8%	71.1%
Cardiology	7.0%	8.2%
Community/public health	9.1%	15.0%
Corrections/prison	2.3%	3.6%
Emergency/trauma	6.5%	3.8%
Endocrine/diabetes	6.7%	9.8%
Geriatrics/gerontology	11.5%	16.3%
Gynecology/women's health	16.9%	22.1%
Home health	1.9%	2.8%
Hospice/palliative care	4.4%	4.9%
Intensive care/critical care	3.9%	1.2%
Medical-surgical	6.0%	4.4%
Neonatal intensive care	0.6%	0.4%
Obstetrics/intrapartum	4.3%	3.1%
Oncology	4.1%	0.9%
Orthopedics	3.5%	4.1%
Newborn/pediatrics	9.5%	15.9%
Psychiatry/mental health	9.5%	8.8%
School health (K-12 or college)	4.0%	7.0%
Surgery/pre-op/post-op/PACU/anesthesia	5.6%	3.6%
Other	11.0%	7.4%
Number of cases	787	412

Note: Data are weighted to represent all NPs with active licenses. Columns do not total 100% because respondents could select multiple items.

NPs were also asked how long they have held their current position(s). Table 5.3 details the average tenure in years with their current employer, for those with NP job titles. Average tenure was 6.9 years overall, and 7.5 years for positions with at least half time focused on primary care. Although average tenure was longer for primary care-focused positions, a higher share of people in these jobs had been there for one year or less (26.1% vs. 23.7%).

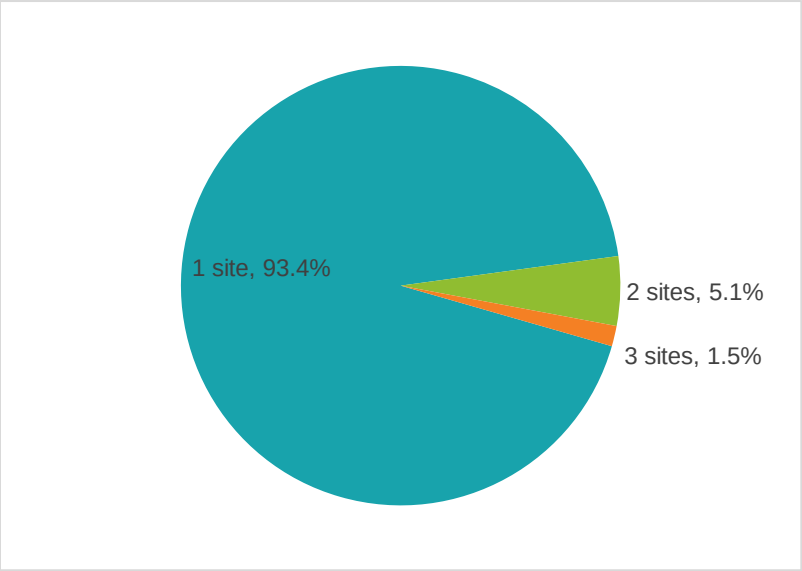
Table 5.3: Average years spent in current primary NP job, for all positions and for primary care focused positions, 2017

	All positions	50% or more time in primary care
1 year or less	23.7%	26.1%
2-3 years	21.6%	20.6%
4-5 years	13.0%	12.6%
6-10 years	15.2%	14.3%
11-15 years	10.0%	9.7%
16-20 years	7.8%	7.5%
21 or more years	8.8%	9.3%
Average number of years	**6.9**	**7.5**
Number of cases	476	244

Note: Data are weighted to represent all NPs with active licenses.

Respondents were asked to provide information about the location of the sites at which they practice for their primary position. Figure 5.7 presents the shares of those with NP job titles who reported only one practice site, 2 sites, and 3 sites. Few NPs reported more than one practice site, with only 5.1% reporting 2 sites and 1.5% reporting 3 sites. The shares reporting multiple practice sites were not different for those providing primary care at least half of their time or living in rural areas.

Figure 5.7: Number of practice locations for primary NP position, 2017



Note: Number of cases=753. Data are weighted to represent all NPs with active licenses.

NPs are compensated for their work in a variety of ways, as seen in Table 5.4. More than half of those working in primary positions with an NP job title reported that they are paid by the hour, day, or shift, regardless of whether their primary focus is primary care. About 37% report they are paid an annual salary. Seven percent of those focused on primary care and 5.4% of all NPs report they are paid a base salary with a bonus provided based on productivity or quality.

Table 5.4: Payment arrangements in current primary NP job, for all positions and for primary care focused positions, 2017

	All positions	50% or more time in primary care
Annual salary	37.6%	36.7%
By the hour / day / shift	51.8%	53.2%
Percentage of billing	2.3%	1.6%
Base salary with bonus	5.4%	7.1%
Per patient	1.2%	0.5%
Hourly/salary + share of billing	0.3%	0.5%
Practice owner / self-employed	0.4%	<0.1%
Other	1.1%	0.4%
Number of cases	800	414

Note: Data are weighted to represent all NPs with active licenses.

Earnings from primary positions with NP job titles are summarized in Table 5.5. NPs who provide primary care at least half of their time earn less than other NPs. Among all NP positions, those residing in urban areas average about $15,000 more per year than those living in rural areas.

Table 5.5: Earnings from current primary NP job, for all positions and for primary care focused positions, by urban/rural region, 2017

	All positions	Number of cases	50% or more time in primary care	Number of cases
Statewide	$111,890	730	$99,988	374
Urban	$112,261	575	$100,151	271
Rural	$97,267	155	$96,757	103

Note: Data are weighted to represent all NPs with active licenses.

Respondents were asked about specific obstacles they may have encountered to practicing as an NP in the last three years. Table 5.6 summarizes their responses. For all those in primary NP jobs statewide, 42.6% reported they had difficulty finding employment and 74.8% reported a lack of adequate mentoring. These obstacles were reported more often among rural NPs than urban NPs. NPs in primary care were more likely to report difficulty finding employment in urban areas, but less likely if they lived in rural areas. NPs in primary care were more likely to report a lack of adequate mentoring in general, and particularly if they lived in rural areas.

Table 5.6: Obstacles encountered in the past three years, for those employed in primary NP jobs, by urban/rural region, 2017

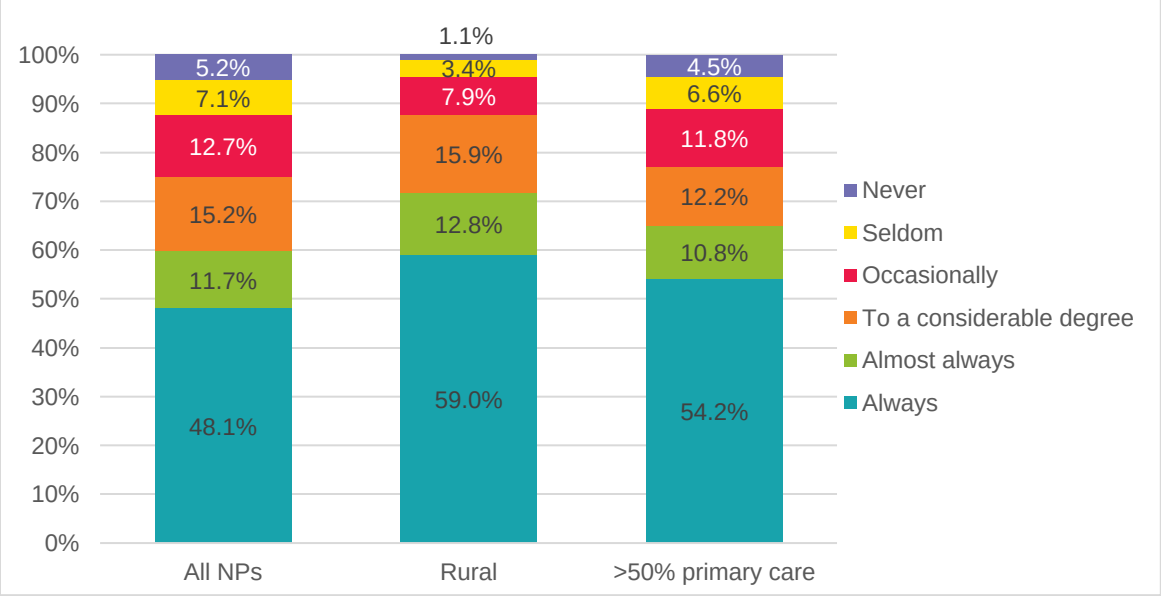
	Difficulty finding employment		Lack of adequate mentoring		
	All positions	50% or more time in primary care	All positions	50% or more time in primary care	Number of cases
Statewide	42.6%	44.3%	74.8%	75.9%	204 total; 108 primary care
Urban	42.5%	44.8%	74.7%	75.2%	176 total; 89 primary care
Rural	46.7%	28.1%	77.6%	96.1%	28 total; 19 primary care

Note: Number of cases=204. Data are weighted to represent all NPs with active licenses.

Patients Cared for by those in NP Jobs

NPs were asked several questions about the patients for whom they care. Figure 5.8 summarizes the degree to which those with the job title of NP in their primary position work with underserved populations. Statewide, 48.1% report working with underserved populations "always," and another 11.7% do so "almost always." The share that works with underserved populations is even greater in rural regions, with 59.0% always and 12.8% almost always doing so. Similarly, those who spend at least half their time providing primary care work with underserved populations more often than the statewide average, with 54.2% always and 10.8% almost always doing so.

Figure 5.8: Extent of work with underserved populations, for those employed as NPs, 2017



Note: Number of cases=779. Data are weighted to represent all NPs with active licenses.

Respondents were asked to estimate the shares of their patients covered by specified types of health insurance. The results for those whose primary job has an NP title are presented in Tables 5.7, 5.8, and 5.9. Table 5.7 provides statewide data, and demonstrates that 23.4% of NPs' think more than half of their patients are insured by Medicare, 28.1% report more than half of their patients are insured by Medicaid, and 14.1% believe more than half of their patients are uninsured.

Compared to the statewide average, NPs who live in rural regions are more likely to report that more than half of their patients are uninsured, at 19.3%. In addition, they more often reported that more than half their patients had private insurance (35.4% vs. 16.1%). NPs who provide primary care at least half of their time are notably more likely than all NPs to report that more than half their patients are insured by Medicaid (35.2%) or Medicare (26.6%), or be uninsured (19.3%).

Table 5.7: Estimated insurance coverage of patients at current primary NP job, 2017

Share of patients with coverage	Medicare fee-for-service	Medicaid fee-for-service	Private insurance	Other government program	Uninsured
None	10.1%	10.4%	27.9%	23.6%	14.0%
1-25%	37.2%	40.3%	38.2%	55.3%	44.7%
26-50%	29.3%	21.2%	17.8%	12.4%	27.2%
51-75%	11.3%	12.2%	7.1%	2.7%	3.7%
76-99%	8.7%	11.8%	7.5%	1.5%	5.8%
100%	3.4%	4.1%	1.5%	4.5%	4.6%

Note: Number of cases=569. Data are weighted to represent all NPs with active licenses.

Table 5.8: Estimated insurance coverage of patients at current primary NP job in rural regions, 2017

Share of patients with coverage	Medicare fee-for-service	Medicaid fee-for-service	Private insurance	Other government program	Uninsured
None	8.0%	7.6%	22.9%	17.1%	5.8%
1-25%	31.5%	47.5%	48.3%	73.7%	48.6%
26-50%	34.0%	26.0%	20.0%	3.9%	26.2%
51-75%	18.4%	12.7%	6.0%	1.0%	11.1%
76-99%	8.2%	6.3%	15.6%	1.7%	5.5%
100%	0.0%	0.0%	13.8%	2.7%	2.7%

Note: Number of cases=120. Data are weighted to represent all NPs with active licenses.

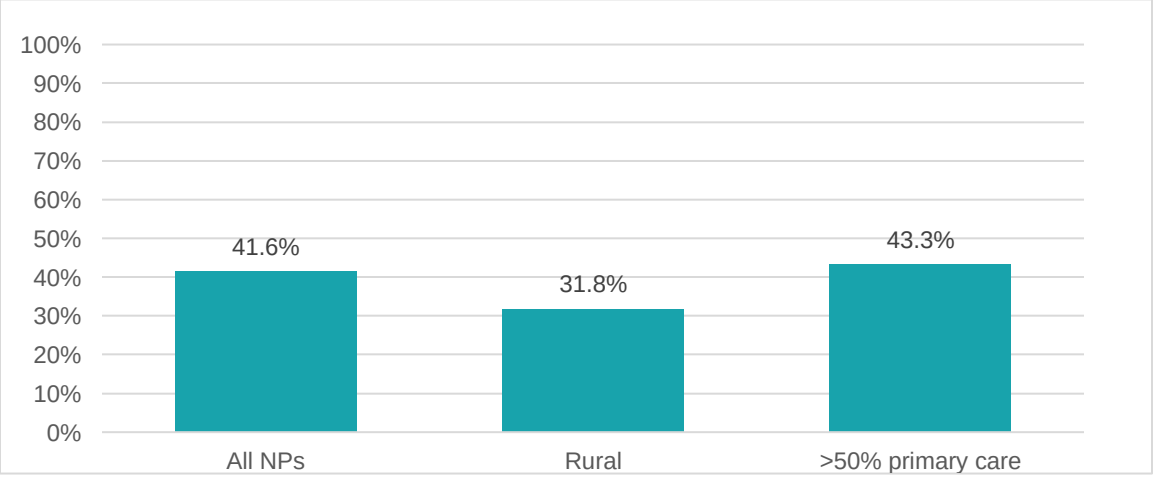
Table 5.9: Estimated insurance coverage of patients at current primary NP job if at least half of time is to provide primary care, 2017

Share of patients with coverage	Medicare fee-for-service	Medicaid fee-for-service	Private insurance	Other government program	Uninsured
None	10.6%	9.5%	32.5%	23.0%	14.9%
1-25%	35.7%	38.4%	38.3%	53.5%	43.2%
26-50%	28.0%	16.9%	13.5%	13.8%	26.4%
51-75%	11.1%	14.9%	7.4%	4.1%	2.9%
76-99%	11.3%	15.7%	7.3%	1.7%	6.4%
100%	3.3%	4.6%	1.1%	3.9%	6.1%

Note: Number of cases=277. Data are weighted to represent all NPs with active licenses.

NPs were asked to estimate the share of their patients that were members of a managed care plan or assigned to an accountable care organization (ACO), regardless of whether they were within Medicare, Medicaid, or private insurance (Figure 5.9). The average estimated share of patients in managed care or an ACO was 41.6% statewide. Unsurprisingly, the share was lower for NPs residing in rural areas, at 31.8%, as managed care plans are less common in rural regions. NPs who provide primary care at least half of their time reported a slightly higher share of patients in managed care and ACOs (43.3%).

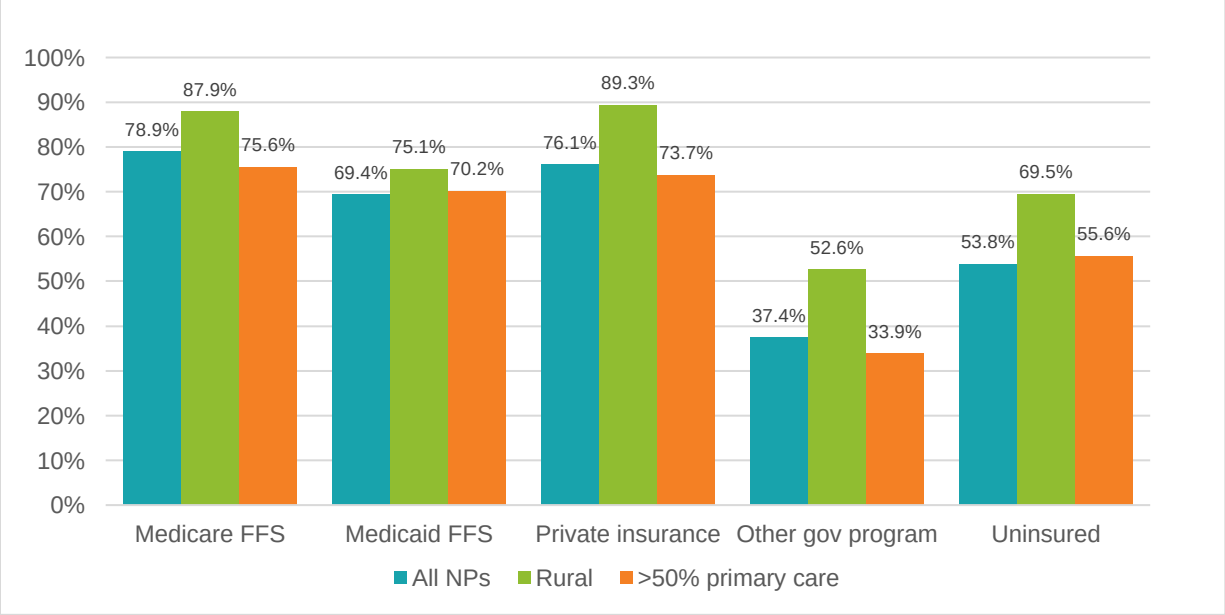
Figure 5.9: Average estimated percent of patients in a Managed Care plan or Accountable Care Organization (ACO), for any type of insurance program, for those employed as NPs, 2017



Note: Number of cases=779. Data are weighted to represent all NPs with active licenses.

More than three-quarters of NPs reported that their practices are currently accepting Medicare fee-for-service patients, as seen in Figure 5.10, with the percentage being higher for those in rural areas and slightly lower for those who spend at least half their time providing primary care. Similar percentages are currently accepting new privately-insured patients, but smaller shares are accepting Medicaid fee-for-service patients. A notably higher share of rural NPs reports they are currently accepting uninsured patients (69.5%) than are NPs in general (53.8%) or those who spend at least half their time providing primary care (55.6%).

Figure 5.10: Types of insurance for which new patients are currently accepted by the practice in which NPs are employed for their primary position, 2017



Note: Number of cases=728; 154 rural cases, 391 primary care cases. Data are weighted to represent all NPs with active licenses.

Practice Environment for Those in NP Jobs

NPs were asked to report the percent of time spent on each of several functions; these are reported for those whose primary job has the title of NP in Table 5.10. The data from 2017 are compared with a similar question in the 2012 NSSNP. In California, 85.9% of NPs indicated they spent more than 75% of their time on patient care activities, including patient teaching and documentation; this is similar to the national share of 89.6%. Nearly 94% of respondents in California and the U.S. spent 25% or less of their time doing management or administration activities. Few California NPs reported they spend any time teaching or precepting pre-licensure RN or advanced practice students; the national share involved in teaching appears larger, but the national survey combined pre-licensure and APRN teaching, in addition to including "orienting," in the item.

Table 5.10: Share of time spent on specific job functions in primary NP position, California 2017 & National 2012

Percent of time spent	0%	1-25%	26-50%	51-75%	76-100%
California, 2017					
Patient care	0.5%	1.0%	3.5%	9.2%	85.9%
Admin/ management	53.1%	40.6%	5.5%	0.6%	0.3%
Teaching/precepting pre-licensure nursing students	93.8%	6.2%	0.0%	0.0%	0.0%
Teaching/precepting NP/CNM students	84.6%	15.2%	0.2%	0.0%	0.0%
Research	91.2%	8.2%	0.4%	0.2%	0.0%
Other	96.0%	3.8%	0.0%	0.0%	0.2%
National, 2012					
Patient care	0.2%	2.8%	8.0%	18.1%	89.6%
Supervision/management/administration	47.9%	46.3%	4.4%	0.9%	0.6%
Teaching/precepting/orienting	29.0%	64.9%	5.4%	0.4%	0.4%

Note: Number of cases=779. Data are weighted to represent all NPs with active licenses.

Respondents were asked if they have a National Provider Identifier (NPI) number , which is used to bill Medicare and Medicaid. Among those whose primary job title is NP in California, 93.7% reported they have an NPI; nationally, the share was 95.4% in 2012. Within California, 40.4% of those with a primary job title of NP do not know how their services are billed to Medicare, and 38.2% do not know how they are billed to Medicaid (Table 5.11). Approximately 26% of NPs in California bill Medicare as the primary provider under their own NPI, and 27.8% bill Medicaid as the primary provider. Nationally, 37.9% report that their billing arrangement involves billing under their own NPI.

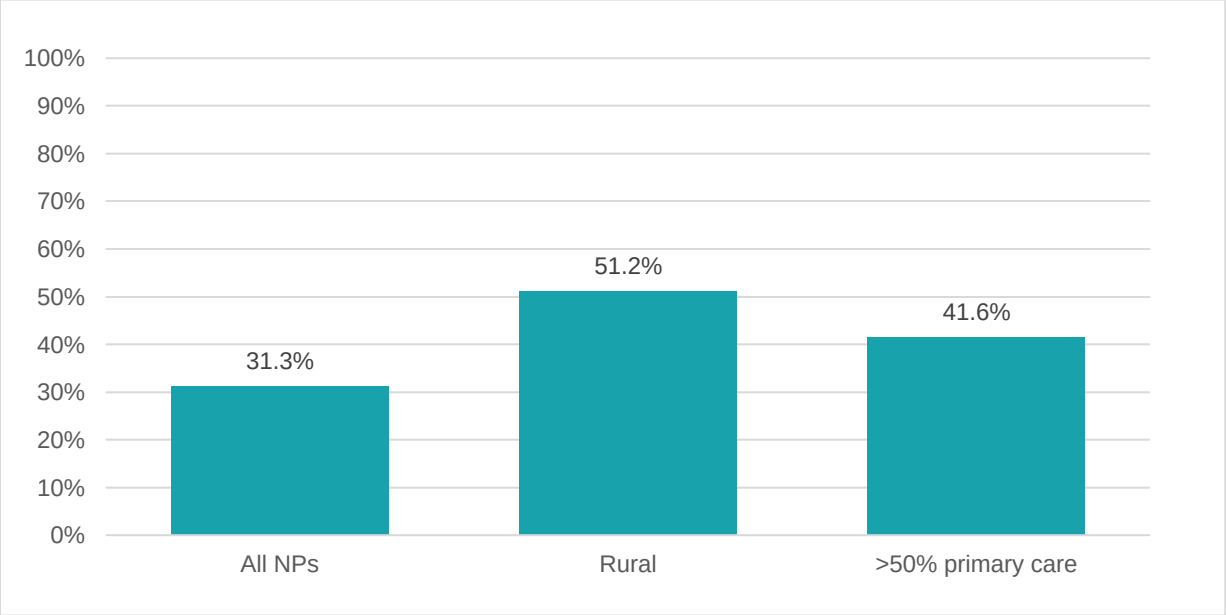
Table 5.11: How NP services for Medicare and Medicaid are billed, California 2017 & National 2012

	California, 2017		National, 2012
	Medicare	Medicaid	General billing
Bill as primary provider	25.9%	27.8%	37.9%
Incident to physician	21.6%	19.0%	23.0%
Don't know	40.4%	38.2%	*
Not applicable / other	13.8%	16.5%	17.5%
Bill under clinic/facility number	*	*	21.7%
Number of cases	669	645	10,209

Note: Columns may not total 100% because some respondents selected multiple items. Data are weighted to represent all NPs with active licenses. * indicate the item was not asked in the survey.

Nurse practitioners can be recognized by private insurance companies as primary care providers, which often facilitates direct billing for their services and their serving a specific panel of patients. As seen in Figure 5.11, only 31.3% of those with an NP position report they are recognized as a primary care provider. However, more than half of rural NPs (51.2%) are primary care providers in their primary NP position. Additionally, 41.6% of those who report they spend at least half their time providing primary care are recognized as primary care providers by private insurance companies.

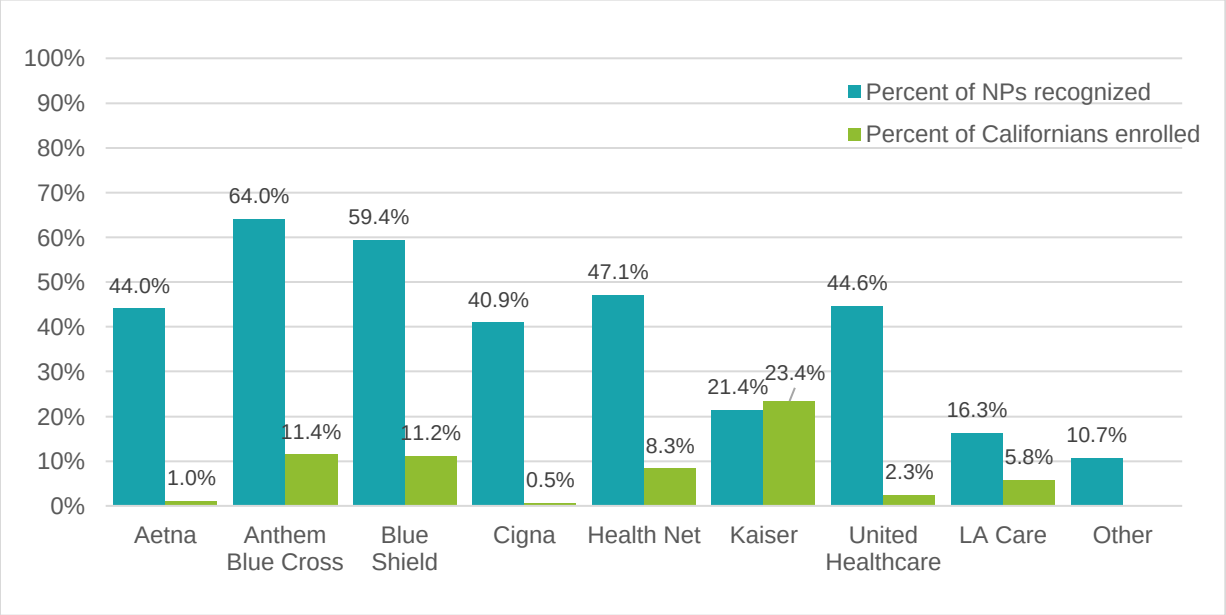
Figure 5.11: Recognition as a primary care provider by private insurance for those employed as NPs, 2017



Note: Number of cases=768; 163 rural cases, 405 primary care cases. Data are weighted to represent all NPs with active licenses.

Figure 5.12 reports the shares of those in NP jobs who report that specific insurance plans recognize them as primary care providers. Of those recognized as primary care providers, 64% are recognized by Anthem Blue Cross, 59.4% by Blue Shield, 47.1% by Health Net, 44.6% by United Healthcare, 44% by Aetna, and 40.9% by Cigna. Note that these percentages are only somewhat correlated with the overall share of the California insurance market held by these insurance companies. Aetna and Cigna insure relatively few Californians, but over 40% of NPs who are recognized as primary care providers by any plans are recognized by these plans. Kaiser Permanente enrolls about 23.4% of Californians, and 21.4% of NPs who are recognized as primary care providers by any plan say they are recognized by Kaiser, which would be tied to their employment by this organization since it is a group-model health maintenance organization.

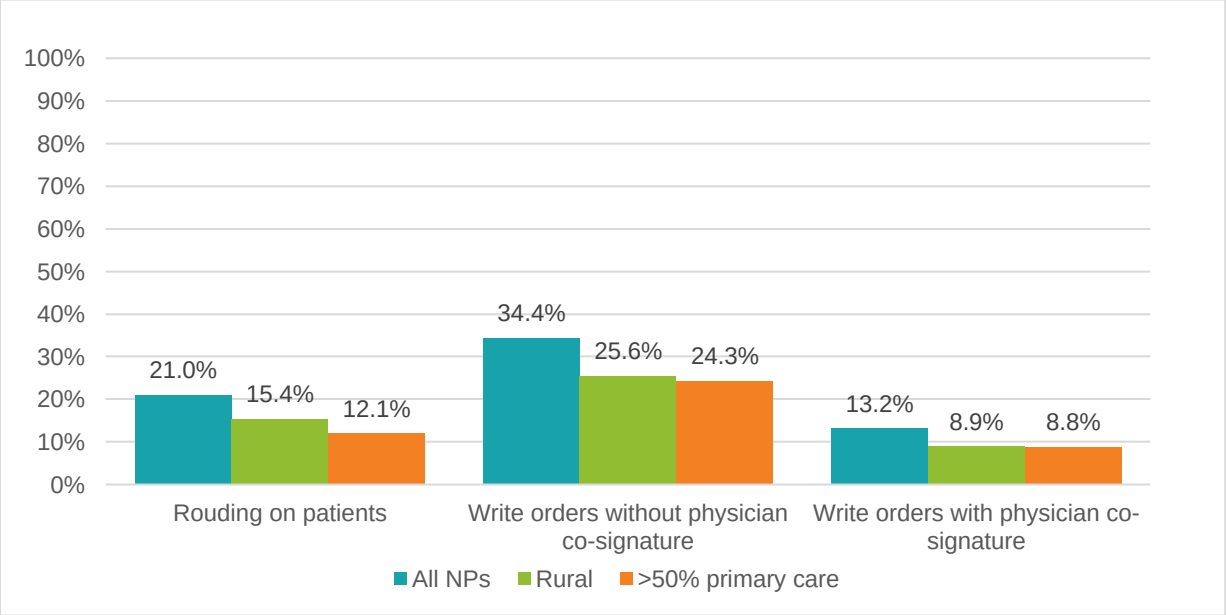
Figure 5.12: Recognition as a primary care provider by specific insurance plans for those employed as NPs, 2017



Note: Number of cases=227. Data are weighted to represent all NPs with active licenses.

Those employed with a job title of NP in their primary job are sometimes allowed some hospital privileges, as seen in Figure 5.13. Only 21% can round on patients in the hospital. It is not surprising that a smaller share (12.1%) of NPs who spend at least half their time providing primary care can round on hospital patients, since their practice is largely focused on the outpatient setting. Hospital orders can be written without a physician signature by 34.4% of those in NP jobs; this share is 25.6% for rural NPs and 24.3% for those spending at least half their time providing primary care. Smaller shares report they write hospital order with a physician co-signature.

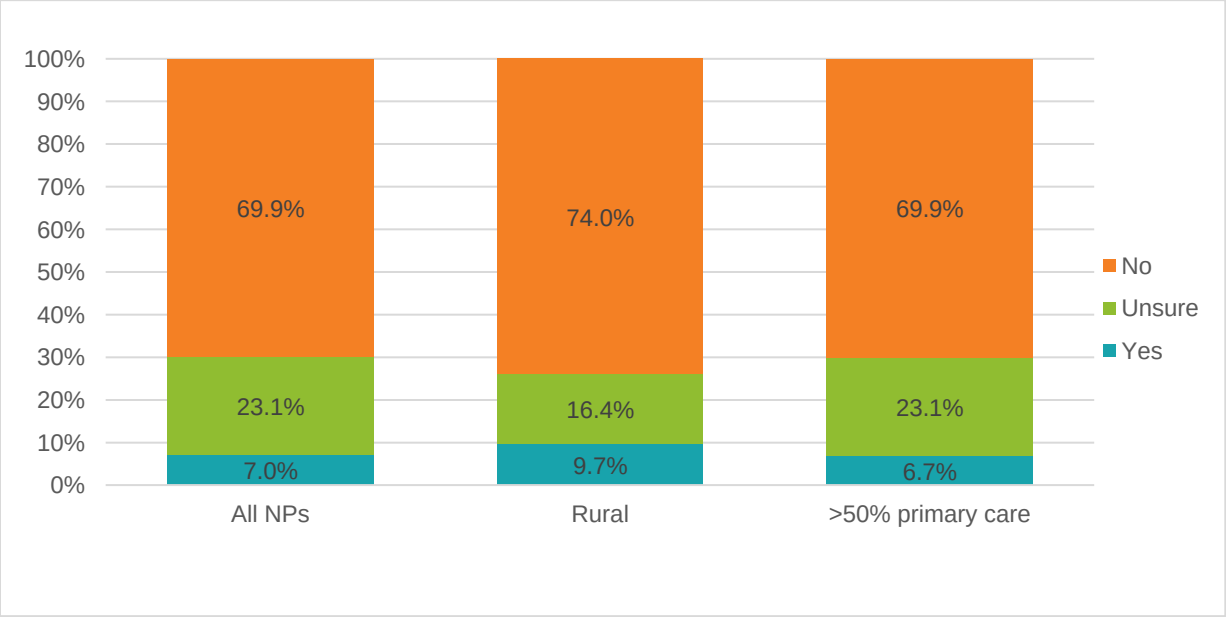
Figure 5.13: Hospital privileges for those employed as NPs, 2017



Note: Number of cases=802; 167 rural cases, 415 primary care cases. Data are weighted to represent all NPs with active licenses.

Buprenorphine is a medication used to treat opioid use disorder; since 2002, it can be prescribed in office-based care settings by a provider who has a waiver under the Drug Addiction Treatment Act (DATA) of 2000.[10] This prescribing was limited to physicians until passage of the Comprehensive Addiction and Recovery Act (CARA) in 2016, which allows nurse practitioners (NPs) and physician assistants (PAs) to obtain waivers.[11] The CARA stipulates that if a state requires physician oversight of NP/PA prescribing, that the physician must be certified in addiction psychiatry or medicine, completed training in MAT, or meet other specific qualifications. In this survey, NPs were asked if they were considering applying for a waiver to prescribe buprenorphine, since the final regulations for NP waiver applications had been released shortly before the survey. Only a minority of NPs intend to apply for waivers, as seen in Figure 5.14. Seven percent of all those working in NP jobs, 9.7% of rural NPs, and 6.7% of NPs spending at least half their time in primary care are considering applying. Another 23.1% statewide are unsure.

Figure 5.14: Interest in obtaining a DATA waiver to prescribe buprenorphine to treat opioid use disorder among those employed as NPs, 2017



Note: Number of cases=774; 162 rural cases, 409 primary care cases. Data are weighted to represent all NPs with active licenses.

[10] Rinaldo SG, Rinaldo DW. Availability without accessibility? State Medicaid coverage and authorization requirements for opioid dependence medications. American Society of Addiction Medicine;2013.

[11] S. 524: Comprehensive Addiction and Recovery Act of 2016. In. Whitehouse S, trans. U.S. Senate. Vol U.S. Senate. 114th Congress. 2016.

NPs were asked if they have a panel of patients for whom the NP is the main care provider and they manage on an ongoing basis. As seen in Table 5.12, only 38.2% of those whose primary job is as an NP reported they have a panel of patients. Nationally, 54.3% of NPs who provided patient care in the US in 2012 reported they had a panel of patients. California NPs living in rural areas were much more likely to report having a panel of patients (52.4%) as were those who spend at least half their time providing primary care (51.8%).

NPs who have patient panels were asked how many hours per month they provide care for their panel. The average was 88.3 hours statewide, 113.8 hours for rural NPs, and 88.7 hours for NPs spending at least half their time providing primary care. The share of hours NPs spend with their panel was greatest for rural NPs (70%).

NPs were asked how many patients are in their panel, if they have one. The average for all those in NP jobs was 564; it was higher for rural NPs (663) and those spending at least half their time providing primary care (662). The national average panel size in 2012 was 358, as reported in the NSSRN.

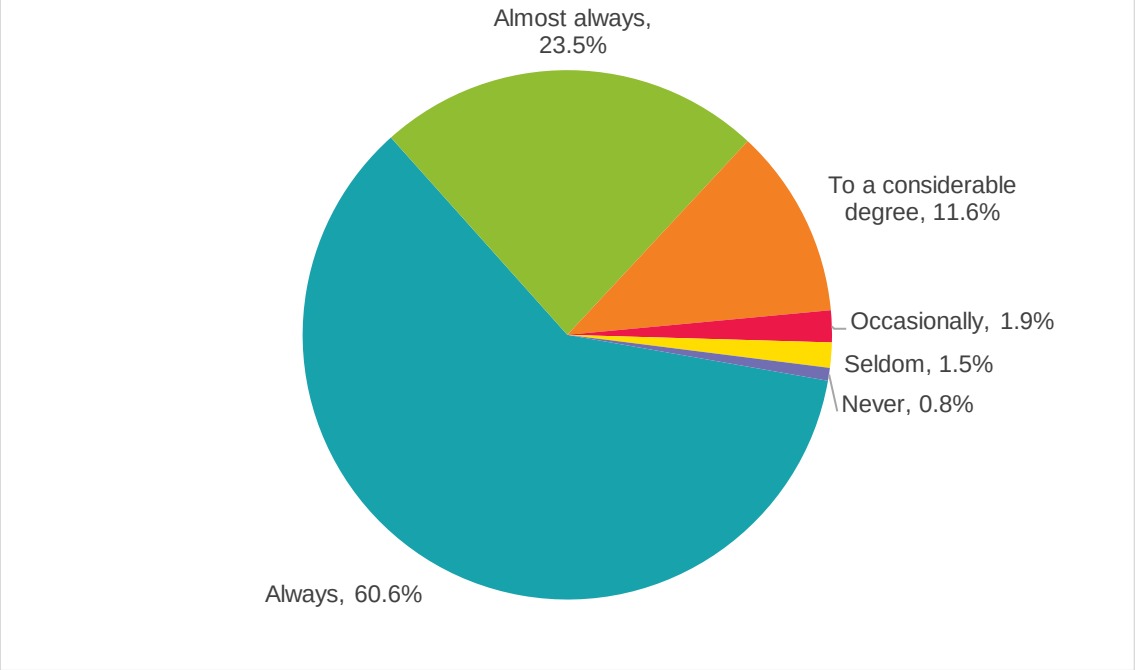
Table 5.12: Management of a panel of patients in current primary NP job, 2017

	All NPs	Rural	50% or more time in primary care
Has a panel of patients	**38.2%**	**52.4%**	**51.8%**
Mean number of hours per month with panel	**88.3**	**113.8**	**88.7**
Mean percent of hours per month	**59.8%**	**70.0%**	**61.4%**
1-10% of hours per month	7.2%	0.0%	5.2%
11-25% of hours per month	22.0%	14.1%	21.0%
26-50% of hours per month	11.5%	12.3%	12.5%
51-75% of hours per month	14.1%	20.0%	15.7%
76-90% of hours per month	6.1%	9.4%	7.2%
More than 90% of hours per month	39.1%	44.3%	38.5%
Number of cases reporting hours	246	71	174
Mean number of patients in panel	**564**	**663**	**662**
1-50 patients in panel	25.4%	10.2%	21.4%
51-100 patients in panel	16.6%	5.3%	16.1%
101-200 patients in panel	16.0%	15.6%	15.3%
201-500 patients in panel	6.7%	33.6%	5.7%
501-1000 patients in panel	21.0%	14.1%	23.7%
1001-2000 patients in panel	7.6%	18.4%	9.5%
More than 2000 patients in panel	6.7%	2.9%	8.4%
Number of cases reporting panel size	190	51	144

Note: Data are weighted to represent all NPs with active licenses.

Respondents were asked how often they were allowed to work to the full scope of their practice in their NP position (Figure 5.15). Over 60% of NPs reported they "always" work to the fullest legal scope, and another 23.5% say they "almost always" work to the fullest legal scope in their primary position. Only 4.2% reported they practice to the fullest legal scope of practice "occasionally," "seldom," or "never." The NSSRN asked the same question with different response categories, asking to what degree they agree that they can practice to their full legal scope of practice. In 2012, 88.1% of NPs in the US agreed or strongly agreed that they could practice to their full legal scope of practice.

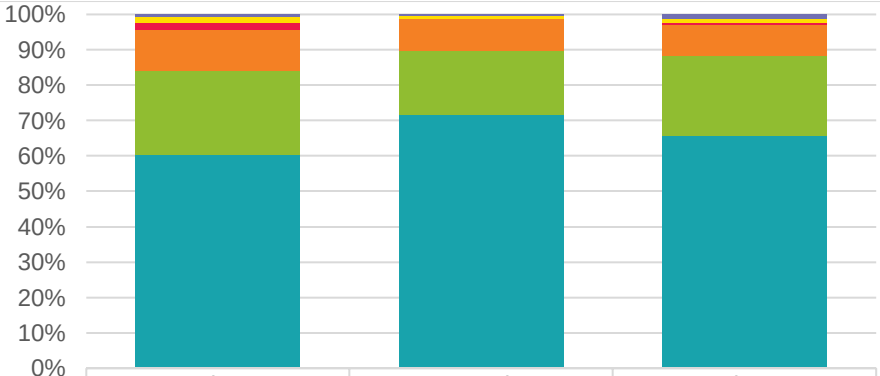
Figure 5.15: Degree to which those in NPs jobs are allowed to work to the fullest extent of the legal scope of practice in California, 2017



Note: Total number of cases=786. Data are weighted to represent all NPs with active licenses.

Those holding NP jobs in rural areas are more likely to report that they always work to the fullest extent of their scope of practice than do those in urban areas, as seen in Figure 5.16. Those working in jobs in which they spend at least half their time providing primary care also are more likely to report they always practice at the full legal scope than NPs in general (65.5% vs. 60.6%, respectively).

Figure 5.16: Degree to which those in NPs jobs are allowed to work to the fullest extent of the legal scope of practice in California, by geographic region and primary care provision, 2017

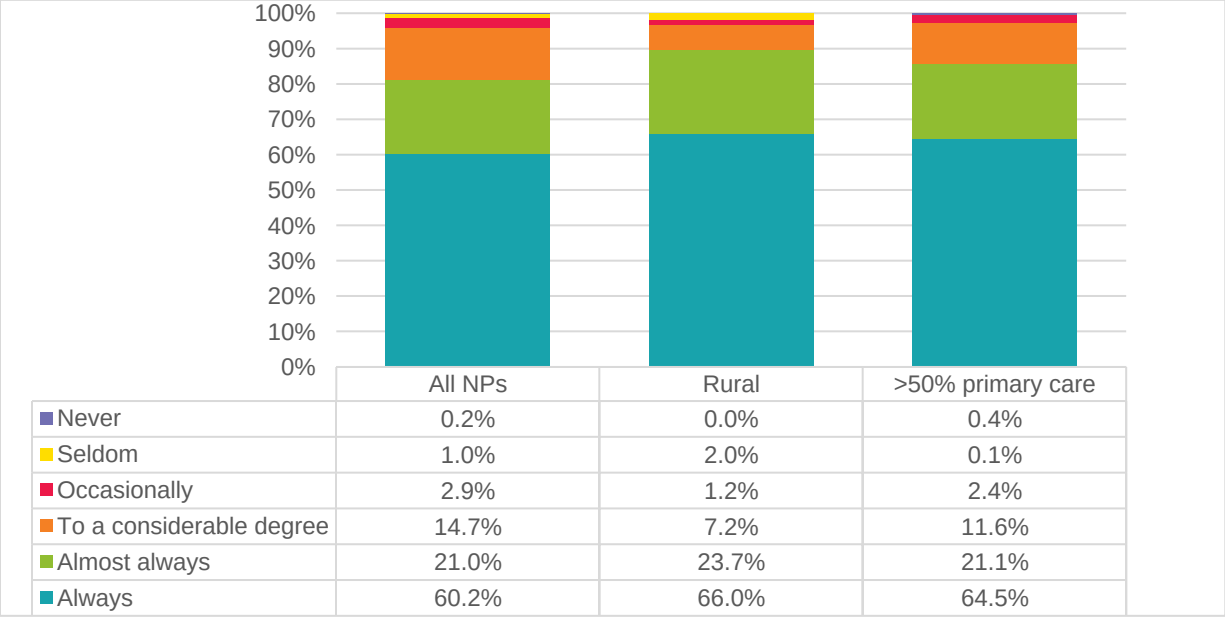


	Urban	Rural	>50% primary care
Never	0.8%	0.6%	1.2%
Seldom	1.6%	0.8%	1.1%
Occasionally	2.0%	0.0%	0.4%
To a considerable degree	11.7%	9.0%	8.9%
Almost always	23.7%	18.0%	22.9%
Always	60.3%	71.8%	65.5%

Note: Number of urban cases=623; 163 rural cases, 413 primary care cases. Data are weighted to represent all NPs with active licenses.

NPs were asked the extent to which they are using their skills fully (Figure 5.17). Statewide, 60.2% of those in NP jobs report they are always fully using their NP skills, and an additional 21% are almost always doing so. The share of rural NPs who believe they are fully using their skills is somewhat higher, with 66% saying they always and 23.7% saying they almost always do so. Similarly, those who spend at least half their time providing primary care more often say they are always (64.5%) or almost always (21.1%) fully using their skills as compared with the statewide average. The share of California NPs who believe that they always or almost always fully use their skills (81.2%) is similar to the national share of NPs that agreed or strongly agreed that their skills were fully utilized in 2012, which was 83.2%.

Figure 5.17: Degree to which those in NPs jobs are using their skills fully, 2017

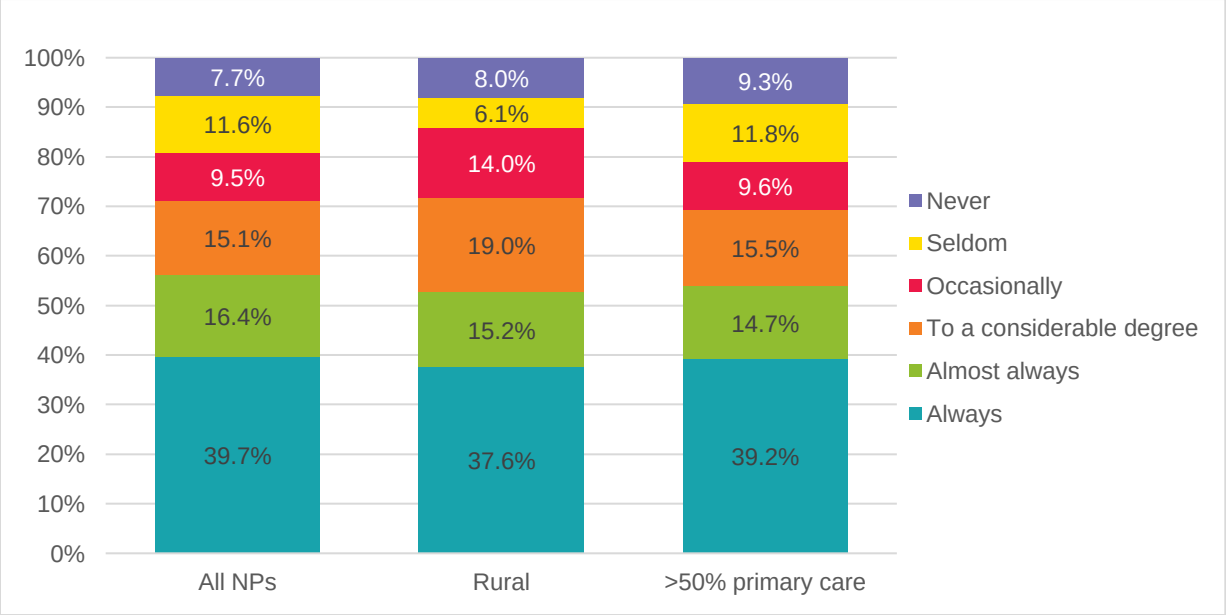


	All NPs	Rural	>50% primary care
Never	0.2%	0.0%	0.4%
Seldom	1.0%	2.0%	0.1%
Occasionally	2.9%	1.2%	2.4%
To a considerable degree	14.7%	7.2%	11.6%
Almost always	21.0%	23.7%	21.1%
Always	60.2%	66.0%	64.5%

Note: Number of cases=784; 164 rural cases, 412 primary care cases. Data are weighted to represent all NPs with active licenses.

NPs were also asked if they contributed to the development or revision of standardized procedures. Figure 5.18 reveals that more than half of NPs in jobs with an NP title are “always” (39.7%) or “almost always” (16.4%) involved in the development or revision of standardized procedures. Nearly 8% of NPs report never having a voice on these issues in their primary NP position.

Figure 5.18: Degree to which those in NPs jobs contribute to the development or revision of standardized procedures, 2017



Note: Number of cases=776; 161 rural cases, 409 primary care cases. Data are weighted to represent all NPs with active licenses.

Nurse practitioners were asked where their collaborating physician is located. California regulations do not require that collaborating physicians be on site with NPs. As seen in Table 5.13, collaborating physicians are most often on site with NPs, with similar shares statewide (72.6%), in rural areas (72.7%), and for NPs who spend at least half their time providing primary care (71.8%).

Table 5.13: Location of collaborating physician for primary NP job, 2017

	All NPs	Rural	50% or more time in primary care
At another practice/system than the NP’s	9.8%	8.6%	11.4%
At another site within the same practice	27.3%	31.5%	27.1%
On site with the NP	72.6%	72.7%	71.8%
Number of cases	784	163	409

Note: Data are weighted to represent all NPs with active licenses. Columns do not add to 100% because respondents could select more than one choice.

NPs were asked how frequently any physician is available on site to discuss patient problems as they occur. This question was also asked in the NSSNP in 2012; both California and national data are presented in Table 5.14. In California, about 7% of NPs statewide, in rural areas, and with a focus on primary care say a physician is never on site with them; this share is higher nationally, at 10.6%. In California, 52.5% of those in NP jobs report that a physician is nearly always on site, compared with 54.7% nationally. Rural NPs are less likely to report a physician is nearly always on site (48.1%).

Table 5.14: Frequency a physician is on site for consultation for primary NP job, California 2017 and US 2012

	California, 2017			US, 2012
	All NPs	Rural	50% or more time in primary care	All NPs
Never (0% of the time)	6.7%	7.0%	7.2%	10.6%
Seldom (1-25% of the time)	17.7%	16.5%	17.2%	16.2%
Sometimes (26-50% of the time)	10.3%	11.1%	10.8%	7.1%
Usually (51-75% of the time)	12.8%	17.3%	14.1%	10.6%
Nearly always (76-100% of the time)	52.5%	48.1%	50.7%	54.7%
Number of cases	786	165	412	10,739

Note: Data are weighted to represent all NPs with active licenses.

The California survey asked NPs to describe the relationship they have with physicians at their primary NP job. Respondents could select more than one option to describe their relationships. As seen in Table 5.15, the most often-reported relationship was that the physician is the medical director who oversees the practice, and all providers (including the NP) are responsible to the medical director (47.3%). NPs who spend at least half their time providing primary care were somewhat more likely to select this description (53.9%). At the same time, 42.2% of all those in NP jobs also described the relationship as “equal colleagues / no hierarchy.” Nearly half of rural NPs reported no hierarchy with physicians, as did 44.6% of those who provide primary care at least half of the time. Statewide, 16.5% of NPs reported that the relationship was hierarchical in which the NP must accept the clinical decisions of physicians, but this share was only 7.8% among rural NPs and 10.6% among those who provide primary care half or more of the time. About 11% of NPs reported that a physician sees and signs off on the patients the NP sees.

Table 5.15: Relationship with physicians at primary NP job, 2017

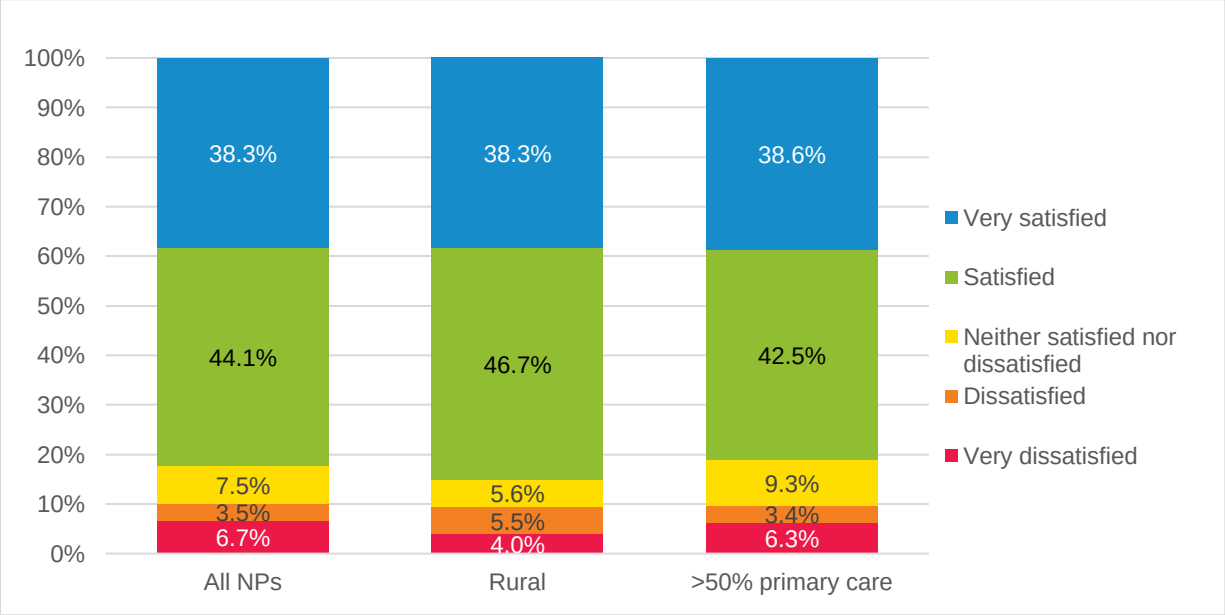
	All NPs	Rural	50% or more time in primary care
Equal colleagues / no hierarchy	42.2%	49.2%	44.6%
S/he is the medical director who oversees all of our practice and I am accountable to them, as are all other providers	47.3%	47.7%	53.9%
Hierarchical / supervisory in which I must accept his/her clinical decisions about the patients I see	16.5%	7.8%	10.6%
Physician sees and signs off on the patients I see	10.8%	5.9%	8.7%
Number of cases	777	162	408

Note: Data are weighted to represent all NPs with active licenses. Columns do not total 100% because respondents could select more than option.

Job Satisfaction of Those in NP Jobs

Those whose primary job has the title of NP are highly satisfied with their careers, regardless of whether they live in an urban or rural area, or whether they devote a high share of time to primary care (Figure 5.19). Among all NPs, about 38% are very satisfied with their career, and 44.1% are satisfied. However, 10.2% are dissatisfied or very dissatisfied with their NP career. This share is similar for those living in rural areas and those who spent at least half their time providing primary care.

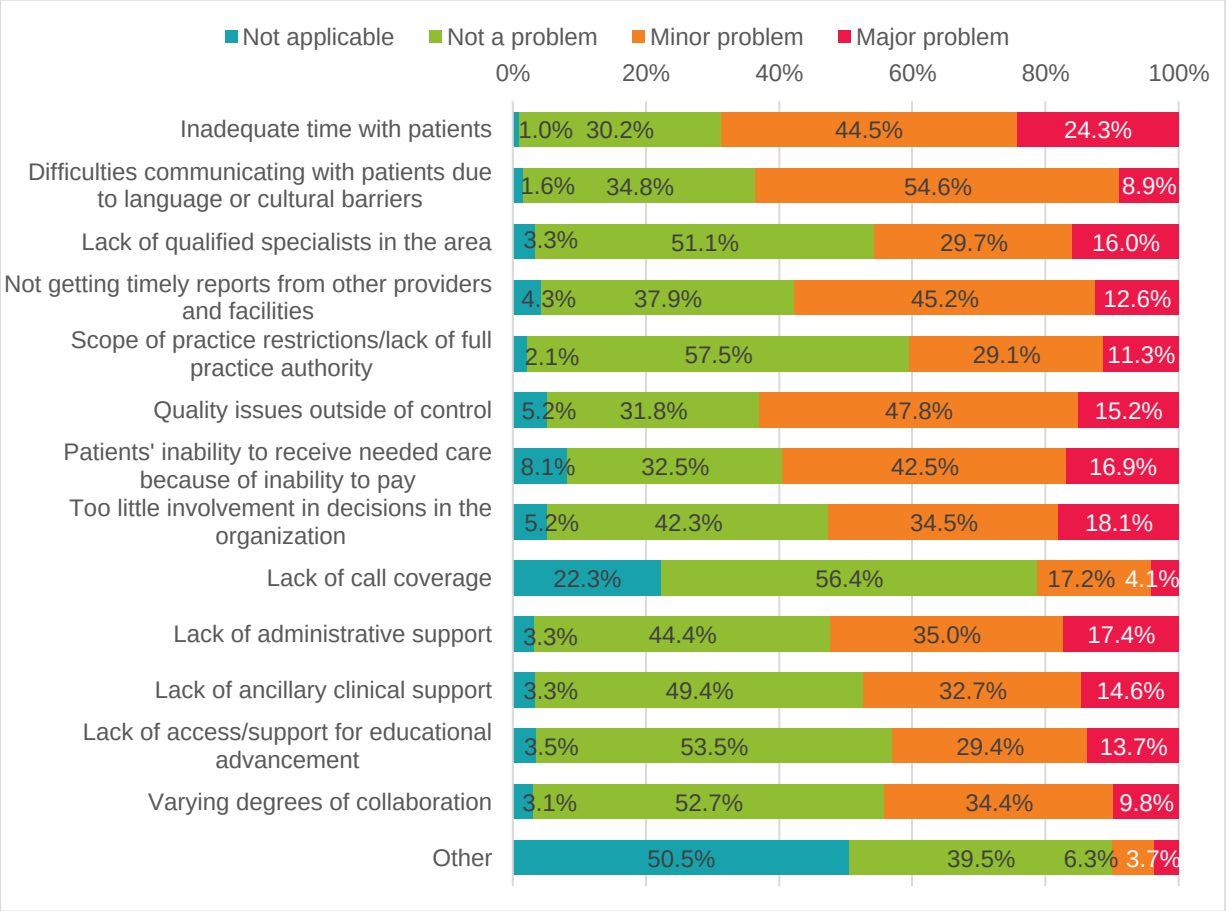
Figure 5.19: Overall satisfaction with NP career of those in NP jobs, 2017



Note: Number of cases=772; 157 rural cases, 398 primary care cases. Data are weighted to represent all NPs with active licenses.

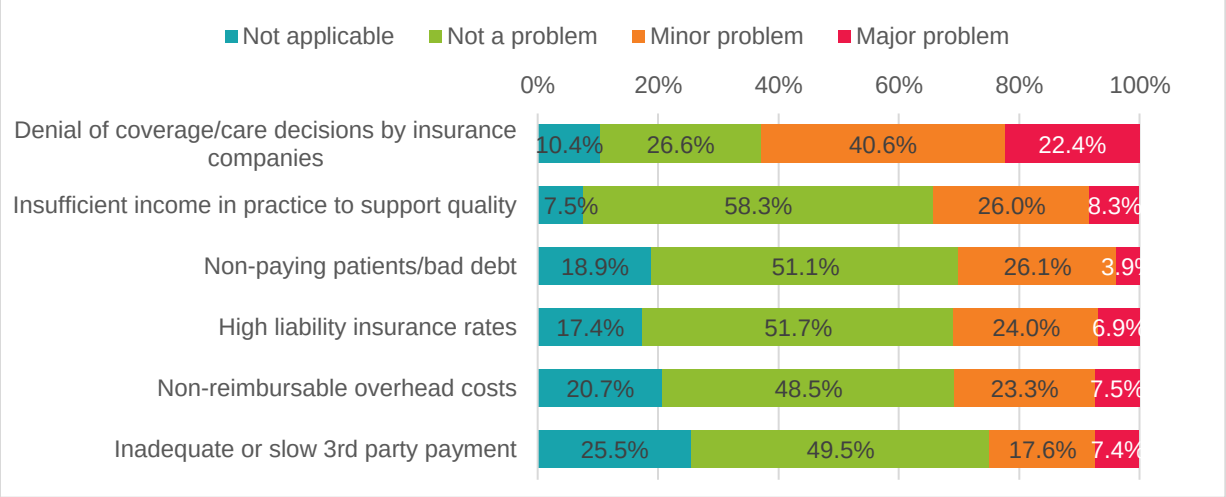
NPs were asked about factors that might affect their ability to provide high-quality care. The ratings of those whose primary position had an NP title are presented in Figures 5.20 and 5.21. The practice-related and patient-related factors most identified as a major problem were inadequate time with patients (24.3%), too little involvement in organization decisions (18.1%), lack of administrative support (17.4%), patients' inability to receive needed care because of inability to pay (16.9%), and lack of qualified specialists in the area (16%). The financial factors that are most often a major problem to providing high-quality care were denial of coverage decisions by insurance companies (22.4%); all other factors were much less of a problem than this. More than one-third of NPs reported that insufficient income in the practice to support quality, non-paying patients, high liability insurance rates, and non-reimbursable overhead costs were problems with respect to providing high-quality care.

Figure 5.20: Assessment of practice-related and patient-related factors that affect NPs' ability to provide high-quality care, for those in NPs jobs, 2017



Note: Number of cases=786. Data are weighted to represent all NPs with active licenses.

Figure 5.21: Assessment of financial factors that affect NPs' ability to provide high-quality care, for those in NPs jobs, 2017



Note: Number of cases=786. Data are weighted to represent all NPs with active licenses.

Table 5.16 reports the employment intentions of those whose primary job title is NP. Most of those in NP jobs (60%) plan to work approximately as much as now in 5 years. However, this is true for only 49% of rural NPs, and higher shares of rural NPs plan to retire (22.9% vs. 14.6%) or reduce their hours of work (25.4%). This is consistent with rural NPs being older, on average, than urban NPs. The employment intentions of those who provide primary care at least half the time are similar to those of the full population.

Table 5.16: Plans for next five years for those with NP jobs, 2017

Plans for next five years	All NPs	Rural	50% or more time in primary care
Plan to increase hours of APRN work	12.9%	6.6%	12.9%
Plan to work approximately as much as now	60.0%	49.0%	59.4%
Plan to reduce hours of APRN work	14.5%	25.4%	13.4%
Plan to leave nursing entirely but not retire	1.4%	0.5%	1.6%
Plan to retire	14.6%	22.9%	14.6%
Plan to move to another state for NP/CNM work	8.1%	7.4%	7.8%
Number of cases	781	163	410

Note: Data are weighted to represent all NPs with active licenses. Columns do not total 100% because respondents could select more than option.

The intentions of those employed in NP jobs for different age groups are presented in Table 5.17. NPs 65 years and older are most likely to retire (57.9%) in the next five years, although 32.1% plan to continue working approximately as much as now. Most of those 55 to 64 years old plan to work about the same amount (57.1%), but 27.6% plan to retire and 14.5% plan to reduce hours of work in the next five years. Among those under 35 years old, 13.4% plan to move to another state for work, and 10.8% of those 35 to 44 years old plan to move.

Table 5.17: Plans for next five years by age group for those with NP jobs, 2017

Plans for next five years	<35 years	35-44 years	45-54 years	55-64 years	65+ years
Plan to increase hours of APRN work	18.8%	15.5%	16.2%	8.0%	3.9%
Plan to work approximately as much as now	59.1%	68.7%	67.0%	57.1%	32.1%
Plan to reduce hours of APRN work	19.3%	12.5%	13.4%	14.5%	16.3%
Plan to leave nursing entirely but not retire	4.3%	1.3%	0.0%	1.6%	<0.1%
Plan to retire	0.0%	0.0%	4.3%	27.6%	57.9%
Plan to move to another state for NP/CNM work	13.4%	10.8%	8.1%	5.8%	0.7%
Number of cases	89	198	172	209	113

Note: Columns do not total 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

Chapter 6: Certified Nurse-Midwife Employment

There were 1,151 Certified Nurse Midwives residing in California in late 2016, of whom 569 also had NP certification. Approximately 792 of them were employed as an APRN in California in 2017, and 661 reported that their primary job was as a nurse-midwife. As seen in Table 6.1, among those with only CNM certification who were working as an APRN, 96.4% reported their job title was CNM; job titles for the remaining 3.6% included management and faculty titles. Among those with dual NP-CNM certification, 72.5% had the primary job title of CNM.

This chapter examines the employment of CNMs, with a focus on those whose primary positions were as a nurse-midwife. There were not sufficient data to examine the employment patterns of CNMs by rural versus urban residence. There was a relatively small number of CNMs employed in non-CNM positions in the data, and thus most tabulations focus only on those employed in CNM positions.

Table 6.1: Job title of primary APRN position of certified nurse-midwives and dual-certified NP-CNMs living in California, 2017

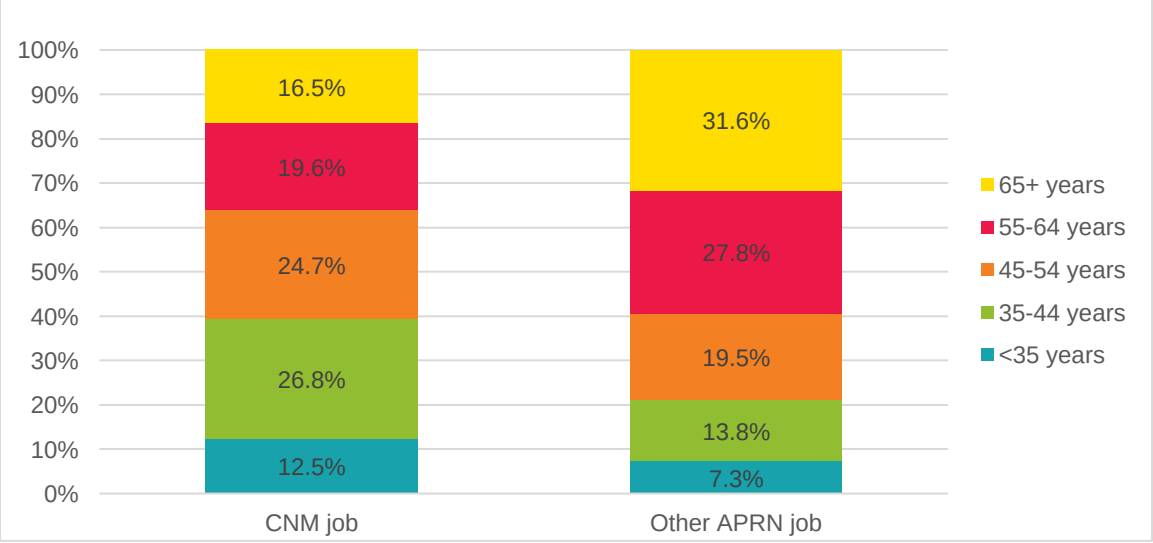
	CNM only	Dual-certified
Employed as nurse-midwife	350 96.4%	311 72.5%
Employed in other APRN role	13 3.6%	118 27.5%
Number of cases	114	124

Note: Data are weighted to represent all CNMs and NPs with active licenses.

Demographics of Employed CNMs

Figure 6.1 presents the age distribution of employed CNMs, for those with a primary job title of CNM and those without. The largest age group of those with CNM job titles is 35 to 44 years old (26.8%), followed by 45 to 54 years old (24.7%). The age distribution of CNMs employed in non-CNM jobs skews older than those working as CNMs.

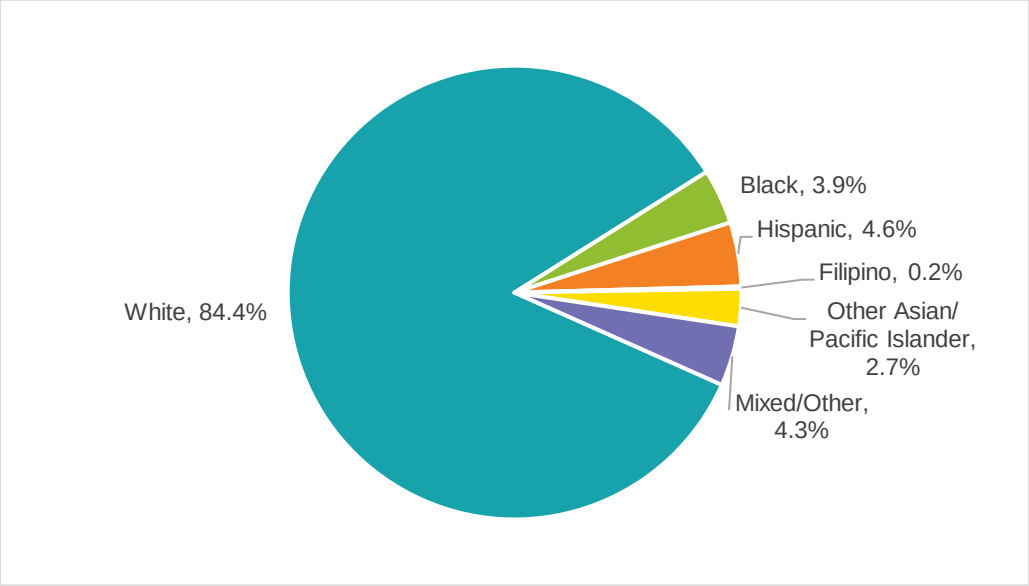
Figure 6.1: Age distribution of employed CNMs, by job title, 2017



Note: Number of cases=238. Data are weighted to represent all NPs with active licenses.

Nearly all employed CNMs (98.5%) are female. Those holding CNM jobs are predominantly White (84.4%), with only 4.6% Hispanic and 3.9% Black/African-American (Figure 6.2). There was not a sufficient number of observations to describe the racial-ethnic diversity of CNMs employed in other APRN positions.

Figure 6.2: Racial/ethnic distribution of those employed as CNMs, 2017

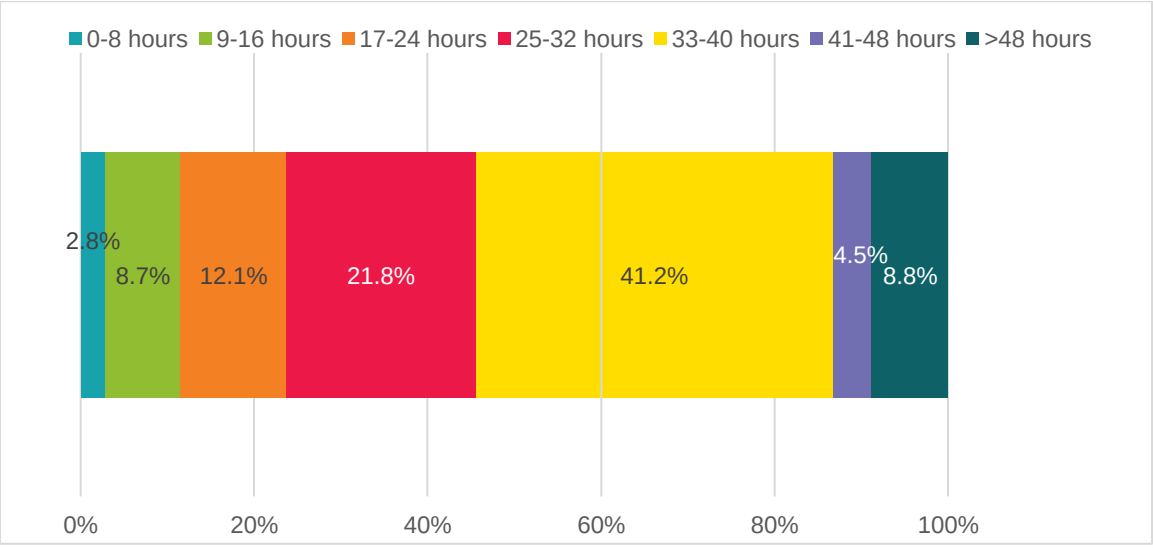


Note: Number of cases=197. Data are weighted to represent all CNMs with active licenses.

How Much Do Those in CNM Jobs Work?

Nearly all CNMs whose primary job title was nurse-midwife (97.6%) reported that they work 12 months per year. As seen in Figure 6.3, more than half of those in CNM jobs work at least 33 hours per week (54.5%); 8.8% report working more than 48 hours per week in their primary CNM job.

Figure 6.3: Average hours worked per week in primary CNM job, 2017



Note: Number of cases=197. Data are weighted to represent all CNMs with active licenses.

Employment Settings and Clinical Fields of Those in CNM Jobs

The employment settings of those employed in primary positions in California with a CNM job title are presented in Table 6.2. Respondents were asked to select the one setting in which they spend the most time. The most common employment setting for CNM jobs is labor and delivery within a hospital, with 36.9% of CNMs reporting this setting. The next most common settings were private physician led practices (12.3%) and community health centers or other public clinics (12.2%). Despite being asked to select only one setting, 11.3% of CNMs selected both hospital labor and delivery and an ambulatory setting, and wrote in the margin that they practiced equally in the clinic and in the hospital. Nearly 10% of CNM jobs were in a HMO-based practice, and 5% were in a VA health center outpatient department. Three percent of those employed in CNM positions indicated they primarily practice in freestanding birthing centers (1.8%) or performing home births (1.2%).

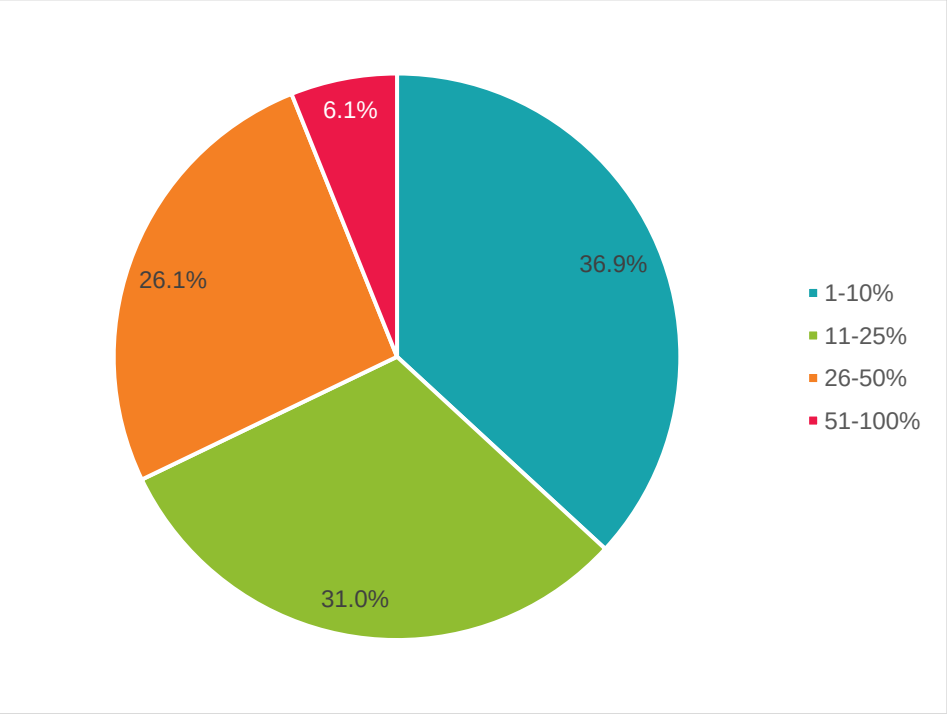
Table 6.2: Work settings of those employed in CNM positions, 2017

	Percent
Hospital Setting	**40.2%**
Hospital, labor and delivery	36.9%
Hospital, acute/critical care	1.4%
Hospital, emergency room/urgent care	0.5%
Hospital, outpatient services	1.4%
Hospital and non-hospital ambulatory setting	**11.3%**
Ambulatory Setting	**48.9%**
Private physician-led practice	12.3%
Community Health Center/FQHC/rural clinic/public clinic	12.2%
HMO-based practice	9.5%
VA health center (outpatient)	5.0%
NP/CNM-led health clinic	1.6%
Family Planning Center	1.5%
Other type of ambulatory care clinic	0.8%
Alternative birth sites	**3.0%**
Freestanding birthing center	1.8%
Home birth	1.2%
Other Setting	**2.6%**

Note: Number of cases=196. Data are weighted to represent all CNMs with active licenses. Other ambulatory settings include retail clinic, occupational health center, college health services, school-based health center, urgent care, and other settings with too few respondents to disaggregate.

Respondents were asked if they provide primary care, involving common health problems and preventive measures, in their CNM position. Among those employed with the job title of CNM, 46.9% reported that they provide primary care. Among those, 36.9% reported that they spend no more than 10% of their time delivering primary care (Figure 6.4), and another 31% provide primary care 11% to 25% of the time. Only 6.1% of CNMs spend more than half their time providing primary care.

Figure 6.4: Percent of time providing primary care in a primary position with a CNM job title and in which primary care is provided, 2017



Note: Total number of cases=81. Data are weighted to represent all NPs with active licenses.

CNMs were asked in which clinical fields they practice (Table 6.3). Respondents could indicate multiple practice fields, leading to percentages that total more than 100% per position. The vast majority (87.5%) indicated that they specialize in obstetrics and intrapartum care, and another 55.5% selected gynecology/women's health. Nearly 40% indicated their clinical specialties include ambulatory/outpatient care, and 10.9% included newborn/pediatrics as a clinical field in which they frequently practice.

Table 6.3: Clinical fields in which direct patient care is most frequently provided in primary CNM position, 2017

	Percent
Obstetrics/intrapartum	87.5%
Gynecology/women's health	55.5%
Ambulatory/outpatient	39.4%
Newborn/pediatrics	10.9%
Community/public health	4.9%
Surgery/pre-op/post-op/PACU/anesthesia	1.4%
Psychiatry/mental health	1.3%
Emergency/trauma	0.7%
Endocrine/diabetes	0.9%
Home health	0.9%
School health (K-12 or college)	0.5%
Other	1.6%
Number of cases	194

Note: Data are weighted to represent all CNMs with active licenses. Columns do not total 100% because respondents could select multiple items.

CNMs were also asked how long they have held their current position(s). Table 6.4 details the average tenure in years with their current employer, for those with CNM job titles. Average tenure was 8.2 years. More than half of CNMs had been with their employer for 5 years or less (52.5%).

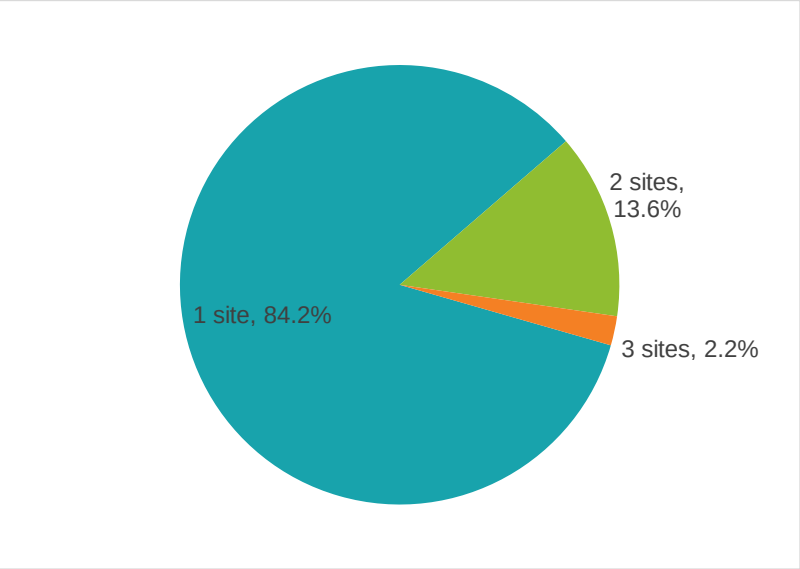
Table 6.4: Average years spent in current primary CNM job, 2017

	All positions
1 year or less	7.9%
2-3 years	29.9%
4-5 years	14.7%
6-10 years	17.8%
11-15 years	10.4%
16-20 years	7.5%
21 or more years	11.7%
Average number of years	**8.2**
Number of cases	139

Note: Data are weighted to represent all CNMs with active licenses.

Figure 6.5 presents the number of sites at which those with CNM job titles practice in their primary position. Most had only one practice site (84.2%), but this share is lower than for that with NP job titles (93.4%, see Figure 5.7). Among CNMs, 13.6% reported they practice at 2 sites in their primary position, and 2.2% reported they practice at 3 sites.

Figure 6.5: Number of practice locations for primary CNM position, 2017



Note: Number of cases=194. Data are weighted to represent all CNMs with active licenses.

CNMs are compensated for their work in a variety of ways, as seen in Table 6.5. More than half of those working in primary positions with a CNM job title reported that they are paid by the hour, day, or shift. Just over 30% report they are paid an annual salary. Nearly 10% report they are paid a base salary with a bonus provided based on productivity or quality. Earnings from primary positions with CNM job titles averaged $112,632.

Table 6.5: Payment arrangements in current primary CNM job, 2017

	Percent
Annual salary	30.6%
By the hour / day / shift	56.2%
Percentage of billing	0.9%
Base salary with bonus	9.6%
Per patient	0.6%
Hourly/salary + share of billing	0.2%
Practice owner / self-employed	1.1%
Other	0.8%
Number of cases	198

Note: Data are weighted to represent all CNMs with active licenses.

Respondents were asked about specific obstacles they may have encountered to practicing as a CNM in the last three years. Table 6.6 summarizes their responses. Of those who responded, 79.7% reported they had difficulty finding employment and 47.4% reported a lack of adequate mentoring. However, most CNMs did not answer this question, and it is possible that those who did not respond did not experience either of these difficulties.

Table 6.6: Obstacles encountered in the past three years, for those employed in primary CNM jobs, 2017

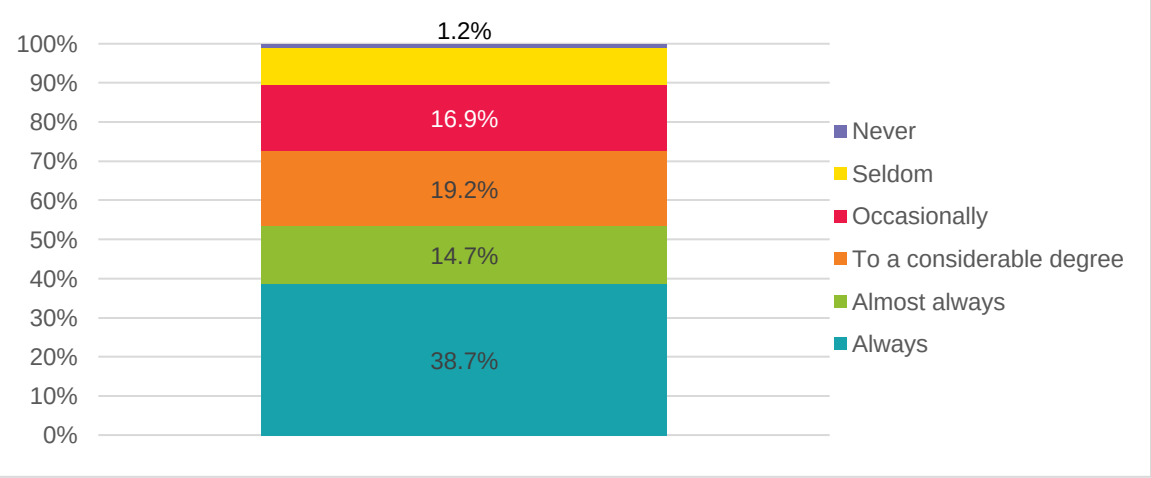
	Percent
Difficulty finding employment	79.7%
Lack of adequate mentoring	47.4%

Note: Number of cases=43. Data are weighted to represent all CNMs with active licenses.

Patients Cared for by those in CNM Jobs

CNMs were asked several questions about the patients for whom they care. Figure 6.6 summarizes the degree to which those with the job title of CNM in their primary position work with underserved populations. Statewide, 38.7% report working with underserved populations "always," and another 14.7% do so "almost always."

Figure 6.6: Extent of working with underserved populations, for those employed as CNMs, 2017



Note: Number of cases=196. Data are weighted to represent all CNMs with active licenses.

Respondents were asked to estimate the shares of their patients covered by specified types of health insurance. The results for those whose primary job has a CNM title are presented in Table 6.7. About one-third of CNMs report that between 76% and 99% of their patients are insured by Medicaid, and another 7.5% report that all of their patients are Medicaid-covered. Twenty-six percent report that more than half their patients have private insurance, and 21.7% believe more than half their patients are insured by Medicare. CNMs also were asked to estimate the share of their patients in a managed care plan or ACO; they estimated an average of 41% in managed care or ACOs.

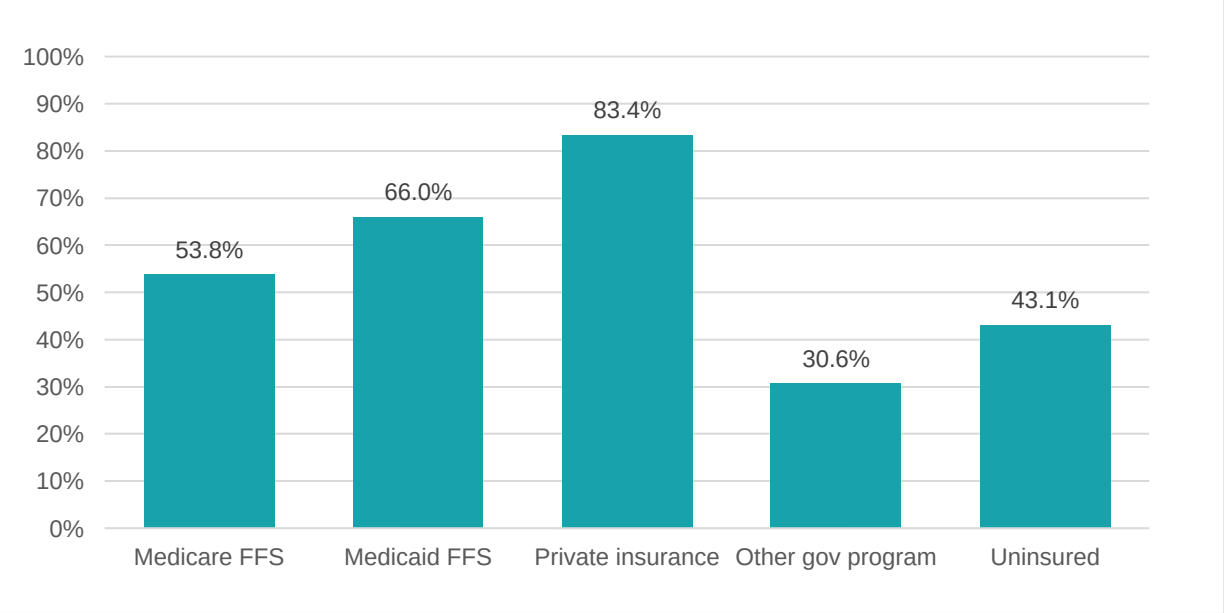
Table 6.7: Estimated insurance coverage of patients at current primary CNM job, 2017

Share of patients with coverage	Medicare fee-for-service	Medicaid fee-for-service	Private insurance	Other government program	Uninsured
None	20.6%	4.5%	43.8%	39.1%	26.8%
1-25%	43.6%	27.7%	9.5%	51.2%	50.2%
26-50%	14.2%	20.1%	20.8%	3.3%	8.7%
51-75%	7.1%	7.0%	4.1%	0.0%	6.1%
76-99%	12.1%	33.1%	19.7%	2.1%	6.8%
100%	2.5%	7.5%	2.2%	4.3%	1.5%

Note: Number of cases=108. Data are weighted to represent all CNMs with active licenses.

Most CNMs reported that their practices are currently accepting new patients with private insurance, as seen in Figure 6.7. About two-thirds will take new patients insured by Medicaid fee-for-service, and 53.8% will accept new Medicare patients. Although only 30.6% will accept new patients from other government programs, 43.1% will accept new uninsured patients.

Figure 6.7: Types of insurance for which new patients are currently accepted by the practice in which CNMs are employed for their primary position, 2017



Note: Number of cases=180. Data are weighted to represent all CNMs with active licenses.

Practice Environment for Those in CNM Jobs

CNMs were asked to report the percent of time spent on each of several functions; these are reported for those whose primary job has the title of CNM in Table 6.8. Patient care activities took more than 75% of the time for 87% of CNMs. None of those in CNM jobs reported they spent 26% or more time teaching pre-licensure RN or APRN students, or conducting research. Administration and management activities occupied at least 1% but not more than 25% of time for 44.4% of those in CNM jobs.

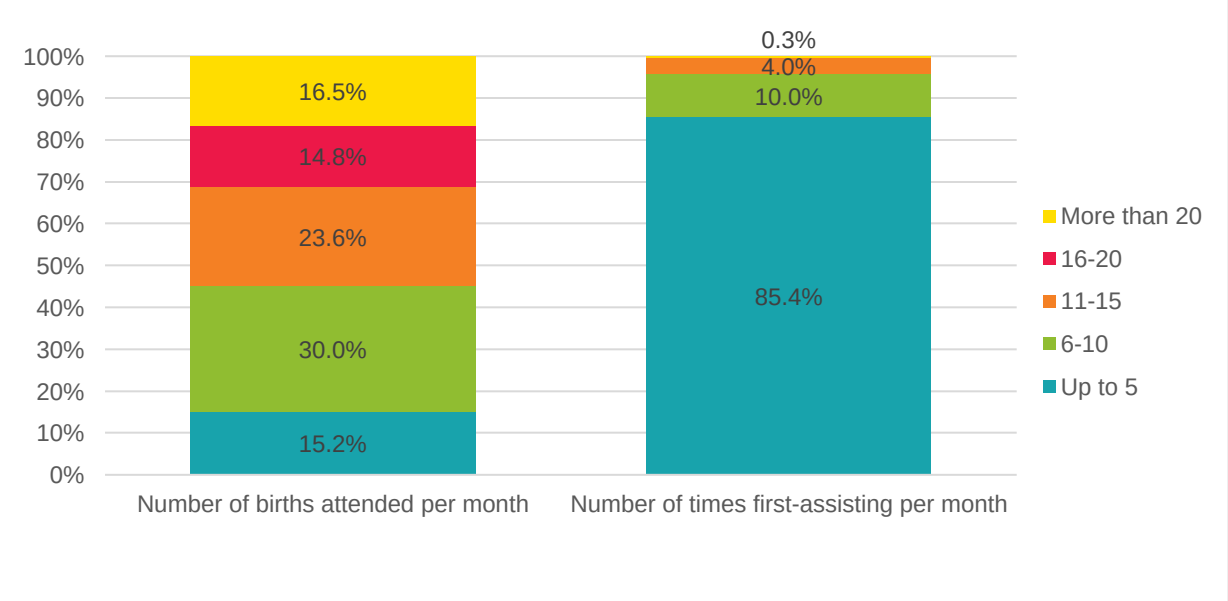
Table 6.8: Share of time spent on specific job functions in primary CNM position, 2017

Job function	0%	1-25%	26-50%	51-75%	76-100%
Patient care	0.0%	0.7%	1.9%	10.4%	87.0%
Admin/ management	50.9%	44.4%	4.0%	0.7%	0.0%
Teaching/precepting pre-licensure nursing students	95.7%	4.4%	0.0%	0.0%	0.0%
Teaching/precepting NP/CNM students	73.5%	26.5%	0.0%	0.0%	0.0%
Research	98.4%	1.6%	0.0%	0.0%	0.0%
Other	90.1%	9.9%	0.0%	0.0%	0.0%

Note: Number of cases=190. Data are weighted to represent all CNMs with active licenses.

Those whose primary job title is CNM were asked if they attend births and serve as the first assistant in the operating room for Cesarean deliveries and, if so, how many times per month. Attendance at births was reported by 83.4% CNMs and first assisting was reported by 59.7% CNMs. Among those who attend births, 54.9% attend at least 11 per month, with 14.8 % attending 16 to 20 per month and 16.5% attending more than 20 per month. Among those who first-assist during Cesarean deliveries, 85.4% report doing this up to 5 times per month, and 10% do this 6 to 10 times per month.

Figure 6.8: Number of times per month those in CNM jobs attend births and serve as first assistant for Cesarean deliveries, 2017



Note: Number of cases for birth attendance=142; number of cases for first assisting=100. Data are weighted to represent all CNMs with active licenses.

CNMs were asked if they have a National Provider Identifier (NPI) number to bill Medicare and Medicaid. Among those whose primary job title is CNM, 94.6% reported they have an NPI. As seen in Table 6.9, more than half of CNMs do not know how their services are billed to Medicare (55.8%) or Medicaid (51.2%). Nearly 15% of those with CNM job titles bill Medicare as the primary provider, and 29.9% bill Medicaid as the primary provider.

Table 6.9: How CNM services for Medicare and Medicaid are billed, 2017

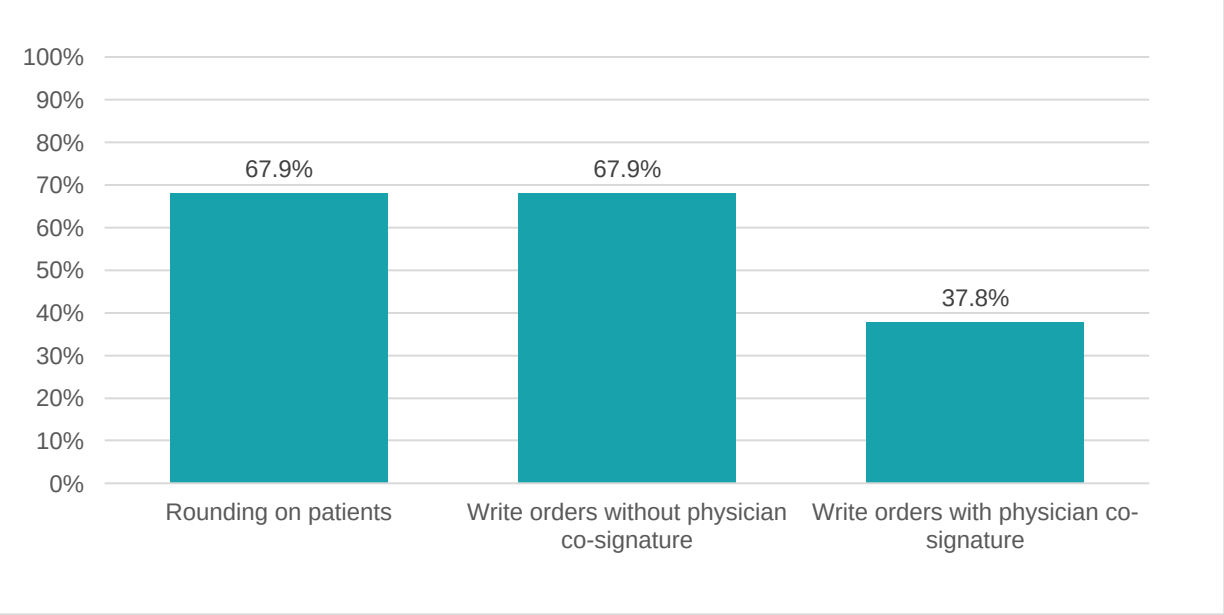
	Medicare	Medicaid
Bill as primary provider	14.7%	29.9%
Incident to physician	9.7%	8.9%
Don't know	55.8%	51.2%
Not applicable / other	19.8%	9.9%
Number of cases	146	168

Note: Columns may not total 100% because some respondents selected multiple items. Data are weighted to represent all CNMs with active licenses.

CNMs can be recognized by private insurance companies as primary care providers. Only 21.8% of those with a CNM position report they are recognized as a primary care provider. There were not enough respondents to measure the shares recognized as primary care providers by specific insurance plans.

Those employed with a job title of CNM in their primary job are sometimes allowed specific hospital privileges, as seen in Figure 6.9. Much higher shares of those in CNM jobs than in NP jobs are allowed to round on patients in the hospital (67.9% vs. 21%, as seen in Figure 5.13). This is not surprising since a large share of CNMs report their main practice location is a hospital. Nearly 68% report that they can write hospital orders without a physician signature, and 37.8% can write orders with a physician co-signature.

Figure 6.9: Hospital privileges for those employed as CNMs, 2017



Note: Number of cases=198. Data are weighted to represent all CNMs with active licenses.

CNMs were asked if they have a panel of patients for whom the CNM is the main care provider and they manage on an ongoing basis. As seen in Table 6.10, only 26.2% of those whose primary job is as a CNM reported they have a panel of patients. CNMs who have patient panels were asked how many hours per month they provide care for their panel. The average was 48.3 hours, accounting for an average of 30.6% of their total hours per month. CNMs were asked how many patients are in their panel, if they have one. The average for all those in CNM jobs was 64.3.

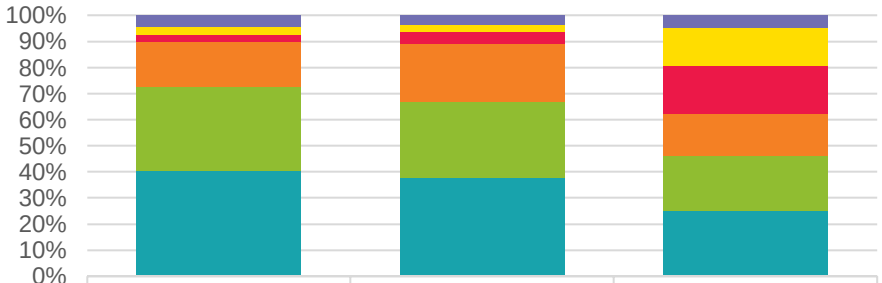
Table 6.10: Management of a panel of patients in current primary CNM job, 2017

	Percent
Has a panel of patients	**26.2%**
Mean number of hours per month with panel	**48.3**
Mean percent of hours per month	**30.6%**
1-10% of hours per month	22.0%
11-25% of hours per month	28.9%
26-50% of hours per month	27.8%
51-75% of hours per month	15.8%
More than 75% of hours per month	5.6%
Number of cases reporting hours	42
Mean number of patients in panel	**64.3**
1-50 patients in panel	63.3%
51-100 patients in panel	27.2%
101-200 patients in panel	4.8%
201-500 patients in panel	4.7%
Number of cases reporting panel size	33

Note: Data are weighted to represent all CNMs with active licenses.

Respondents were asked how often they were allowed to work to the full scope of their practice in their CNM position (Figure 6.10). Over 40% of CNMs reported they "always" work to the fullest legal scope, and another 32.1% say they "almost always" work to the fullest legal scope in their primary position. Only 7.2% reported they practice to the fullest legal scope of practice "seldom" or "never." CNMs were asked the extent to which they are using their skills fully. Statewide, 37.7% of those in CNM jobs report they are always fully using their CNM skills, and an additional 28.9% are almost always doing so. Finally, CNMs were asked whether they contribute to the development or revision of standardized procedures. Nearly one-quarter "always" contribute, and 21.3% "almost always" contribute. However, 19.5% indicate that they "seldom" or "never" contribute to the development or revision of standardized procedures.

Figure 6.10: Degree to which those in CNM jobs practice to the fullest legal scope of practice, are using their skills fully, and contribute to standardized procedure development and revision, 2017



	Allowed to practice to fullest extent of legal scope	Using APRN skills fully	Contributing to standardized procedures
Never	4.5%	3.7%	4.7%
Seldom	2.7%	2.7%	14.8%
Occasionally	2.9%	4.8%	18.6%
To a considerable degree	17.5%	22.3%	15.8%
Almost always	32.1%	28.9%	21.3%
Always	40.3%	37.7%	24.9%

Note: Number of cases=196. Data are weighted to represent all CNMs with active licenses.

CNMs were asked where their supervising physician is located. California regulations do not require that supervising physicians be on site with CNMs. As seen in Table 6.11, supervising physicians are most often on site with CNMs (76.6%). For 19.2% of CNM jobs, the physician is at another site within the same practice, and for 12.7% of CNM jobs, the physician is at another practice or system. CNMs were asked how frequently any physician is available on site to discuss patient problems as they occur. About 8% of CNMs say a physician is never on site with them, while 60% say a physician is nearly always on site.

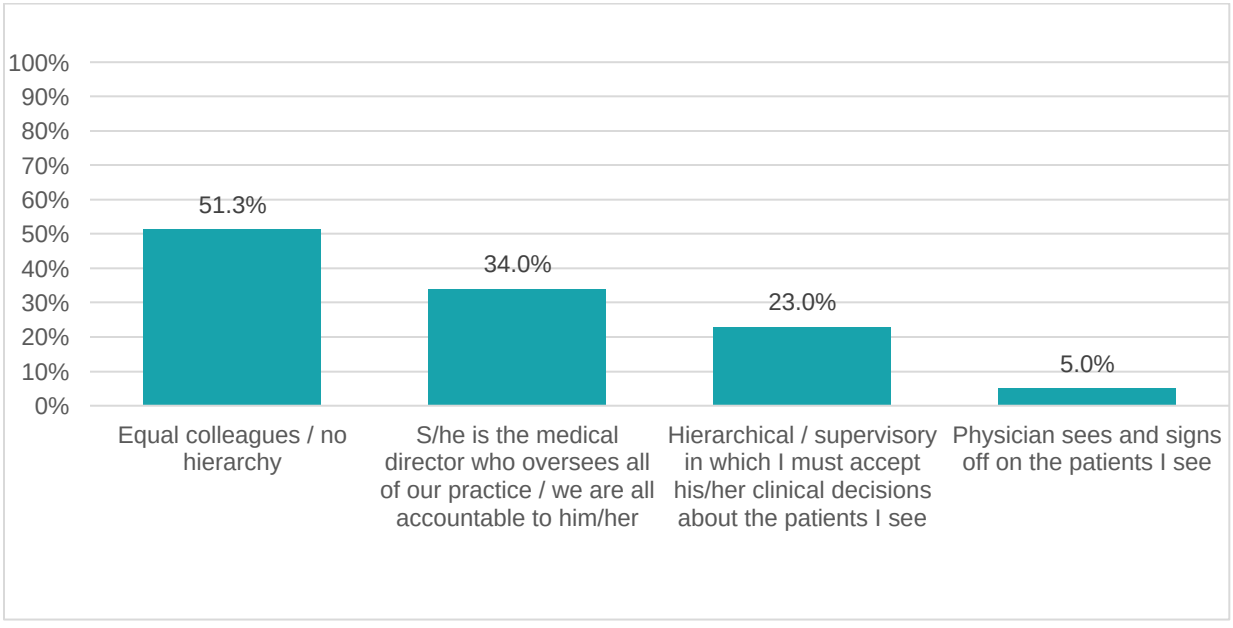
Table 6.11: Location of supervising physician and frequency a physician is on site for primary CNM job, 2017

Location of supervising physician	Percent	Frequency a physician is on site	Percent
At another practice/system than the CNM's	12.7%	Never (0% of the time)	8.1%
At another site within the same practice	19.2%	Seldom (1-25% of the time)	9.9%
On site with the CNM	76.6%	Sometimes (26-50% of the time)	8.5%
		Usually (51-75% of the time)	13.6%
		Nearly always (76-100% of the time)	60.0%
Number of cases	194	Number of cases	786

Note: Data are weighted to represent all CNMs with active licenses. Column with data on location of supervision physician does not add to 100% because respondents could select more than one choice.

The California survey asked CNMs to describe the relationship they have with physicians at their primary CNM job. Respondents could select more than one option to describe their relationships. As seen in Figure 6.11, the most often-reported relationship was that of being equal colleagues with no hierarchy (51.3%). CNMs said that the physician is the medical director who oversees the practice, and all providers are responsible to the director 34% of the time. Twenty-three percent of respondents reported a hierarchical, supervisory relationship in which the CNM must accept the physician's clinical decisions, while 5% reported that the physician sees and signs off on all their patients.

Figure 6.11: Relationship with physicians at primary CNM job, 2017

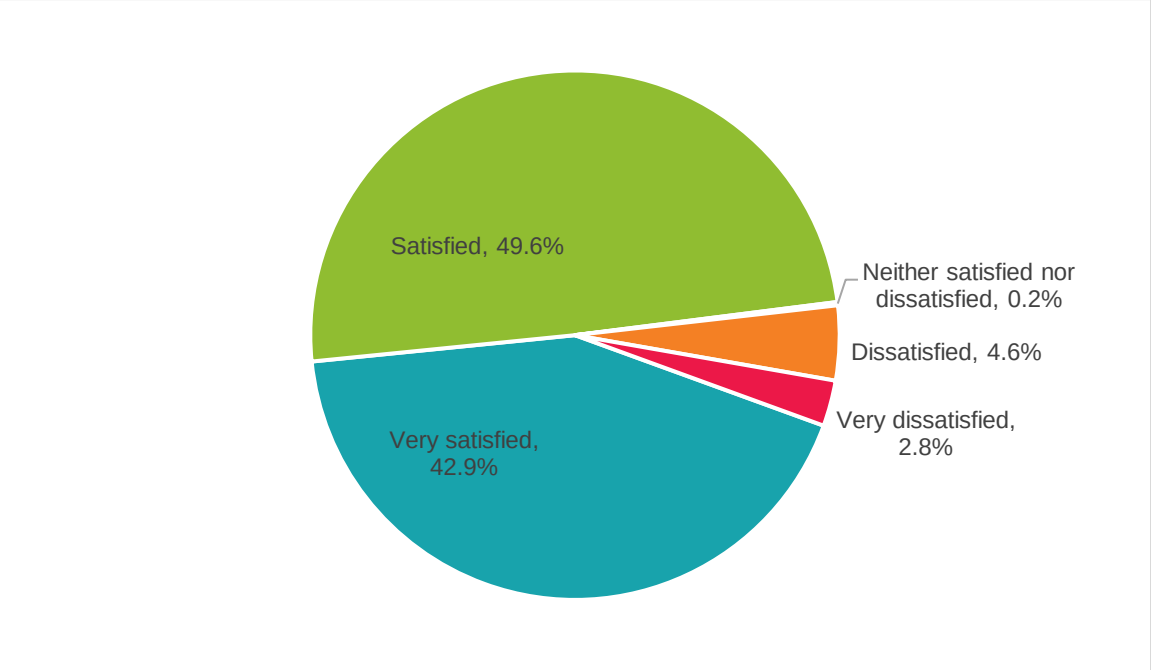


Note: Number of cases=190. Data are weighted to represent all CNMs with active licenses.

Job Satisfaction of Those in CNM Jobs

Those whose primary job has the title of CNM are highly satisfied with their careers, as seen in Figure 6.12. Nearly half are satisfied with their career and another 42.9% are very satisfied. Only 7.4% are dissatisfied or very dissatisfied with their CNM career.

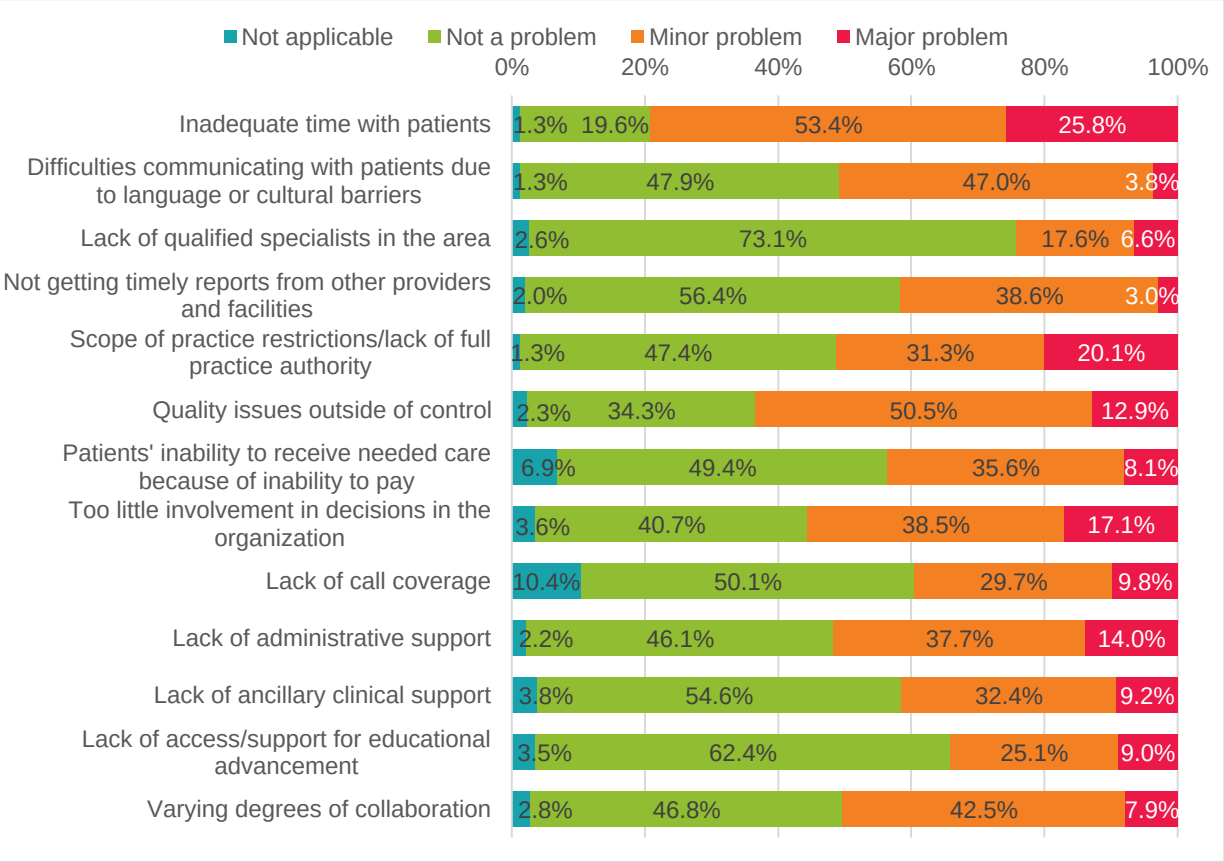
Figure 6.12: Overall satisfaction with CNM career of those in CNM jobs, 2017



Note: Number of cases=196. Data are weighted to represent all CNMs with active licenses.

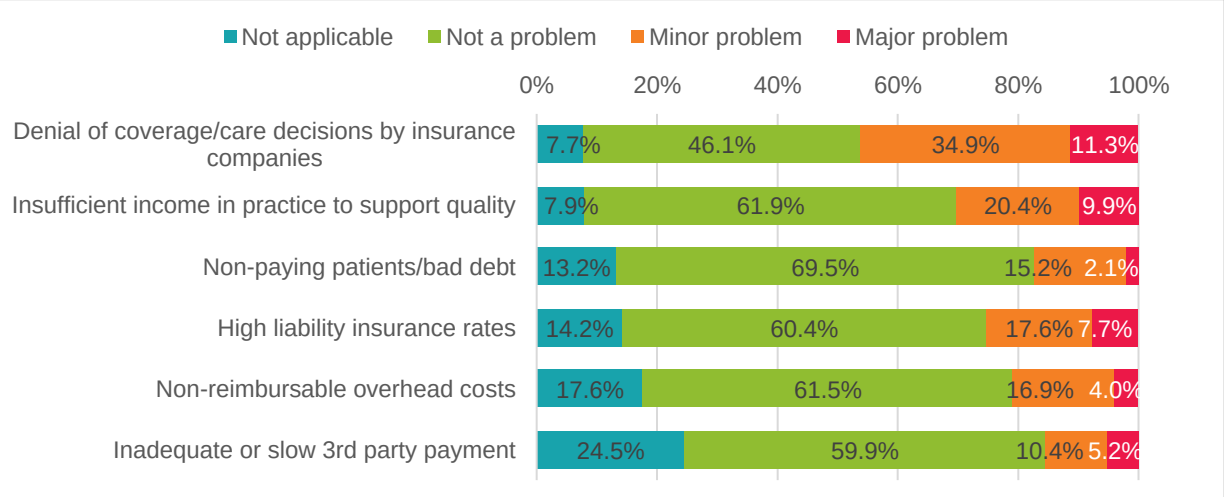
CNMs were asked about factors that might affect their ability to provide high-quality care. The ratings of those whose primary position had a CNM title are presented in Figures 6.13 and 6.14. The practice-related and patient-related factors most identified as a major problem were inadequate time with patients (25.8%), scope of practice restrictions (20.1%), too little involvement in organization decisions (17.1%), lack of administrative support (14%), and quality issues outside the CNM's control (12.9%). The financial factors that are most often a major problem to providing high-quality care were denial of coverage decisions by insurance companies (11.3%), insufficient income in the practice to support quality (9.9%), and high liability insurance rates (7.7%).

Figure 6.13: Assessment of practice-related and patient-related factors that affect CNMs' ability to provide high-quality care, for those in CNM jobs, 2017



Note: Number of cases=194. Data are weighted to represent all CNMs with active licenses.

Figure 6.14: Assessment of financial factors that affect CNMs' ability to provide high-quality care, for those in CNM jobs, 2017



Note: Number of cases=194. Data are weighted to represent all CNMs with active licenses.

Table 6.12 reports the employment intentions of those whose primary job title is CNM. About half of those in CNM jobs (51.1%) plan to work approximately as much as now in 5 years, but 20.4% plan to reduce their hours of work and 18.2% plan to retire. These plans for reduced labor force participation are associated with age. CNMs 65 years and older are most likely to retire (59.7%) in the next five years, although 13.6% plan to continue working approximately as much as now and 5.6% plan to increase their hours of APRN work. Among those 55 to 64 years old, 40% plan to retire in the next 5 years and 29.2% plan to reduce their hours of work. Among those under 35 years old, 6.3% plan to move to another state for work, and 7.1% of those 35 to 44 years old plan to move.

Table 6.12: Plans for next five years by age group for those with CNM jobs, 2017

Plans for next five years	All CNM jobs	<35 years	35-44 years	45-54 years	55-64 years	65+ years
Plan to increase hours of APRN work	12.7%	21.7%	21.9%	10.3%	3.3%	5.6%
Plan to work approximately as much as now	51.1%	59.4%	66.8%	70.3%	32.6%	13.6%
Plan to reduce hours of APRN work	20.4%	14.9%	9.9%	18.4%	29.2%	33.8%
Plan to leave nursing entirely but not retire	0.5%	3.4%	0.0%	0.5%	0.0%	0.0%
Plan to retire	18.2%	3.4%	0.0%	0.0%	40.0%	59.7%
Plan to move to another state for NP/CNM work	3.5%	6.3%	7.1%	0.5%	0.0%	3.7%
Number of cases	196	32	46	45	39	34

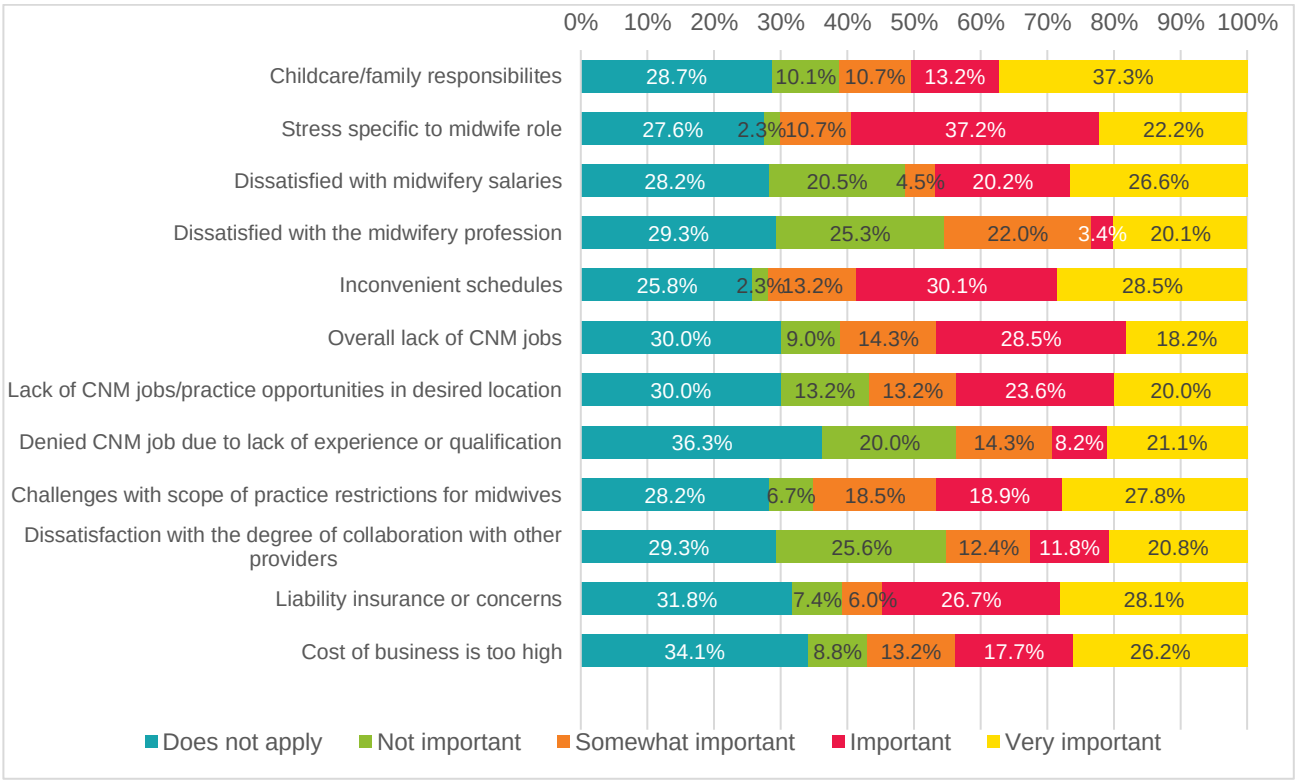
Note: Columns do not total 100% because respondents could select multiple items. Data are weighted to represent all CNMs with active licenses.

Certified nurse-midwives not practicing nurse-midwifery

Employed CNMs were asked if they were practicing nurse-midwifery, regardless of their job title. Among those with sole CNM or dual NP-CNM certification, 11.1% reported they were not employed in a nurse-midwife role. Among those who reported their job title was "certified nurse-midwife," 2.2% indicated this was not a nurse-midwife role, suggesting that the job title may not reflect their sense of the work a CNM should be doing.

Employed CNMs, excluding those employed as nurse-midwives, were asked why they were not working in nurse-midwifery. The reasons most often cited as "very important" were childcare/family responsibilities (37.3%), inconvenient schedules (28.5%), liability insurance or concerns (28.1%), and challenges with scope of practice restrictions (27.8%). The reasons most often cited as either "important" or "very important" were stress specific to the midwife role, inconvenient schedules, and liability insurance or concerns.

Figure 6.15: Reasons why employed CNMs are not working in nurse-midwifery

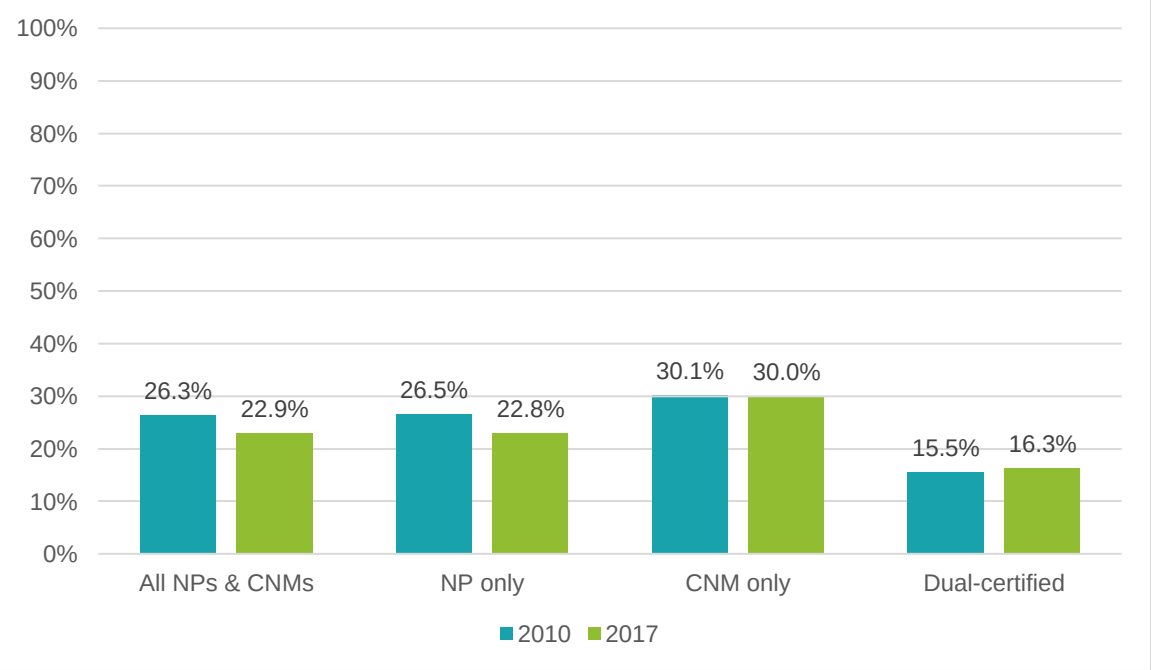


Note: Number of cases=27. Data are weighted to represent all CNMs with active licenses.

Chapter 7: Nurse Practitioners and Certified Nurse-Midwives Not Employed in Advanced Practice

In 2017, 22.9% of NPs and CNMs were not employed as APRNs, which is lower than in 2010 when 26.3% were not working as APRNs (Figure 7.1). Of those with only NP certification, the share not employed as APRNs dropped from 26.5% in 2010 to 22.8% in 2017. The share of CNMs not working as APRN was stable at about 30% in 2010 and 2017. Dual-certified NP-CNMs were the least likely to not work as an APRN, at 16.3% in 2017.

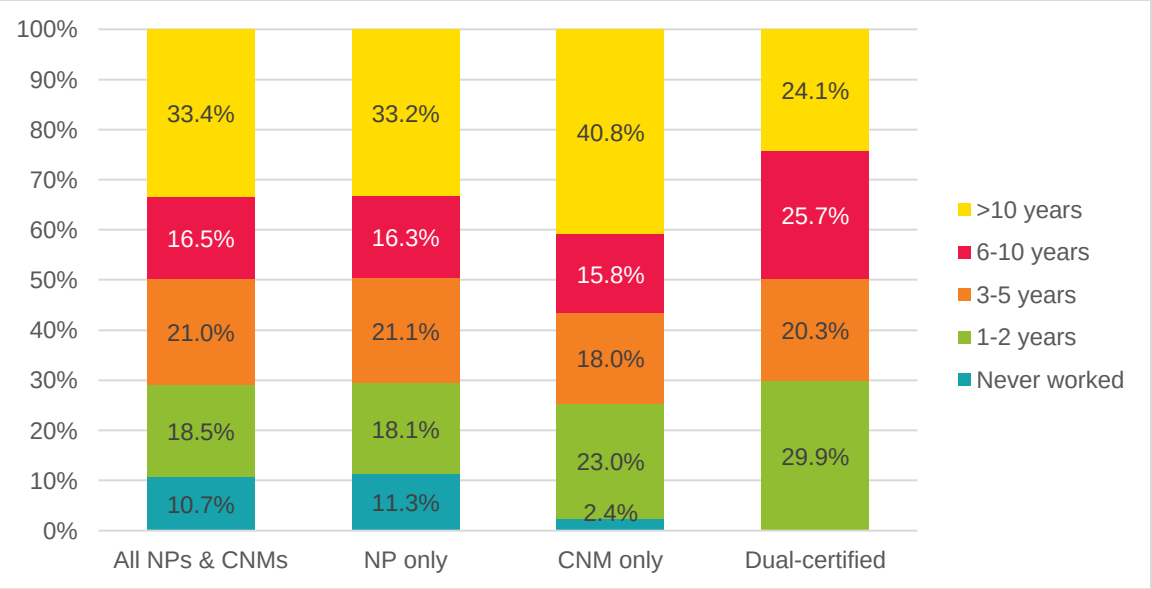
Figure 7.1: NPs and CNMs not working as APRNs and residing in California, 2010 and 2017



Note: Total number of APRNs=1,365. Data are weighted to represent all NPs and CNMs with active licenses.

When asked the last year they worked as an APRN, the NPs and CNMs reported an average of 9 years ago (Figure 7.2). One-third of NPs reported they last worked more than 10 years ago, while 18.1% last worked 1-2 years ago. Nearly 41% of CNMs last worked more than 10 years ago, while 23% last worked 1-2 years ago. Among those dual-certified, 29.9% last worked 1-2 years ago, and only 24.1% last worked more than 10 years ago. Some of those not working indicated that they had never worked as an APRN: 11.3% of NPs and 2.4% of CNMs, but no dual-certified NP-CNMs reported this.

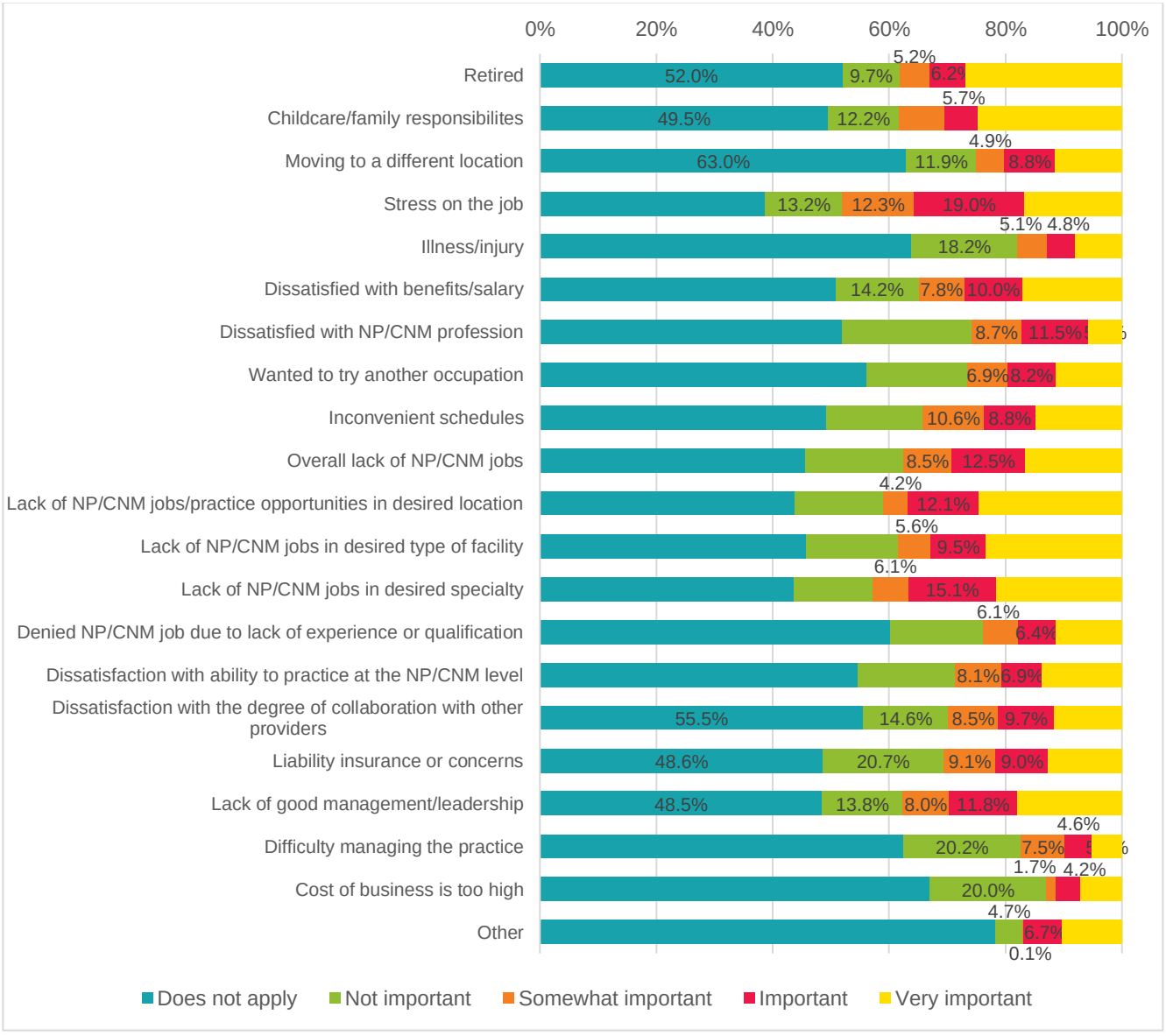
Figure 7.2: Years since last worked as an APRN for all California-residing NPs and CNMs not working as APRNs



Note: Total cases=307. Total NP-only cases=246. Total CNM-only cases=40. Total dual-certified cases=21. Data are weighted to represent all NPs and CNMs with active licenses.

APRNs who are not working in APRN nursing positions were asked to rate the importance of certain factors in their decision not to work in advanced practice nursing. Figure 7.3 presents the results from this question. The factors most often identified as important or very important were lack of NP/CNM jobs/practice opportunities in desired location (36.8%), lack of NP/CNM jobs in desired specialty (36.7%), stress on the job (35.8%), lack of NP/CNM jobs in desired type of facility (32.9%), childcare/family responsibilities (30.5%), lack of good management/leadership (29.8%), and overall lack of NP/CNM jobs (29.2%).

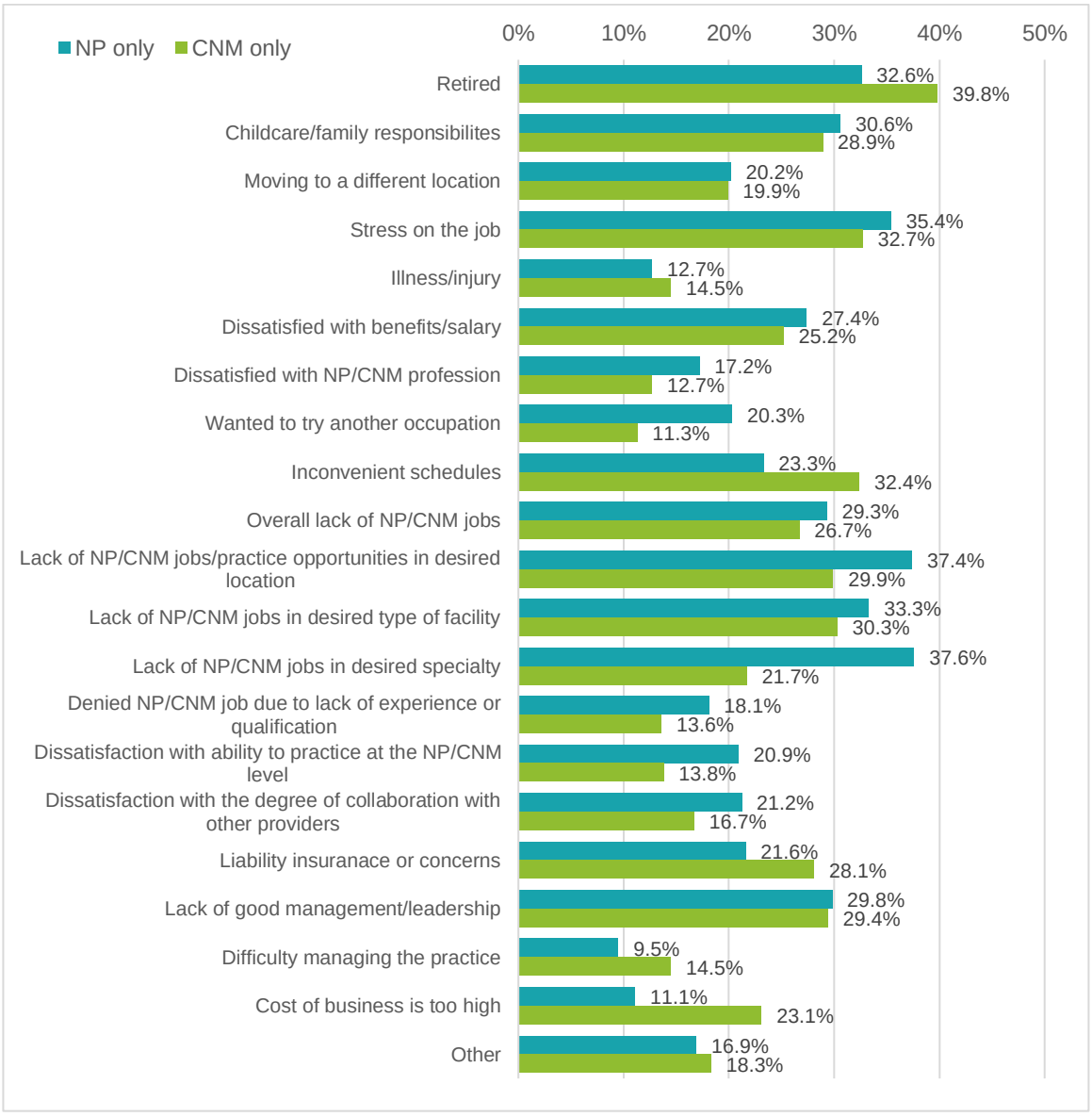
Figure 7.3: Reasons why California-residing NPs and CNMs are not working as APRNs



Note: Number of cases=342. Data are weighted to represent all NPs and CNMs with active licenses.

The importance of factors that influence a nurse's decision not to work in an APRN position varies by whether they are an NP or a CNM (there were not enough respondents to examine dual-certified NP-CNMs for this question). Figure 7.4 compares NPs' and CNMs' reasons for not working as APRNs. CNMs more often identified reasons of retirement, inconvenient schedules, liability insurance or concerns, cost of business is too high, and difficulty managing the practice as important or very important. NPs more often indicated dissatisfaction with the profession, wanting to try another occupation, lack of jobs/practice opportunities in desired location, lack of jobs in desired specialty, denied a job due to lack of experience or qualification, dissatisfaction with ability to practice at the NP level, and dissatisfaction with the degree of collaboration with other providers as reasons why they were not working as an APRN.

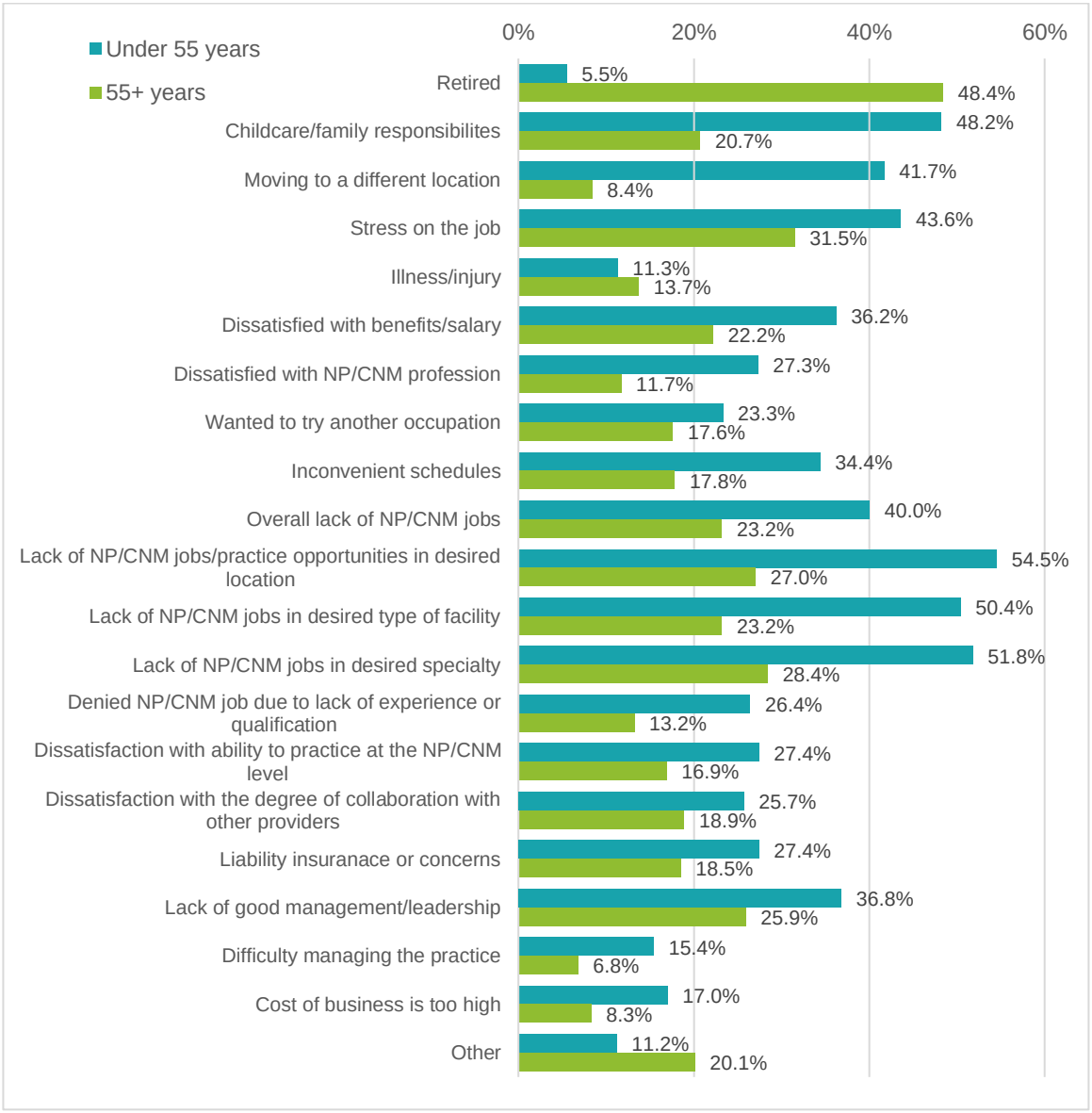
Figure 7.4: Reasons why California-residing NPs and CNMs are not working as APRNs, by license type, 2017



Note: Total number of NP cases=273. Total number of CNM cases=44. Data are weighted to represent all NPs and CNMs with active licenses.

The importance of factors that influence a nurse's decision not to work in an APRN position varies with the age of the nurse, as seen in Table 7.5. Among nurses 55 years and older, retirement was the reason most often cited as important or very important for not working as an APRN was (48.4%). The only other item that at least 30% of this age group reported was important or very important was stress on the job (31.5%). Among NPs and CNMs under 55 years old, the reasons most often indicated as important for not working were lack of NP/CNM jobs/practice opportunities in desired location (54.5%), lack of NP/CNM jobs in desired specialty (51.8%), lack of NP/CNM jobs in desired type of facility (50.4%), childcare/family responsibilities (48.2%), stress on the job (43.6%), moving to a different location (41.7%), and overall lack of NP/CNM jobs (40%).

Figure 7.5: Reasons why California-residing NPs and CNMs are not working as APRNs, by age group, 2017

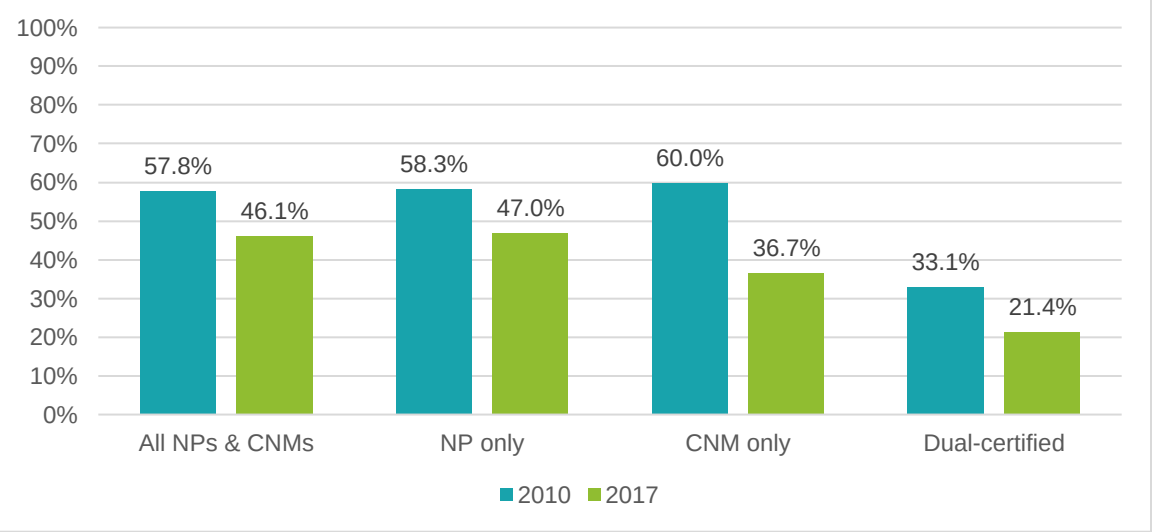


Note: Total number of cases under 55 years=92. Total number of cases 55 years and older=250. Data are weighted to represent all NPs and CNMs with active licenses.

Work Outside of Advanced Practice

NPs and CNMs not working as APRNs were asked if they were working as RNs, meaning they were employed in positions that required an RN license but not their APRN certificate (Figure 7.6). The share of those not working as APRNs who are employed as RNs dropped from 57.8% in 2010 to 46.1% in 2017. In 2017, NPs not employed as APRNs were more likely to have an RN job (47%) than CNMs (36.7%) or those with dual-certification (21.4%). Among those with RN jobs in 2017, 12.1% reported they held multiple RN positions; in 2010 14.9% held multiple RN jobs.

Figure 7.6: Percentage of California-residing NPs and CNMs not employed as APRNs but working as RNs, 2010 and 2017



Note: Total number of cases in 2017=355. Data are weighted to represent all NPs and CNMs with active licenses.

NPs and CNMs were asked where they were working as RNs and what their job titles were. The largest share of APRNs not working as an APRN reported working as RNs in hospitals (62.5%) and the next largest share reported working in a school health service (14.7%). Another 10.8% reported they were faculty or administration at a university or college (Table 7.1). The most common RN job titles were staff nurse (49.2%), nurse coordinator (12.3%), management/administration (12.1%), and educator in an academic setting (10.6%).

Table 7.1: Employment setting and job title of RN position, for NPs and CNMs not working as APRNs, 2017

Employment setting	Percent	Job title	Percent
Hospital (any department)	62.5%	Staff nurse / direct care nurse	49.2%
School health service (K-12 or college)	14.7%	Nurse coordinator	12.3%
University or college (faculty or administration)	10.8%	Management / administration	12.1%
Medical practice, clinic, surgery center	6.3%	Educator, academic setting	10.6%
Nursing home, extended care, or skilled nursing facility	4.4%	Educator, service setting	9.1%
Government agency	4.4%	Quality improvement nurse, utilization review	8.7%
Public health or community health	3.9%	Clinical nurse specialist	6.5%
Case management / disease management	3.6%	Patient care coordinator / case manager / discharge planner	4.3%

Mental health/substance abuse	2.6%	Patient educator	3.4%
Home health agency/service	1.2%	Telenursing	2.3%
Other	8.0%	Other	3.8%
Number of cases	129	Number of cases	129

Note: Columns do not total 100% because respondents could select multiple items. Data are weighted to represent all NPs and CNMs with active licenses.

Most NPs and CNMs not working as APRNs, but working as RNs, reported they worked as an RN 12 months per year (82%). Another 12.5% worked 10 or 11 months per year. They worked an average of 34 hours per week, which is nearly the same as in 2010 when they averaged 34.2 hours per week (Table 7.2). Well over half reported they work at least 33 hours per week, and 13.3% work more than 48 hours per week. Average earnings from all RN positions were $111,707 per year, which is notably higher than reported in 2010 when the average was $62,922.

Table 7.2: Hours per week for RN jobs help by California-residing NPs and CNMs not working as APRNs, 2010 and 2017

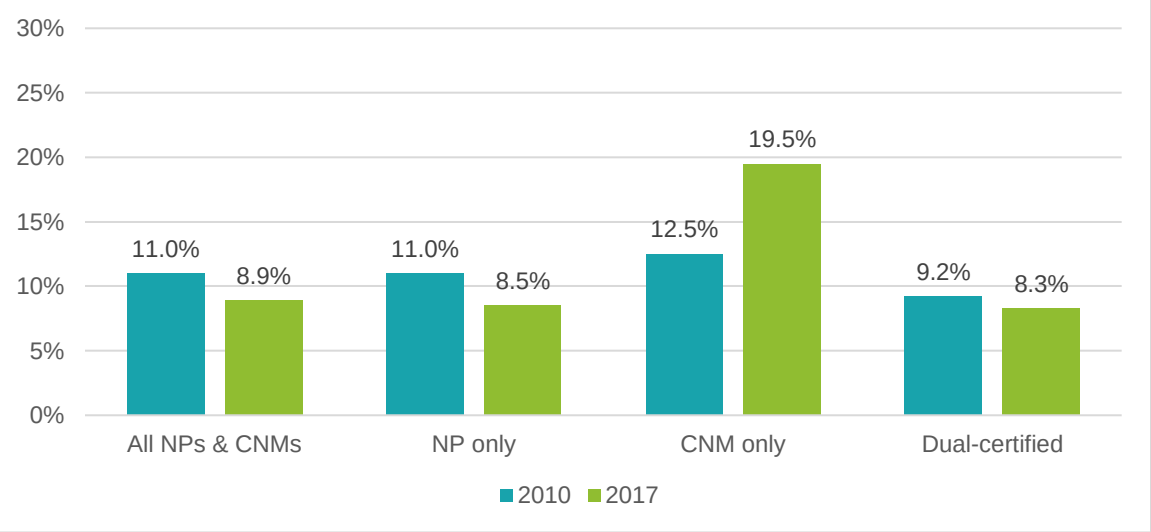
	2010	2017
1-8 hours	6.9%	7.2%
9-16 hours	6.9%	9.7%
17-24 hours	15.4%	14.3%
25-32 hours	10.3%	8.4%
33-40 hours	40.7%	41.8%
41-48 hours	7.6%	5.3%
49+ hours	12.5%	13.3%
Overall Mean	34.2	34.0
Number of cases	173	128

Note: Data are weighted to represent all NPs and CNMs with active licenses.

Work and Volunteering Outside of Nursing

NPs and CNMs not working as APRNs were asked if they were working outside of nursing. About 9% of these APRNs reported working outside of nursing (Figure 7.7), which is slightly lower than in 2010 when 11% worked outside nursing. Those with CNM certificates more often reported working outside nursing (19.5%) than did NPs (8.5%) or dual-certified NP-CNMs (8.3%). Of those employed in non-nursing jobs, 57.4% reported that their position utilized their nursing knowledge.

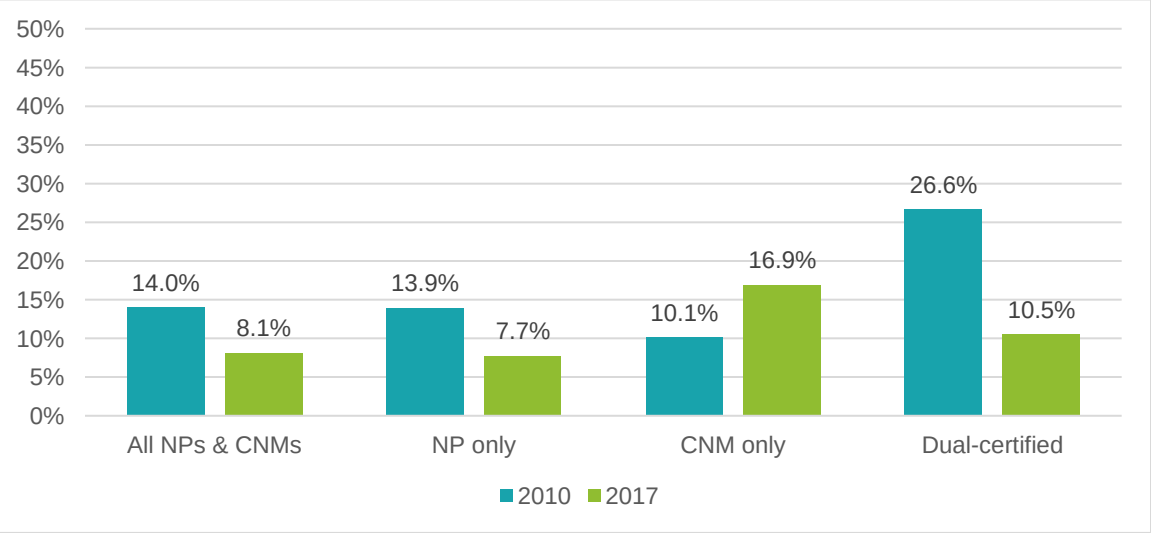
Figure 7.7: Work outside of nursing by California-residing NPs and CNMs not working as APRNs, 2010 and 2017



Note: Total number of cases in 2017=353. Data are weighted to represent all NPs and CNMs with active licenses.

APRNs were also asked if they volunteer as an NP or CNM. About 8% of those who are not working as an APRN are volunteering as an NP or CNM (Figure 7.8). The rate of volunteering declined overall between 2010 and 2017, from 14% to 8.1%. In 2017, CNMs more often reported that they volunteered than did NPs or dual-certified NP-CNMs.

Figure 7.8: Volunteering as an NP or CNM by California-residing NPs and CNMs not working as APRNs, 2010 and 2017

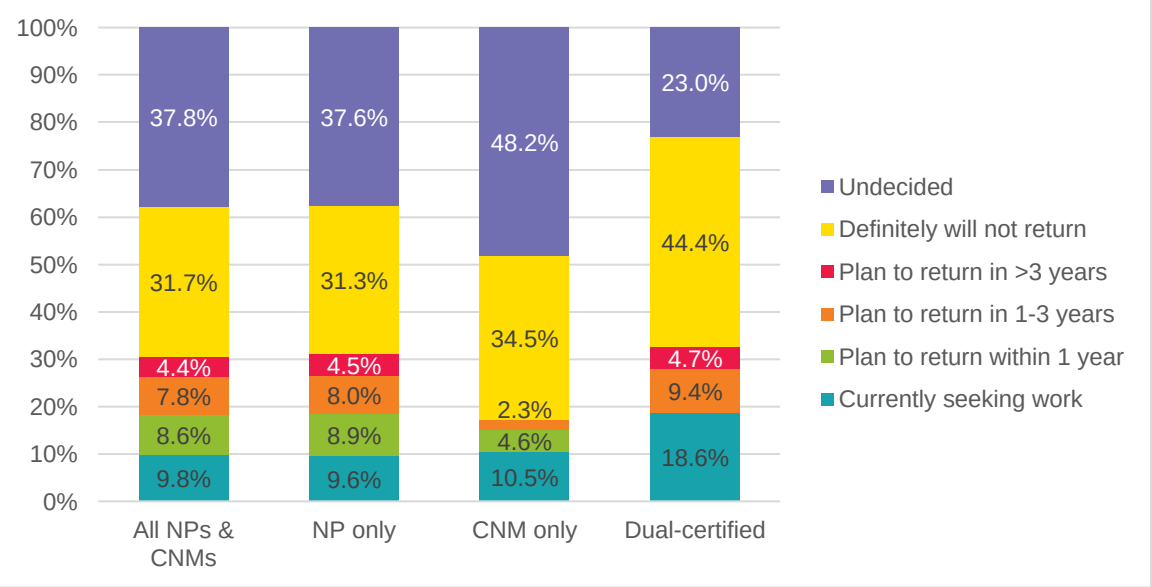


Note: Total number of cases in 2017=337. Data are weighted to represent all NPs and CNMs with active licenses.

Future Plans of NPs and CNMs not working as APRNs

NPs and CNMs who were no longer working as APRNs were asked about their future APRN plans. Figure 7.9 presents the results from this question. Only 9.8% of non-working APRNs are looking for an APRN position at this time; in 2010, 13.2% were seeking work as APRNs. The share currently seeking employment is greater for CNMs (10.5%) and dual-certified NP-CNMs (18.6%) than NPs (9.6%). About 8.6% overall are planning to return to APRN work within one year, 7.8% plan to return in 2 to 3 years, and 4.4% plan to return in more than 3 years. Nearly 32% do not intend to work as an APRN, and 37.8% are uncertain as to their plans.

Figure 7.9: Future plans of California-residing NPs and CNMs seeking APRN work, but not currently working as APRNs, 2017



Note: Total cases=329. Total NP-only cases=264. Total CNM-only cases=42. Total dual-certified cases=23. Data are weighted to represent all NPs and CNMs with active licenses.

Chapter 8: Analysis of Comments Provided by Nurse Practitioners and Certified Nurse-Midwives

Respondents were invited to provide open-ended comments at the end of the 2017 Survey of Nurse Practitioners and Certified Nurse Midwives. Comments were received from 488 respondents, representing 30.2% of the survey respondents. Respondents who submitted comments were similar to non-respondents in terms of age, ethnicity, type of APRN certification, and employment status, as shown in Table 9.1.

Table 9.1: Characteristics of respondents who commented and all survey respondents

	Respondents who commented	All survey respondents
Age (mean)	54.4	52.9
Ethnicity (% white)	79.2%	73.4%
NP only	75.6%	78.5%
CNM only	12.3%	11.0%
Dual-certified	12.1%	10.5%
Employed	73.7%	74.6%

Note: Not weighted.

It should be kept in mind that the comments do not necessarily reflect the opinions of the whole population of NPs and CNMs. Nonetheless, the fact that the expressed issues, opinions, and concerns are shared by many respondents suggests that these are very real concerns and issues for the nursing workforce.

Some respondent comments were not relevant to this thematic analysis. These comments included specific critiques of the survey instrument as well contact information for respondents. The majority of the comments reflected issues related to advanced practice nursing.

The passion that advanced practice nurses bring to their work, their pride in serving others, and the satisfaction of touching people's lives was evident throughout. Many mentioned the joy of having improved the lives of patients, and enjoying a fulfilling career.

> *"Happy to say- 30 + years in nursing- 20 as an NP & I have never had a boring day. Nursing as a career choice has been an ongoing plus in my life, socially, financially, and for its dependability."*

> *"Being a RN and a NP has opened up numerous career opportunities for me. Best decision I ever made as a teenager way back when. I define myself as a nurse. It's not just my profession. It's truly a part of who I am."*

> *"I retired from my Nurse Practitioner role after 63 years of a very rewarding experience. It was rewarding to treat so many families from the prenatal to geriatric members."*

Along with respondents' positive comments were strongly expressed criticisms of the systems affecting advanced practice nursing. Areas of criticism included the lack of recognition, unsatisfying pay, limited scope of practice, charting requirements, and externally-driven productivity goals.

> *"Being an OB/Gyn Nurse Practitioner was my dream job and I loved it for the first 20 years. Once the medical group that I worked for switched over to Epic - Electronic Medical Records and Management - it sucked all the fun out of the job. Charting became such a chore. EVERYTHING I did took more time. Spent more time typing than spending time with patients. Decided to retire 5 years earlier than planned strictly because of EMR."*

> *"I love the nursing practice both APRN and RN roles. It is my belief that the APRN role is the future of nursing. The only obstacles encountered have been acceptance by nursing administration in the acute care setting and varied insurers as evident in their reimbursement for services."*

> *"I worked 30 years as RN/NP/ CNM. As an NP/CNM, I was bullied, used, underpaid- just so I can work in my chosen field. The last 5 years of my FT career I worked in an RN position with public health where I earned more money and had enhanced autonomy. As a CNM, my work was difficult with bad hours but I loved it and would still be practicing midwifery if politics and MD bullying had not pushed me out."*

This analysis utilizes a set of four themes identified in the comments from the 2010 BRN Survey of Nurse Practitioners and Certified Nurse Midwives. These four thematic areas are: (1) scope of practice, (2) job-related concerns, (3) work relationships, and (4) nursing education.

Theme 1: Scope of Practice

The most prominent theme from the narrative comments of the NP/CNM survey was the demand for increased "independence." One-hundred and fifty-two respondents (31% of all who commented) remarked on issues related to independence and scope of practice.

Respondents expressed frustration with the requirement for MD supervision (for CNMs) or collaboration (for NPs). Many felt they were being hampered from practicing to the full extent of their knowledge and training. CNM commenters noted that they were sometimes barred from hospital privileges and that regulations precluded them from attending home births. Many commented on the potential for NPs and CNMs to provide increased access to primary care for women seeking female providers and for underserved rural and other communities if they were allowed full scope of practice.

Full Practice Authority

Respondents felt that because of their preparation and education, they should be able to have full practice authority. Comments showed that many respondents have had to work within limited and irregular scopes of practice. In addition, many APNs had worked in states where they had experienced greater autonomy and questioned why California was different. Ninety-four respondents commented on this issue, making up 62% of all scope of practice comments and 19% of comments overall.

> *"In the states that have independent practice for APNs there has been no increase in malpractice lawsuits or disciplinary actions. In every state that has passed legislation granting independent practice to APNs, the nursing unions have supported the legislation. Why does CNA [California Nurses Association] continue to refuse to support legislation for independence for APNs? California continues to have the broadest scope of practice for RNs based on Standardized Procedures. Education between RNs and APNs is quite different. Why doesn't the BRN have a separate scope of practice for APNs?"*

> *"The State of California, Department of Consumer Affairs, Board of Registered Nursing (BRN) should remove the restrictions which prevent Nurse Practitioners from exercising Full Practice Authority. This is the recommendation from the National Institute of Medicine in their Future of Nursing Report (2010). The National Association of Governors published the same conclusion in "The Role of Nurse Practitioners in Meeting Increasing Demand for Primary Care" (2012). By allowing Nurse Practitioners independent clinical practice, the California BRN will increase consumer access to quality healthcare while decreasing consumer cost."*

More than a quarter of comments on scope of practice (28%, n=41, 8% of those who commented overall) were specifically about the desire for independence from the supervision of or collaboration with physicians. Many felt that the supervision/collaboration requirement hindered their ability to provide high-quality, direct care to their patients.

> *"Frustrated with the lack of support in advancing the profession of nursing and supporting advanced practitioners. We need to make advanced practitioners independent from MD supervision. I want to be overseen by my peers!! Please help us!!"*

> *"The California Board of Nursing can greatly help Certified Nurse Midwives in solo practice by removing law that requires "Supervising Physician." Obstetricians are willing to collaborate with CNMs in solo practice from my experience, but are not willing to become the midwife's Supervisor. This position raises their insurance premium. Point # 2. There are many women who like midwifery services and can't get it because of few midwives in solo practice as a result of the BRN regulation of "Supervising Physician. Point #3. Midwives that are not CNM certified by the California Medical Board are allowed to practice without Supervising Physician Regulation. This is something that BRN Law makers should take into consideration. Point # 4. California BRN is among very few States that still requires CNMs to have "Supervising Physician," many States in US have removed this requirement. Removing this law of Physician Supervision will enhanced CNM practice and avoid CNMs seeking licensure through the California Medical Board."*

Prescriptive Authority

Some respondents (n=10, 7% of those who commented on scope of practice and 2% of those who commented overall) felt exasperated at being unable to furnish medication or medical equipment without MD supervision, despite having received training to do so. This theme was somewhat less prominent in 2017 as compared to 2010. Nearly all 2017 comments had to do with home health, hospice, and durable medical equipment, as well as other restrictions established in the Medicare program.

> *"Work to have federal policy regarding Home Health and Hospice certifications changed. It is ridiculous to need to have a physician sign orders when they probably have never seen the patient. The same goes for diabetic shoes...I can write orders for narcotics but not get diabetic shoes."*

> *"Assisting with Medicare rules that would allow nurse practitioners to sign off on all documents. At this time documents such as ordering a walker or home services for a patient require a physician signature, which adds a lot of extra work and time to the patient care in the hospital."*

Billing and Reimbursement

Twenty respondents (14% of those who commented on scope of practice, and 4% of those who commented overall) expressed frustration at billing and reimbursement practices that they felt disadvantaged APRNs. APRNs often noted the pay disparity between primary care physicians and APRNs, and often complained that RN wages were higher.

> *"One hindrance to practice is not being able to be the provider of record with insurance companies for the patients we give care and are followed by us. With the shortage of physicians in our rural communities there needs to be a shift from physician to provider…"*

> *"Allow insurance companies to accept NPs as PCPs and allow direct billing."*

> *"…What are we doing to push for 100% reimbursement for NP services so that we don't have to bill as incident-to?"*

> *"Work to pass legislation mandating private insurers to contract with APN/NP/CNMs. Pass policy requiring parity between physician and NP/CNM reimbursement for same services…"*

CNMs and Scope of Practice

Some respondents, specifically CNMs, remarked that working in hospitals, with the need to "earn" privileges, was both difficult and discouraging. Some felt that current laws encouraged competition between physicians and CNMs, a situation that usually did not end well for CNMs. Some were unhappy about how BRN regulations made it difficult for CNMs to attend home births due to requirements for physician supervision (n=25, 17% of scope of practice comments, 5% of all comments).

> *"The hospital in my area does not employ CNMs. I would love to be able to offer my services there for private patients of mine."*
>
> *"Lobby for hospital admission privileges for CNMs. Work with insurance companies to make malpractice insurance affordable."*
>
> *"I am now a 'licensed midwife XX' under the California Medical Board. All my disclosures, consents and information given to my home birth clients reflects my new licensure. I have a working relationship with my local hospital and physicians. I have malpractice and am applying for Medi-Cal providership. Fear of prosecution from the BRN led me to "jump ship". I hope this will change in the future."*

Primary Care Access

Both NP and CNM respondents saw the need for increased recognition for their abilities to serve as primary care providers. Many felt that expanding their scope and allowing them to serve as primary care providers would allow for greater access to primary care, particularly in rural and other underserved communities, and would decrease the burden on MDs.

> *"NP should be able to practice independently with full scope of practice in California. With some reimbursement as physicians with this opportunity, I think more NPs would have their own practice to take the load off of family practice physicians; because 90% of patients coming to us (urgent care clinic) is because their PCP is fully booked. Too many patients and not enough providers."*
>
> *"The rural communities of California are so underserved, yet those of us who are able and willing to serve there are not allowed to, because of the legal barriers to practice without a supervising entity."*
>
> *"…Midwives and NPs are not allowed to practice to the full extent of their training and abilities. CA women want access to women providers and they are denied by the lack of providers who can serve them. Medi-Cal now requires that women have access to a birth center as one of their birthing options. That certainly is not available in our county or others because of regulatory restrictions on the practice of Midwifery in the state of CA."*
>
> *"Help NPs gain full practice authority for the underserved residing in nursing homes. Support legislation to allow NPs to serve as primary providers for nursing home patients. Support NPs legislation allowing ability to provide initial Medicare H&P visit for nursing home patients."*

Theme 2: Job-related Concerns

Comments from employed APRNs often expressed dissatisfaction with salary and benefits, concern for the liabilities of the profession, and sometimes difficulty in work relationships with employers and physicians.

Low Pay / Lack of Benefits

Some respondents felt that they were not being accorded fair compensation, considering the heavy burden of their work, the liability, and the high cost of malpractice insurance (n=27, 6% of all comments). Many remarked that the salaries of their RN colleagues were much higher than their own salaries as NPs/CNMs. Some also noted that they were paid significantly less than physicians although they were sometimes doing substantially the same work as physicians.

> *"It has been difficult to leave my job as a school RN for a full time job as an NP due to the reduced pay and benefits. I would have to settle for starting as an NP. So, I have elected to keep my job as a School RN, and work part time as an NP for job satisfaction and to keep and continue to improve my skills as an NP. It has not been easy working more hours than I would have otherwise liked to work, but it has worked for me. I think you'll find that it is not unusual to learn that RNs who have worked years as RNs often have to accept lower salaries after working hard to complete additional education to become NPs."*

> *"NP positions require higher liability, education and knowledge compared to RN jobs, yet pay is significantly less in NP jobs as compared to RN jobs."*

> *"…Independent practice would be wonderful as well as advocating for equality with pay - I am paid at 85% of what an MD is paid yet do the same exact thing (or more) as the other PCP MD's in this area."*

Employment Difficulties – Job Placement/Search

Job search and placement comments were made by about 4% of respondents (n=18). This theme seems less pronounced in 2017 as compared to 2010, possibly due to an improving job market. Some comments had to do with the long distances some APRNs have to travel to practice.

> *"No CPNP jobs available unless I want to travel 1.5 hours commuting into Los Angeles one way. That is the only reason I am not working as CPNP."*

> *"I will have to drive 3-4 hours and spend 3-4 days away from my family in order to practice midwifery."*

Six respondents suggested that the BRN provide additional information on job opportunities and job search resources.

> *"Have a job posting board to search for jobs from reputable employers. Information on CMEs and conferences. Information about average salaries. Advice on working as a nurse practitioner under a physician and how to know if you are being treated fairly or being taken advantage of."*

> *"How to get a job out of school, what nursing licenses you need to apply for out of school, BRN personnel who can return your call and help you."*

> *"Resource website for Training Opportunities to increase skill set as NP / RN and NP Job Board Opportunities in the State."*

Malpractice Risks and Liabilities

While NPs and CNMs commented on the high cost of malpractice insurance and the burden of liability, these comments appeared to be fewer and less specific than those in the 2010 survey (n=8, 2%). Many simply noted that they were paid less than registered nurses and yet carried higher costs and liability. Because CNMs are required to be supervised by MDs, the supervising MDs face greater liability risks than do physicians who "collaborate" with NPs. Some comments indicated that MDs were not willing to work with CNMs due to these issues.

> *"Would love to see salary data. At my worksite RN's on PM shift are making 25% more than the CNM on call who arrives with much more professional liability and responsibility and has less administrative and professional support."*

> *"Remove supervising/collaborative MD from scope. Encourage NP/CNM's to be primary care providers so insurance companies will credential with them. Increase reimbursement from insurance co.--decrease costs of malpractice."*

> *"If NP's are never going to have full independent practice authority and Rx Authority, then the penalty for wonderful, collaborative, sharing MD's should be removed at high malpractice rates."*

Unions

A few respondents (n=6) expressed interest in a union that supported NP/CNMs, although a couple (n=2) also complained that the California Nurses Association (CNA) was not supportive of their practice.

> *"As an RN, I felt that there was better advocacy for RN rights. I wish NPs had an entity similar to the CNA advocating for us."*

> *"The corporation who hires me as a CNM offers no paid vacation, unpaid vacation, pay differential for night/day shift, salary raises, or maternity leave. I want to be unionized like RN's; I have no rights and have a lower hourly wage than the RNs I work alongside!"*

> *"Would love to see "mid-level" providers universally unionized through the state (to receive the same stature, $, and benefits packages and clout our CNA sisters enjoy!)"*

Theme 3: Work Relationships

The work relationships of NPs/CNMs with other members of the medical profession can be complicated; some NPs and CNMs perceive a lack of appreciation and collaboration for APRN professionals. Most of the 2017 comments about work relationships had to do with physicians. There were few comments about relationships with other health care professionals as compared to the 2010 survey responses.

Physicians

A number of respondents (n=15, 3% of all respondents) commented on work relationships with physicians. The requirement for physician supervision was a source of tension in some cases. Some NPs/CNMs felt there was little recognition and respect for NPs and CNMs. Some CNM respondents felt that physicians saw them as competition and "bullied" them.

> *"The physician I work with requires I discuss all changes to patients orders by him first. This decreases my productivity and delays care for my patients."*

> *"I have had to leave a rural health facility because the physician I had to work with was substandard. He was sanctioned by the pharmacies around him and because my name was on his triplicates, I couldn't provide prescriptions either. I would still be out working in XX County if I had been able to practice without having the supervisory barriers."*

> *"MD's see NP's / CNM's as #1 competition (that they can ignore) or #2 physician extenders they can take advantage of. Either way, bad news for NP/ CNM."*

> *"I worked for many years in an X county. The CNMs were required to work unsustainable schedules. Some of the doctors bullied the CNMs terribly. The situation became intolerable and heated discussions ensued. The solution? Eliminate the CNMs. And they did. There was no recourse. It was a complete restriction of trade."*

Not all of the comments were negative. As one respondent noted:

> *"I love the nursing profession and have always had great collaborative experiences with other health professionals (MD, PT, OT, etc.)."*

Employers

There were just a few comments on relationships with employers and management other than physicians. Some referred to the lack of respect for the special role of the NP or CNM, while in two examples, CNMs commented on instances where CNMs were actually pushed out of hospital settings due to perceived competition with physicians. APRNs also had some complaints about productivity requirements and documentation and the perception that medicine is now largely driven by the profit motive.

> *"Change at hospital where I practiced. Brought in doctors from another hospital who didn't want midwives. Had worked as labor and delivery nurse at their other hospital. Doctors all about the money they could make from overseas luxury deliveries in CA. Booted CNM's after many years of service and a great reputation. We knew these docs, how poorly they treated low income women as well as nurses in general…"*

> *"Nursing became a harsh environment to work. Supervisors who are crooked and unethical & CEO's taking federal monies and getting rich. I would not encourage my grandchildren to go into nursing or the medical field."*

> *"The biggest stressor in my work world is having zero input on my schedule. I am soon to be one of 2 providers and the number of patients per day is increasing (without any discussion with me… I work for a large corporation that dictates nearly every aspect of my practice and it seems their main goal is income. I have more to do (and am now working up to 12 hours per week without compensation), less time to do it and no hope of more providers being added to our practice."*

Other Nurses

In the 2010 survey results, there were a number of comments about relations with other nurses. There were very few comments about other nurses in the 2017 survey other than complaints that RNs were sometime paid as much or more than APRNs. However, one CNM noted:

> *"It is abysmal that one group of advanced practice nurses would limit the practice of another group. My gyn skills have completely eroded due to this unacceptable work practice by the NP's. Protectionist approaches do not work well as we all will doubtless discover over the next few years. I have over the years in the USA thought the MD's were the limiting factor come to find out it is my own peer group at Kaiser."*

Patients

There were few comments about patient relations in the 2017 survey, although APRNs repeatedly expressed concern for the health and well-being of their patients. APRNs expressed frustration with productivity and charting requirements that cut into their face-to-face time with patients.

> *"…Expected to see a patient in a 5-7 minute is unsafe and unfair for the patient as well. Because of the time constrictions patients are not provided with the best practice to empower them in their disease management."*

> *"In the vast majority of the practice settings lack of time to provide quality care to patients. The intimidating schedule- seeing patients every 15 min has kept me away from many job opportunities as well as lack of mentorship."*

Theme 4: Education

The theme of "education" was of marked importance to the respondents. It was one of the most frequently commented on topics (n=80, 17% of all respondents). Respondents spoke about new graduates, instructors, residency/mentorship programs, the need for reentry programs, and the controversy of changing the entry-level requirements of advanced practice nurses.

Many commented on the plight of would-be students, students, and new graduates, expressing concerns about the difficulty of getting into nursing school, affording nursing school, and obtaining clinical placements.

> *"It seems like we need more nursing programs, ideally Bachelor's programs, and at a more affordable cost. I have many patients who would like to become RN's but either they are waiting for at least 2-3 years to begin the program or the cost is too high and they are not able to afford it. It would be ideal if there were more grants/scholarships available for students going into the nursing programs, and more incentives/higher pay for nursing professors/educators."*

Program Effectiveness

Respondents largely felt that the new graduates were not yet ready to provide patient care. This was often ascribed to lack of hands-on clinical preparation.

> *"It is difficult to get into nursing schools these days, and the new students have to jump through hoops. Finding clinical sites is arduous in our rural setting, thank goodness for sim labs. Nurses coming out of school often haven't been taught how to OBSERVE patients in the first few minutes, that should be part of an exam...what did they see when they walked into the room?"*

> *"I have been precepting NP students and some have had very limited nursing experience and it is very difficult to get them where they need to be. I feel entry level into an NP program should require a minimum of 5 years nursing experience to get into a program. Some of the programs allow new graduates and it is too early into their career to step into the NP role. They lack the knowledge and assessment skills to perform at the highest level and I feel this is watering down the NP role. The best and brightest should be in this position. It shouldn't be taken lightly. The other problems are the computer based only programs. These programs have problems with the structure of the curriculum and lack teaching the students the correct assessment skills needed to perform the role of the NP and rely solely on the preceptor to teach the student what they need to know."*

Residency Programs

Respondents strongly recommended the creation of a residency/mentorship program for new graduates and/or students. Both NPs and CNMs felt that such a program would provide new graduates with invaluable learning opportunities and experiences, making them more effective NPs or CNMs. Some respondents offered to be mentors or preceptors themselves (n=14; 16% of education comments and 3% of all comments).

> *"Institute a medical residency program for NP candidate (students) as a requirement for graduation. The quality (academic base, clinical skills etc.) of NPs vary greatly based on school attended. The state will produce better NPs if there is at least 6 month (residency requirement)."*

> *"Lobby for improved access to preceptors perhaps rewarding organizations/ incentives for serving as preceptors. Conduct study on preceptor availability for NP schools of nursing."*

> *"More nurse practitioner residency programs post-graduation PLEASE. This would help the transition process and retention of new grad NP's. A lot of my colleagues have changed jobs 2-3 times since we graduated 6 months ago. That's a problem!"*

Educational Requirements for Registered Nursing

Respondents discussed the need to make a bachelor's degree the minimum for entry into nursing. Some felt that making such a change would increase respect for the nursing profession as a whole.

> *"I think BSN should be the minimum degree, to give nursing more educational status, like the physical therapy profession has done, making advance degree mandatory. I question MEPN programs. How can a history major (or other non-science/medical as an example), obtain a master's and all the necessary background and training, to be a practicing NP? I think it's demoralizing to RNs with BSNs and years of practice, who also get a master's."*

> *"I wish CA would lead the national movement to standardize BS education as the minimal education level to be an RN. It's necessary to establish the clinical level of expertise needed to provide safe nursing care to the complex illnesses of patients in hospitals. There should be a 5 year grandfather clause to give all RNs in practice time to achieve the BS degree; hopefully with assistance programs that facilitates the process. Standardize titles for all levels of healthcare workers so the public is protected by knowing with level is providing care to them."*

Education Requirements for Advanced Practice

A number of respondents commented on the need to find a way to establish grandfather clauses so that previously-educated NPs and CNMs who do not have master's degrees are able to continue their practice. The respondents were frustrated by the emphasis on the degrees, and the lack of recognition for their years of experience.

> *"Grants for getting Master's. Or challenge exam for those who had practice for many years before Master's began being required by employers. I know it's not required by the State of California."*

> *"More support for non-certified NPs. I have been an NP for over 20 years and have worked in ER, corrections, family practice settings-- and there continues to be limitations to my practice due to no Master's-- thus no national certification. This really is a problem and I cannot seem to get a concise answer from the BRN if there is anything I can do about it. I have a DEA, NPI, and RN license but continue to have issues. Is there ANYTHING that can be done to "grandfather in" my type of license? Thank you."*

> *"Encourage MSN programs that are a fast track for NPs who previously attended a certificate program. The cost of re-doing it is prohibitive."*

Opinions on the advocacy of the DNP as the entry-level education for advanced practice nursing, as recommended by the AACN, were divided. Some respondents felt the DNP was part of advancing the profession and possibly a step to full practice authority. Others saw it as unnecessary. Overall, respondents were more invested in residency or mentorship requirements than advanced degrees as a requirement for NPs. This discussion was not as extensive in the 2017 survey results as in the 2010 results.

> *"Eliminate the requirement for practice protocols. Legislate full independent primary care practice for NPs - so eliminate the need for a "collaborating" physician. Discourage the use of the term "mid-level" provider to describe NPs. Require the DNP as the educational level for entry into NP practice."*

> *"Do not require a Doctorate to practice."*

> *"I do not see the need to require PhD for Clinical Nurse Practitioner Practice. I am an Associate Degree RN who completed (an) NP PA Program. I held a PA license initially and then dropped it. I am nationally certified and scored on the 97% for certification. Not having advanced degrees has not impacted my ability to work or deliver primary care in the clinical setting. If one is thinking about administration or other positions, then I can see the need for furthering education. I can appreciate recognizing the profession and seeking recognition as a whole, but feel from my experience the advanced degrees are not necessary for clinical practice."*

Continuing Medical Education and Refresher Courses

A number of comments on education had to do with continuing education for practicing APRNs (n=16, 20% of those commenting on education, 3% of respondents overall). Respondents had a number of suggestions for courses they would like to see:

> *"If you have classes on coding or how NPs can work more independently. Also offer classes to MDs on how to fully utilize NPs."*

> *"I am an older RN/FNP- still certified. Classes in computer based medicine would help."*

> *"Offering online course opioid management to aid NPs with obtaining controlled licensure."*

Aside from requests for specific courses and the plea to simply make more opportunities available, respondents also had suggestions for making the process easier:

> *"Provide an easy process for APNs to get credit/CEUs for the normal educational programs that are presented in department meetings, etc. For example, clinical information is presented numerous times in department and CNM meetings, but we don't get CEUs for these because the process of doing the administrative portion of this is not easy. Streamline this process to assist all of us in getting our CEUs, improve our ability to mentor others, and take care of each other."*

A number of respondents commented on the need for "refresher" courses for those who had left the profession for a few years (n=12, 12% of comments about education, 2% of comments overall).

> *"I am desperately searching for a re-entry course for PNPs. I would love to re-enter the workforce but need to update skills and review. This includes EHR and clinical skills."*

Need to Educate on the Role of NPs/CNMs

Respondents spoke of the need for defining the APRN role as well as educating the public and general medical profession on the value of NPs/CNMs. In addition, several noted the need for more information on, or better definition of, scope of practice.

> *"I think more emphasis needs to be made on educating the public and physicians on the role of the NP. Many think of NPs as a threat to their practice, but more information is needed for MDs to understand how NPs can be tremendous asset to their practice."*

> *"In my area people are not very familiar with what a nurse practitioner is- sometimes only want to see MD and not me. Perhaps a public relations campaign?"*

> *"We are so valuable to physicians! But I think many of them don't know all the ways that we can assist them. They don't understand the scope of our practice, the financial advantage and time saving advantages we afford them. If they only knew.....?"*

Suggestions

Many respondents had suggestions for the BRN. Suggestions included greater BRN accessibility, expedited license and renewal processing, expanded scope of practice, clearer and more accessible guidelines on scope of practice, APRN representation at the BRN, a separate scope of practice for NPs, and possibly a separate midwifery board.

> *"I would like the California Board of Registered Nursing to come out in support of full practice authority for Nurse Practitioners the next time the measure goes through the California Legislature and Senate. Publicly supporting California's well educated, well prepared practitioners for full independent practitioner status would reflect that it understood how primary health care is being delivered on the ground throughout our state, particularly in rural areas."*

> *"Often it becomes very confusing for an NP to find out what s/he is allowed under NP scope. I wish there was a clear up-to-date online guide that clearly describes our scope of practice in California and gets updated frequently. For example, I always get a mixed response if as an NP, I could make a referral/sign for home health evaluation for my patients or not?"*

> *"Please make a genuine effort to show support to out-of-hospital CNMs. Please help out of hospital CNMs by having an out-of-hospital CNM on the nurse midwifery advisory council."*

> *"I fully believe California needs to establish a Board of Midwifery. Nurses- Midwives are not truly supervised by MDs but work in a consultative relationship. … The law needs to be changed…I feel nurse- midwives would benefit from their own Board which oversees the many issues that come up in the practice of midwife in California. Many other states have Boards of Midwifery."*

> *"I think as the NP/ primary care provider role further develops that there needs to be a separate division from RN on site and Board related activities. For NPs such as myself who no longer practice in the RN capacity, my support needs are different. We are on the "medical" side of the ledger. While I will never fully leave my RN "roots", the fact is that the Boards' activities for the most part simply don't apply (not that I can see, anyway)."*

Summary of Thematic Findings

While the perspectives voiced in the comments section are not likely to represent all NPs and CNMs residing in California, the recurrence of key issues indicates their relevance to a sizable number of APRNs.

Scope of practice was the most frequently mentioned topic in the comments to this survey. Respondents reported legal and cultural barriers to practice that keep APRNs from working to the full extent of their abilities and scope of practice. Many demanded full practice authority and independence from MD supervision or collaboration. CNMs had concerns particular to their profession, including the difficulty of obtaining hospital privileges, a sense that MDs were hostile to them because they viewed them as competition and/or a liability, and frustration about supervision requirements that prevented them from attending home births. Many commented on the fact that allowing APRNs greater scope would allow for greater patient access to primary care.

Many APRNs felt undervalued for the work they perform. Some respondents remarked on the higher wages and lower liability of RNs, and some respondents noted that they did the same work as MD colleagues at a lower salary. While some commented on job search, relatively few remarked on job placement difficulties in comparison to the 2010 survey, where these comments were more prevalent. Instead, several respondents offered the BRN suggestions on creating job search resources. Some APRNs felt bullied and undervalued by MDs, but there was relatively little commentary on relationships with other nurses or staff.

Nursing education was another popular topic. While many respondents felt concerned about the difficulties faced by new nurses and nursing students, they also felt that new graduates were often underprepared for patient care due to lack of hands-on clinical preparation. This led many to call for residency and/or mentorship programs for new graduates and/or students. While many agreed to the idea of making the BSN the minimum degree for entry into the field, there was debate about the value of the DNP degree for APRNs. The plight of non-master's prepared APRNs was lamented by some, with many pleas for finding a way to grandfather them in or provide expedited and/or subsidized courses to facilitate their acquisition of a master's degree. The need for refresher courses for APRNs wishing to reenter the field was also noted.

Many felt that the public and the medical community do not understand the role of APRNs in healthcare and asked the Board of Registered Nurses to advocate on behalf of advanced practice. Specific suggestions included a request that the BRN define the roles and autonomy of APRNs, advocate for full-practice authority, and grant waivers to APRNs lacking advanced degrees.

Comments from the 2017 NP/CNM Survey remind us that nurses are working in an improved economy compared to the employment situation during the 2010 survey. However, APRNs still face obstacles to working to their full capacity in the workplace. In addition, they are faced with a constantly changing and uncertain healthcare environment. Increasing use of computer technology and changes in nursing education expectations have introduced additional stress into a job to which nearly all express a deep commitment.

Chapter 9: Conclusions

California's advanced practice nursing workforce of Nurse Practitioners and Certified Nurse-Midwives is, on average, older than the RN population and less diverse; this is particularly true for CNMs. Men make up only 10.1% of Nurse Practitioners, and nearly no men hold a certificate as a nurse midwife. Over 60% of NPs and 80% of CNMs are white. The registered nurse workforce of California is becoming increasingly diverse, which provides an opportunity to recruit these diverse RNs into advanced practice. There has been a notable influx of younger NPs into the workforce, with the largest age group being 35 to 44 years old (32.3%).

NPs and CNMs are highly educated. The majority of NPs and CNMs received their initial education in a baccalaureate degree program in California and then received further education for their NP or CNM degrees through a master's degree program. Over 80% of NPs and over 65% of CNMs had a master's or doctoral degree as their highest degree. The most common areas of educational specialization were family/individual health for NPs and women's/gender health for CNMs.

At the time of the survey, 77.1% of all NPs and CNMs were working in positions that required their advanced practice certificates. Employment rates were higher for NPs (77.2%) than CNMs (70%), likely due to CNMs' average older age compared to NPs and those with dual-certification. Nurses employed in primary positions requiring APRN certification reported working in a variety of settings that are generally related to their specific certification. NPs most commonly reported working in a private physician-led office, community health center, or other outpatient setting. CNMs reported their most common employment setting as a labor and delivery unit in a hospital, although many reported a combination of clinic care and hospital-based labor and delivery.

Around 84% of NPs reported that they were nearly always able to practice to the fullest extent of their legal scope of practice, though only 21% can round on patients in the hospital. More than 38% of NPs have a panel of patients they manage over time, but only 31.3% are recognized as a primary care provider by private insurance plans. Over 72% of CNMs reported that they work to the full extent of their scope of practice and 68% can round on hospital patients.

When asked to rate their satisfaction with their work and careers, 82% of NPs and 92% of CNMs working as APRNs reported being "satisfied" or "very satisfied" with their APRN career. Nonetheless, NPs and CNMs were forthcoming as to the problems facing with work and careers. The most common issues reported by NPs and CNMs were inadequate time with patients, too little involvement in organization decisions, lack of administrative support, and scope of practice restrictions.

About 23% of NPs and 30% of CNMs reported that they do not work in advanced practice. Of this group, 47% of NPs and 36.7% of CNMs were working as an RN. Over 30% of those not working as APRNs are retired. The reasons for not working in advanced practice were many, with a large share of NPs and CNMs indicating a lack of jobs in desired clinical specialties, types of facilities, and geographic locations were a barrier to employment.

In comments received from survey respondents, one of the most common themes was that of unmet potential. Whether through restrictive scope of practice or the failure of administrators and collaborators to use APRNs as primary care providers, the medical community is not taking advantage of the rich and extensive APRN training and experience. Many APRNs report that healthcare providers and physicians do not understand what an APRN can do.

California's NP and CNM workforce is highly educated, highly motivated, and under-utilized in many areas of the health care delivery system. Only a small proportion of the APRN workforce is under the age of 35, while a much larger proportion prepares to retire, leave the profession entirely, continue to work in nursing outside of an APRN position, or decrease their APRN hours in the next five years. The aging of the APRN population and reported difficulties finding work as an NP and CNM make the future of the NP and CNM workforce difficult to predict. If California is to take advantage of NPs' and CNMs' extensive skills, experience, and ability to provide primary care, then the concerns raised in this report must addressed. Employers and health care leaders need to continue to support this valuable workforce, seek to retain APRNs, support their efforts to work to the full scope of practice, and attract younger nurses to the profession.

California Board of Registered Nursing

Survey of Nurse Practitioners and Certified Nurse Midwives 2017

Conducted for the Board of Registered Nursing by

Philip R. Lee Institute for Health Policy Studies,
University of California, San Francisco

Here's how to fill out the Survey:

- Use pen or pencil to complete the survey.
- Please try to answer each question.
- Most questions can be answered by checking a box or writing a number or a few words on a line.
- Never check more than one box, except when it says **Check all that apply.**
- Sometimes we ask you to skip one or more questions. An arrow will tell you what question to answer next, like this:

☐1 YES
☐2 NO → **SKIP TO Question 23**

- If none of the boxes is just right for you, please check the one that fits you the best. Feel free to add a note of explanation. If you are uncomfortable answering a particular question, or can't answer it, feel free to skip it and continue with the survey.
- If you need help with the survey, call toll-free (877) 276-8277.
- **REMEMBER**: An online version of this survey is available. Follow the instructions in the cover letter that came with this questionnaire to access the online survey.

After you complete the survey, please mail it back to us in the enclosed envelope. No stamps are needed. Thank you for your prompt response.

CALIFORNIA BOARD OF REGISTERED NURSING
2017 NURSE PRACTITIONER (NP) & CERTIFIED NURSE MIDWIFE (CNM) SURVEY

SECTION A: EDUCATION AND LICENSURE INFORMATION

1. In which educational program(s) did you complete **any** NP and/or CNM preparation? (**Check all that apply**, including both initial and advanced education.)

	NP	Year completed	CNM	Year completed
Entry Level Master's Program (ELM, MEPN, etc.)	☐a		☐a	
Master's Degree (MSN, non-ELM)	☐b		☐b	
Post-master's Certificate	☐c		☐c	
Certificate Program (no master's degree)	☐d		☐d	
Doctor of Nursing Practice (DNP)	☐e		☐e	
Other Doctorate (PhD, DNSc, etc.)	☐f		☐f	
Other (Describe): _____	☐g		☐g	

2. Please indicate **all additional** educational degrees you have earned. Do not include degrees indicated in Question 1.

- ☐a Diploma in Registered Nursing
- ☐b Associate degree in Nursing (AD)
- ☐c Other Associate degree (non-nursing)
- ☐d Baccalaureate of Science in Nursing (BSN)
- ☐e Other Baccalaureate degree (non-nursing)
- ☐f Master's degree in Nursing (MSN, MN)
- ☐g Other Master's degree (non-nursing)
- ☐h Doctorate of Nursing Practice (DNP)
- ☐i PhD or other Research Doctorate in Nursing
- ☐j Other Doctoral degree (non-nursing)

3. In what **year** did you obtain your first RN license (in any state or country)? __ __ __ __

4. In what state or country did you first get licensed as an RN?

USA: _____ (2-letter state code) **OR** Other country: _____

5. Please indicate your clinical fields of NP and/or CNM **educational preparation**. **(Check all that apply.)**

- ☐a Family/individual
- ☐b Adult primary care
- ☐c Geriatrics primary care
- ☐d Pediatrics primary care
- ☐e Women's health/gender-related
- ☐f Neonatalology
- ☐g Psychiatric/mental health
- ☐h Acute care – adult and/or geriatrics
- ☐i Acute care – pediatrics
- ☐j Perinatal care
- ☐k Oncology
- ☐l Occupational health
- ☐m Palliative care/hospice
- ☐n Midwifery
- ☐o Other (specify): _____

6. Are you currently certified as **both** an NP and a PA?

☐1 Yes ☐2 No → **Skip to Question #8 on the next page**

7. In which certification field are you currently working? ☐1 NP ☐2 PA ☐3 Neither ☐4 Both

8. If you are **currently <u>nationally</u>** certified as an **NP or CNM**, by whom? **(Check all that apply.)**

☐a American Academy of Nurse Practitioners (AANP)
☐c National Certification Corporation (NCC)
☐e American Midwifery Certification Board (AMCB) / ACNM
☐b American Nurses Credentialing Center (ANCC)
☐d Pediatric Nursing Certification Board (PNCB)
☐f AACN Credentialing Corporation (acute care adult/gero NP)
☐g Other (specify below) _____

9. Are you **currently** enrolled in a graduate, advanced degree, or specialty certificate program?

☐1 Yes ↓
☐2 → **Skip to Question #11 below.**

10. What is your **degree objective**? (Check all that apply.)

☐a Master's degree in nursin
☐b Master's degree in non-nursing fiel
☐c Non-degree specialty certification program
☐d Doctor of Nursing Practice (DNP
☐e PhD or other Research Doctorate in Nursin
☐f Other Non-Nursing Doctoral degre

11. If you <u>ever</u> **pursued a degree** <u>beyond</u> your NP/CNM education, or are seeking one now, why? (Check all that apply.)

☐a Higher salary
☐b Required for my NP/CNM position
☐c Required for billing purposes
☐d Personal growth/development
☐e To seek new job opportunities
☐f Interest in becoming faculty
☐g Other (specify: _____)

12. Are you **currently working for pay** in **<u>any job</u>** that requires your NP or CNM certification?

☐1 **Yes** ↓ **Continue below to Section B.**
☐2 **No**, I am not working as an NP or CNM. ↓ **Skip to page 10, Section D.**

SECTION B: FOR NURSES CURRENTLY EMPLOYED AS AN NP OR CNM

Please complete this section if you have any job (clinical or not) that requires your <u>California</u> NP or CNM certification. If you are <u>NOT</u> working in a paid position that requires your NP or CNM certification, please SKIP to page 10, Section D.

13. In how many <u>NP/CNM</u> positions do you currently work for pay?

☐1 One ☐2 Two ☐3 Three ☐4 Four or more

Please complete the following questions for the <u>top two NP/CNM positions</u> according to where you spend most of your working time.

14. How many **months per year** do you work in your NP/CNM position(s)?

Primary NP/CNM position: _____ # months/year
Second NP/CNM position: _____ # months/year

15. How many **hours per week** do you work (on average) in your NP/CNM position(s)?

Primary NP/CNM position: _____ # hours per week
Second NP/CNM position: _____ # hours per week

16. How are you paid in your **primary** NP/CNM position? (Select one.)

☐1 Annual salary
☐2 By the hour
☐3 Percentage of Billing
☐4 Base salary with bonus (based on billing, quality, etc.)
☐5 Other (specify: _____)

17. Indicate the zip codes for **each** site you work at in your top two NP/CNM position(s).

Primary NP/CNM position: _____ site 1 zip _____ site 2 zip _____ site 3 zip

Second NP/CNM position: _____ site 1 zip _____ site 2 zip _____ site 3 zip

18. How long have you worked with your **current employer**?

Primary NP/CNM position: _____ years & _____ months

Second NP/CNM position: _____ years & _____ months

19. Which one of the following best describes the **job title** of your **NP/CNM position(s)**? (Check one for each applicable position.)

	Primary NP/CNM position	**Second NP/CNM position**
Nurse Practitioner	☐1	☐1
Nurse-Midwife	☐2	☐2
Management / Administration	☐3	☐3
Faculty in NP education program	☐4	☐4
Faculty in CNM education program	☐5	☐5
Faculty in RN education program	☐6	☐6
Other (specify:_____)	☐8	☐8

20. Approximately what percentage of your time is spent on each of the following functions during a **typical week** in your NP/CNM position(s)?

	Primary NP/CNM position	**Second NP/CNM position**
Patient care (including patient and family education, record keeping, communications regarding patient care)	_____ %	_____ %
Administration, management, or organizational support (such as quality improvement, peer review, committee service)	_____ %	_____ %
Teaching/precepting for a pre-licensure nursing education program	_____ %	_____ %
Teaching/precepting for a NP/CNM education program	_____ %	_____ %
Research	_____ %	_____ %
Other (specify: _____)	_____ %	_____ %
	100%	**100%**

21. Please estimate the **total annual earnings** for your NP/CNM position(s) **in 2016**, before deductions for taxes, social security, etc.

Primary NP/CNM position: $_____,_____ per year

Second NP/CNM position: $_____,_____ per year

22. Which of the following **best** describes the type of **setting** of your NP/CNM position(s)? (**Check only one setting for each position based on where you spend the most time.**)

	Primary NP/CNM position	Second NP/CNM position
Hospital Setting		
Hospital, acute/critical care	☐1	☐1
Hospital, emergency room/urgent care	☐2	☐2
Hospital, labor and delivery	☐3	☐3
Hospital, outpatient services	☐4	☐4
Ambulatory Setting		
Private physician-led practice	☐5	☐5
HMO-based practice	☐6	☐6
NP/CNM-led health clinic	☐7	☐7
Community Health Center/FQHC	☐8	☐8
Family Planning Center	☐9	☐9
Rural Health Center	☐10	☐10
Occupational/Employee health center	☐11	☐11
Public Health clinic	☐12	☐12
Retail based clinic	☐13	☐13
Urgent Care	☐14	☐14
College health service	☐15	☐15
School-based health center	☐16	☐16
VA health center (outpatient)	☐17	☐17
Maternal Child Health Setting		
Freestanding Birthing Center	☐18	☐18
Home birth	☐19	☐19
Other Setting		
Academic education program	☐20	☐20
Correctional system	☐21	☐21
Extended care/long term facility	☐22	☐22
HMO/Managed care company (no patient care)	☐23	☐23
Mental Health Facility	☐24	☐24
Public Health Department (not a health center)	☐25	☐25
Home Health agency	☐26	☐26
Hospice/Palliative care	☐27	☐27
Other (Specify)_____	☐28	☐28

23. Are you doing volunteer work in your capacity as an NP/CNM? ☐1 Yes ☐2 No

If Yes, how many hours per month _____

24. Do you precept NP, CNM, MD, and/or PA students through direct clinical observation?

☐a No

☐b Yes, NP students _____# per month ☐c Yes, CNM students _____# per month

☐d Yes, MD students _____# per month ☐e Yes, PA students _____# per month

25. Which of the following **barriers**, if any, do you face regarding precepting **NP/CNM students** from **California-based programs?** (Check all that apply.)

☐a Not interested in precepting
☐b Lack of physical space for students
☐c Lack of time due to clinical demands
☐d Too much paperwork required
☐e Administrative constraints on accepting students
☐f Competition for spots from non-NP/CNM students
☐g Competition from out-of-state programs
☐h Other (specify): _____

26. Are you required to maintain **national** certification in your NP/CNM role for your position?

☐1 Yes ☐2 No ☐3 Unsure

27. In which clinical fields do you **most frequently** provide direct patient care in your top two paid NP/CNM position(s)? (**Check all that apply for each position.**)

☐a **Not** involved in patient care for <u>both</u> positions ⟶ **Skip to Question #42**

	Primary NP/CNM position	**Second NP/CNM position**
Not involved in patient care for this position	☐a	☐a
Ambulatory/outpatient	☐b	☐b
Cardiology	☐c	☐c
Community/public health	☐d	☐d
Corrections/prison	☐e	☐e
Emergency/trauma	☐f	☐f
Endocrine/diabetes	☐g	☐g
Geriatrics/gerontology	☐h	☐h
Gynecology/women's health	☐i	☐i
Home health	☐j	☐j
Hospice/palliative care	☐k	☐k
Intensive care/critical care	☐l	☐l
Medical-surgical	☐m	☐m
Neonatal intensive care	☐n	☐n
Obstetrics/intrapartum	☐o	☐o
Oncology	☐p	☐p
Orthopedics	☐q	☐q
Newborn/Pediatrics	☐r	☐r
Psychiatry/mental health	☐s	☐s
School health (K-12 or college)	☐t	☐t
Surgery/pre-op/post-op/ PACU/anesthesia	☐u	☐u
Other (Specify:)	☐v	☐v

Skip to question #42 if you do not provide patient care in your top two NP/CNM positions.

28. In your **NP/CNM practice**, please estimate what percent of <u>your patients</u>:

	Primary NP/CNM position	**Second NP/CNM position**
A. Are covered by Medicare fee-for-service?	_____ %	_____ %
B. Are covered by Medicaid fee-for service?	_____ %	_____ %
C. Are covered by private insurance?	_____ %	_____ %
D. Worker's compensation?	_____ %	_____ %
E. Other government program (e.g., VA, IHS)	_____ %	_____ %
F. Uninsured?	_____ %	_____ %

29. Please **estimate what percent** of <u>your patients</u> are in a Managed Care plan or Accountable Care Organization (ACO), for any type of insurance program?

_____% in managed care or ACO

30. Which types of new patients is your practice **currently** accepting? **(Check all that apply.)**

	Primary NP/CNM position	Second NP/CNM position
A. Covered by Medicare	☐a	☐a
B. Covered by Medicaid	☐b	☐b
C. Covered by private insurance	☐c	☐c
D. Worker's compensation	☐d	☐d
E. Other government program (e.g., VA, IHS)	☐e	☐e
F. Uninsured	☐f	☐f

31. For billing/reimbursement in your NP/CNM position(s), do you have a Medicare provider number/NPI?

☐1 Yes ☐0 No → **Skip to #33 below.**

↓

32. If you care for Medicare/Medi-Cal patients in your NP/CNM position(s), how are your services billed?

	Primary NP/CNM position	Second NP/CNM position
Medicare	☐1 Bill as primary provider ☐2 Incident to physician ☐3 Don't know ☐4 Not applicable	☐1 Bill as primary provider ☐2 Incident to physician ☐3 Don't know ☐4 Not applicable
Medi-Cal	☐1 Bill as primary provider ☐2 Incident to physician ☐3 Don't know ☐4 Not applicable	☐1 Bill as primary provider ☐2 Incident to physician ☐3 Don't know ☐4 Not applicable

33. Are you recognized as a primary care provider (PCP) in those insurance networks in which your practice(s) participate?

☐1 Yes ☐0 No or unsure → **Skip to #34 below.**

↓

If Yes, indicate by marking all that apply below.

	Primary NP/CNM position	Second NP/CNM position
Aetna	☐a	☐a
Anthem Blue Cross	☐b	☐b
Blue Shield	☐c	☐c
Cigna	☐d	☐d
Health Net	☐e	☐e
Kaiser	☐f	☐f
United Healthcare	☐g	☐g
LA Care	☐h	☐h
Other (specify):	_____	_____

34. Indicate if you have the following privileges at **any hospital** for your NP/CNM position(s). (Check all that apply.)

	Primary NP/CNM position	Second NP/CNM position
Rounding on patients	☐a	☐a
Write orders <u>without</u> physician co-signature	☐b	☐b
Write orders <u>with</u> physician co-signature	☐c	☐c

35. Do you work in **primary care**, involving common health problems and preventive measures, in your NP/CNM position(s)?

Primary NP/CNM position: ☐0 No ☐1 Yes → Percent of time: _____%

Second NP/CNM position: ☐0 No ☐1 Yes → Percent of time: _____%

36. In your NP/CNM position(s), are you…

	Always	Almost always	To a considerable degree	Occasionally	Seldom	Never
Allowed to practice to the fullest extent of the legal scope of practice in California?	☐1	☐2	☐3	☐4	☐5	☐6
Using your NP/CNM skills fully?	1	2	3	4	5	6
Contributing to the development or revision of standardized procedures?	☐1	☐2	☐3	☐4	☐5	☐6
Working with underserved populations?	1	2	3	4	5	6

37. Are you considering applying for a waiver to prescribe buprenorphine? ☐1 Yes ☐2 No ☐3 Unsure

38. Do you have a **panel of patients** for whom you are the **main** care provider and that you **manage on an ongoing basis**? ☐1 Yes ☐2 No

If Yes, how many hours per month _____

If Yes, how many patients are in your panel? _____

39. Where is your collaborating/supervising physician located? (Check all that apply.)

	Primary NP/CNM position	Second NP/CNM position
Physician is in another practice/system than mine	☐a	☐a
Physician is at another site within the same practice/system	☐b	☐b
Physician is on site	☐c	☐c

40. How often is a **physician present on site** to discuss patient problems as they occur in your principal NP/CNM positions? (Check one for each applicable position.)

	Primary position	Second position
Never (0% of the time)	☐1	☐1
Seldom (1%-25% of the time)	☐2	☐2
Sometimes (26%-50% of the time)	☐3	☐3
Usually (51%-75% of the time)	☐4	☐4
Nearly always (76%-100% of the time)	☐5	☐5

41. What type of **professional relationship do you have with the physician(s)** in your NP/CNM practice? (Check all that apply.)

	Primary NP/CNM position	Second NP/CNM position
	☐	☐
S/he is the medical director who oversees all of our practice and I am accountable to the medical director, as are all other providers	☐b	☐b
	☐	☐
Physician sees and signs off on the patients I see	☐d	☐d
_____	☐	☐

42. Are you certified in California as a **nurse mid-wife**?

☐1 Yes ☐0 No → **Skip to Section C on the next page.**

43. Are you employed in a **nurse mid-wife** role? ☐2 No ☐1 Yes→ skip to #45 below

44. How important are each of the following factors for **not practicing nurse-midwifery**?

	Not important	Somewhat important	Important	Very important	Does not apply
A. Childcare/family responsibilities	☐1	☐2	☐3	☐4	☐0
B. Stress specific to CNM role		☐2	☐3	☐	
C. Dissatisfied with CNM salaries		☐		☐4	☐0
D. Dissatisfied with the CNM profession	☐1	☐2	☐3	☐4	☐0
E. Inconvenient schedules	☐1	☐2	☐3	☐4	☐0
F. Overall lack of CNM jobs		☐2	☐3	☐4	
G. Lack of CNM jobs/practice opportunities in desired location			☐3	☐4	☐0
H. Denied CNM job due to lack of experience or qualification		☐	☐	☐	
I. Challenges associated with scope of practice restrictions for CNMs / physician supervision				☐4	☐0
J. Dissatisfaction with the degree of collaboration with other providers	☐	☐	☐	☐	
K. Liability insurance or concerns				☐4	☐0
L. Cost of business is too high	☐	☐	☐	☐	
M. Other				☐4	☐0

(**Specify:** _____)

45. Do you **attend births** in your CNM position(s)?

☐0 No ☐1 Yes → Number per month: _____

46. Do you participate as an RN **first assistant in Cesarean deliveries** in your CNM position(s)?

☐0 No ☐1 Yes → Number per month: _____

SECTION C: SATISFACTION WITH NP/CNM PRACTICE

47. How satisfied are you with your NP and/or CNM career?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
☐1	☐2	☐3	☐4	☐5

48. How much of a problem is each of the following issues with regard to your ability to provide quality care?

	Not a problem	Minor problem	Major problem	Not applicable
A. Inadequate time with patients	☐1	☐2	☐3	☐0
C. Lack of qualified specialists in your area	☐1	☐2	☐3	☐0
E. Denial of coverage/care decisions by insurance companies	☐1	☐2	☐3	☐0
G. Quality issues outside of your control	☐1	☐2	☐3	☐0
I. Insufficient income in my practice to support quality	☐1	☐2	☐3	☐0
K. Non-paying patients/bad debt	☐1	☐2	☐3	☐0
M. Non-reimbursable overhead costs	☐1	☐2	☐3	☐0
O. Lack of administrative support	☐1	☐2	☐3	☐0
P. Lack of ancillary clinical support (such as MAs)	☐1	☐2	☐3	☐0
Q. Lack of access/support for educational advancement	☐1	☐2	☐3	☐0
R. Varying degrees of collaboration	☐1	☐2	☐3	☐0
S. Inadequate or slow 3rd party payment	☐1	☐2	☐3	☐0
T. Other	☐1	☐2	☐3	☐0

(**Specify:** _____)

49. In the last three years, indicate if you have you encountered either of the following obstacles to practicing as an NP/CNM? **(Check all that apply.)**

☐a Difficulty finding employment as an NP/CNM ☐b Lack of adequate mentoring

50. Has your NP/CNM **employment changed** during the last three years? **(Check all that apply.)**

☐a Increased NP/CNM hours ☐d Added services in a practice ☐g Opened practice(s)
☐b Decreased NP/CNM hours ☐e Ceased offering specific services ☐h Changed roles at same employer
☐c Changed employer(s) ☐f Closed practice(s) ☐i No change in NP/CNM employment
☐i Other (specify: _____)

51. Within the **next five years**, what are your intentions regarding your NP/CNM employment? *(**Check all that apply.**)*

- ☐a Plan to increase hours of NP/CNM work
- ☐b Plan to work approximately as much as now
- ☐c Plan to reduce hours of NP/CNM work
- ☐d Plan to leave nursing entirely but not retire
- ☐e Plan to retire
- ☐f Plan to move to another state for NP/CNM work

(PLEASE SKIP TO PAGE 11, SECTION E)

SECTION D: FOR PERSONS NOT EMPLOYED IN AN NP/CNM ROLE

If you ARE working in a paid position in which you utilize your NP/CNM training and skills, please SKIP to page 11, Section E.

52. What was the last year you worked for pay as an NP/CNM? __ __ __ __ or ☐ Never

53. How important are each of the following factors in your not being employed as an NP/CNM?

	Not important	Somewhat important	Important	Very important	Does not apply
A. Retired	☐1	☐2	☐3	☐4	☐0
B. Childcare/family responsibilities	☐1	☐2	☐3	☐4	☐0
C. Moving to a different location	1	☐2	☐3	☐4	☐0
D. Stress on the job	☐1	☐2	☐3	☐4	☐0
E. Illness/injury	☐1	☐2	☐3	☐4	☐0
F. Dissatisfied with benefits/salary	☐1	☐2	☐3	☐4	☐0
G. Dissatisfied with NP/CNM profession	☐1	☐2	☐3	☐4	☐0
H. Wanted to try another occupation	☐1	☐2	☐3	☐4	☐0
I. Inconvenient schedules	☐1	☐2	☐3	☐4	☐0
J. Overall lack of NP/CNM jobs	☐1	☐2	☐3	☐4	☐0
K. Lack of NP/CNM jobs/practice opportunities in desired location	☐1	☐2	☐3	☐4	☐0
L. Lack of NP/CNM jobs in desired type of facility	☐1	☐2	☐3	☐4	☐0
M. Lack of NP/CNM jobs in desired specialty	☐1	☐2	☐3	☐4	☐0
N. Denied NP/CNM job due to lack of experience or qualification	☐1	☐2	☐3	☐4	☐0
O. Dissatisfaction with ability to practice at the NP/CNM level	☐1	☐2	☐3	☐4	☐0
P. Dissatisfaction with the degree of collaboration with other providers	☐1	☐2	☐3	☐4	☐0
Q. Liability insurance or concerns	☐1	☐2	☐3	☐4	☐0
R. Lack of good management/ leadership	☐1	☐2	☐3	☐4	☐0
S. Difficulty managing the practice	☐1	☐2	☐3	☐4	☐0
T. Cost of business is too high	☐1	☐2	☐3	☐4	☐0
U. Other	☐1	☐2	☐3	☐4	☐0

(**Specify:** _____)

54. Which of the following best describes your **current intentions regarding work** as an NP/CNM? **(Check only one.)**

- ☐1 Currently seeking employment as an NP/CNM
- ☐2 Plan to return to NP/CNM practice within 1 year
- ☐3 Plan to return to NP/CNM practice in 1-3 years
- ☐4 Plan to return to NP/CNM practice in more than 3 years
- ☐5 Definitely will not return to or seek NP/CNM position
- ☐6 Undecided at this time → What would affect your decision?

_____

_____

_____

55. Are you doing volunteer work as an NP/CNM? ☐2 No ☐1 Yes → Hours per month: _____

SECTION E: EMPLOYMENT OUTSIDE NP/CNM ROLES

56. Are you currently working for pay **as an RN** (**not as an NP or CNM**)?

☐1 Yes ☐2 No → Skip to the **Question #63** on the next page

57. How many nursing (**non-NP/CNM**) positions do you hold? ☐1 One ☐2 Two or more

58. How many **months per year** do you work as an RN (non-NP/CNM)? _____ # months per year

59. How many **hours per week** do you normally work in any RN position? _____ # hours per week

60. Please estimate the **total annual earnings** for all of your **RN** (non-NP/CNM) positions **in 2016** combined, before deductions for taxes, social security, etc. $_____

61. Which of the following best describes the **type of setting**(s) of your **RN (non-NP/CNM)** position(s)? (**Check all that apply.**)

- ☐a Hospital (any department)
- ☐b Home health agency / home health service
- ☐c Nursing home, extended care, or skilled nursing facility
- ☐d Mental health / substance abuse
- ☐e Medical practice, clinic, surgery center
- ☐f Public health or community health
- ☐g Government agency
- ☐h School health service (K-12 or college)
- ☐i University or college (faculty or administration)
- ☐j Case management/disease management
- ☐k Other (specify: _____)

62. Which one of the following best describes your **job title** in your **RN (non-NP/CNM)** nursing position(s)? **(Check all that apply.)**

- ☐a Staff nurse/direct care nurse
- ☐b Clinical Nurse Specialist
- ☐c Patient care coordinator/ case manager/ discharge planner
- ☐e Nurse Coordinator
- ☐f Quality Improvement nurse, utilization review
- ☐g Telenursing
- ☐h Patient educator
- ☐i Educator, academic setting (professor, instructor)
- ☐j Educator, service setting (in-service educator)

☐d Management / administration ☐k Other (specify: _____)

63. Are you currently employed in a **non-nursing position** (that does not require an RN license)?

☐1 Yes ☐2 No **Skip to Section F below.** →

64. Does your position utilize any of your nursing knowledge? ☐1 Yes ☐2 No

SECTION F: DEMOGRAPHIC INFORMATION

65. Gender ☐1 Female ☐2 Male ☐3 Other

66. Year of birth 19 ___ ___

67. Are you currently married or in a domestic partner relationship? ☐1 Yes ☐2 No

68. What is your ethnic/racial background (select the **one** with which you most strongly identify)?

☐1 African American/Black/African ☐2 Caucasian/White/ European/Middle Eastern ☐3 American Indian/Native American/Alaskan Native ☐4 Other or Mixed

Asian		Latino/Hispanic	Native Hawaiian/Pacific Islander	
☐5 Cambodian	☐10 Korean	☐15 Central American	☐20 Fijian	☐25 Tongan
☐6 Chinese	☐11 Laotian/Hmong	☐16 South American	☐21 Filipino	☐26 Other
☐7 Indian	☐12 Pakistan	☐17 Cuban	☐22 Guamanian	
☐8 Indonesian	☐13 Thai	☐18 Mexican	☐23 Hawaiian	
☐9 Japanese	☐14 Vietnamese	☐19 Other Hispanic	☐24 Samoan	

69. In what languages, other than English, do you have medical fluency? (Check all that apply.)

☐a None ☐b Spanish ☐c Korean ☐d Vietnamese ☐e Tagalog/other Filipino dialect ☐f French ☐g Hindi/Urdu/Punjabi/other South Asian language ☐h Mandarin ☐i Cantonese ☐j Other Chinese dialect

☐k Other (**Please describe**: _____)

70. Do you have children living at home with you? ☐1 Yes ☐2 No

If Yes, **how many** are:

a) 0-2 years ____ b) 3-5 years____ c) 6-12 years ____ d) 13-18 years ____ e) 19+ years ____

71. Home Zip Code: _____ , City: _____, State: _____ or

If you reside outside of the country, please specify what country: _____

72. Which category best describes how much income your **total household** received last year? This is the before-tax income of **all** persons living in your household, including yourself:

☐1 Less than $50,000 ☐2 $50,000 - 74,999 ☐3 $75,000 - 99,999 ☐4 $100,000 – 124,999 ☐5 $125,000 – 149,999 ☐6 $150,000 – 174,999 ☐7 $175,000 – 199,999 ☐8 $200,000 or more

Thank you for completing the survey.

Please return the questionnaire in the postage-paid envelope provided

If you have additional thoughts or ideas about the nursing profession in California, please write them below. You may include your email address if you would like an email notification when the report on this survey is published.

What information or activities could the CA Board of Registered Nursing provide to assist or support your practice in the state of California?

_____

_____

_____

_____

Comments:

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Yes, I would like to be notified when the report is published.

My email address is: _____

Appendix B: Weighted Responses to All Survey Questions

SECTION A: EDUCATION AND LICENSURE INFORMATION

Q1: In which educational program(s) did you complete any NP and/or CNM preparation?

	Selected [%]
NP Entry-Level Master's Program	15.00
NP Master's Degree MSN, non-ELM	69.59
NP Post-Master's Certificate	11.21
NP Certificate Program (non-Master's)	12.00
NP Doctor of Nursing Practice	4.37
NP Other Doctorate (PhD, DNSc)	1.15
NP Other program	1.19
CNM Entry-Level Master's Program	1.33
CNM Master's Degree MSN, non-ELM	3.16
CNM Post-Master's Certificate	0.41
CNM Certificate Program (non-Master's)	1.66
CNM Doctor of Nursing Practice	0.06
CNM Other Doctorate (PhD, DNSc)	0.04
CNM Other program	0.07
Number of cases:	**1,409**

Decades for NP: Entry Level Master's Program (ELM, MEPN, etc.)

	Selected [%]
1970-	6.52
1980-	6.09
1990-	9.52
2000-	37.49
2010-	40.38
Number of cases:	**181**

Decades for NP: Master's Degree (MSN, non-ELM)

	Selected [%]
1950-	0.15
1960-	0.15
1970-	3.04
1980-	7.45

1990-	20.18
2000-	32.98
2010-	36.05
Number of cases:	**794**

Decades for NP: Post Masters Certificate

	Selected [%]
1970-	0.03
1980-	5.26
1990-	20.05
2000-	34.70
2010-	39.96
Number of cases:	**123**

Decades for NP: Certificate Program (no master's degree)

	Selected [%]
1950-	0.09
1970-	12.72
1980-	20.94
1990-	41.30
2000-	16.26
2010-	8.68
Number of cases:	**196**

Decades for NP: Doctor of Nursing Practice (DNP)

	Selected [%]
1990-	0.15
2000-	10.42
2010-	89.43
Number of cases:	**52**

Decades for NP: Other Doctorate (PhD, DNSc, etc.)

	Selected [%]
1970-	21.09
1980-	0.00
1990-	21.49
2000-	5.38
2010-	52.05
Number of cases:	**13**

Decades for NP: Other program

	Selected [%]
1950-	1.19
1970-	1.33
1980-	36.99
1990-	30.58
2000-	29.91
Number of cases:	**14**

Decades for CNM: Entry Level Master's Program (ELM, MEPN, etc.)

	Selected [%]
1980-	14.28
1990-	31.04
2000-	32.68
2010-	22.01
Number of cases:	**69**

Decades for CNM: Master's Degree (MSN, non-ELM)

	Selected [%]
1970-	0.70
1980-	14.12
1990-	27.71
2000-	31.78
2010-	25.69
Number of cases:	**153**

Decades for CNM: Post Masters Certificate

	Selected [%]
1980-	8.79
1990-	52.73
2000-	24.46
2010-	14.02
Number of cases:	**20**

Decades for CNM: Certificate Program (no master's degree)

	Selected [%]
1960-	1.01
1970-	7.83
1980-	48.24
1990-	36.50

2000-	6.41
Number of cases:	**84**

Decades for CNM: Doctor of Nursing Practice (DNP)

	Selected [%]
2010-	100.00
Number of cases:	**3**

Decades for CNM: Other Doctorate (PhD, DNSc, etc.)

	Selected [%]
2000-	100.00
Number of cases:	**1**

Decades for CNM: Other program

	Selected [%]
1970-	69.89
1990-	19.26
2000-	10.85
Number of cases:	**5**

Q2: Please indicate all additional educational degrees you have earned. Do not include degrees in Question 1.

	Selected [%]
Diploma in Nursing	7.58
Associate degree in Nursing (AD)	29.32
Other Associate degree (non-Nursing)	4.76
Baccalaureate of Science in Nursing	74.60
Other Baccalaureate degree (non-Nursing)	26.00
Master's degree in Nursing (MSN)	33.00
Other Master's degree (non-Nursing)	6.83
Doctorate of Nursing Practice (DNP)	1.87
PhD or other Research Doctorate in Nursing	1.59
Other Doctoral degree (non-Nursing)	2.55
Number of cases:	**1,372**

Q3: In what year did you obtain your first RN license (in any state or country)?

	Selected [%]
1950-	0.18

1960-	3.33
1970-	13.81
1980-	20.52
1990-	21.69
2000-	29.71
2010-	10.76
Number of cases:	**1,417**

Q4: In what state or country did you first get licensed as an RN?

Q4: STATES

State of first license	Selected [%]
CALIFORNIA	70.76
NEW YORK	4.40
ILLINOIS	2.05
MASSACHUSETTS	1.70
CONNECTICUT	1.66
FLORIDA	1.42
OHIO	1.40
PENNSYLVANIA	1.31
MARYLAND	1.06
TEXAS	1.01
WASHINGTON	0.91
TENNESSEE	0.86
MINNESOTA	0.84
WISCONSIN	0.78
ARIZONA	0.75
VIRGINIA	0.72
NEBRASKA	0.71
MICHIGAN	0.69
NEVADA	0.69
DISTRICT OF COLUMBIA	0.63
INDIANA	0.56
MISSOURI	0.47
MONTANA	0.46
IOWA	0.41
OREGON	0.38
NORTH CAROLINA	0.37
NEW JERSEY	0.36
UTAH	0.32
ARKANSAS	0.29
OKLAHOMA	0.27
HAWAII	0.25
COLORADO	0.19
VERMONT	0.19
MAINE	0.18

NEW HAMPSHIRE	0.18
LOUISIANA	0.17
NEW MEXICO	0.16
KANSAS	0.13
SOUTH CAROLINA	0.10
GEORGIA	0.09
KENTUCKY	0.03
ALABAMA	0.02
ALASKA	0.02
WYOMING	0.02
IDAHO	0.01
MISSISSIPPI	0.01
SOUTH DAKOTA	<0.01
WEST VIRGINIA	<0.01
Number of cases:	**1,321**

Q4: COUNTRIES

Country of first license	**Selected [%]**
Philippines	39.44
Canada	12.93
South Korea	9.68
England	7.12
China	5.66
Peru	2.82
India	1.62
Nigeria	1.62
Ukraine	1.62
Taiwan	0.35
Ireland	0.12
New Zealand	0.06
Other	*16.97*
Number of cases:	**58**

Q5: Please indicate your clinical fields of NP and/or CNM educational preparation. Check all that apply.

	Selected [%]	**Number of cases**
Family individual	60.50	1,344
Adult Primary Care	24.16	1,344
Geriatrics Primary Care	12.97	1,344
Pediatrics Primary Care	15.60	1,344
Women's health gender related	20.01	1,344
Neonatology	1.43	1,344
Psychiatric mental health	7.60	1,344
Acute care – adult and or geriatric	9.47	1,344

	Selected [%]	Number of cases
Acute care - pediatrics	2.90	1,350
Perinatal care	3.97	1,349
Oncology	1.98	1,347
Occupational health	2.82	1,348
Palliative care - hospice	2.12	1,347
Midwifery	5.74	1,407
Other	4.92	1,347

Q6: Are you currently certified as both an NP and a PA?

Are you currently certifies as both NP and PA (yes/no)	**Selected [%]**
No	95.37
Yes	4.63
Number of cases:	**1,418**

Q7: In which certification field are you currently working? (If Q6=yes)

Certification Field (NP/PA)	**Selected [%]**
NP	65.95
PA	5.58
Neither	17.70
Both	10.77
Number of cases:	**86**

Q8: If you are currently nationally certified as an NP or CNM, by whom?

Certification body

	Selected [%]
American Midwifery Certification Board (ACMB ACNM)	37.69
National Certification Corporation (NCC)	45.38
American Nurses Credentialing Center (ANCC)	6.68
American Academy of Nurse Practitioners (AANP)	7.84
Pediatric Nursing Certification Board (PNCB)	5.84
AACN Credentialing Corporation	1.83
No answer[1]	*20.95*
Number of cases	**1,127**

[1] Out of all respondents living in California.

Q9: Are you currently enrolled in a graduate advanced degree, or specialty certificate program?

Currently enrolled in graduate, advanced degree or specialty certificate program	Selected [%]
No	93.61
Yes	6.39
Number of cases:	**1,413**

Q10: What is your degree objective? Check all that apply. (If Q9=yes)

	Selected [%]
Master's degree in non-nursing field	4.18
Non-degree specialty certification	17.03
Doctor of Nursing Practice (DNP)	55.71
PhD or other Research Doctorate	6.75
Other Non-Nursing Doctoral degree	5.05
No answer	*3.11*
Number of cases:	**71**

Q11: If you ever pursued a degree beyond your NP/CNM education, or are seeking one now, why? Check all that apply.

	Selected [%]
Higher salary	22.20
Required for NP/CNM position	7.76
Required for billing purposes	1.91
Personal growth/development	75.92
To seek new job opportunities	37.79
Interest in becoming faculty	24.10
Other	8.42
Number of cases:	**509**

Q12: Are you currently working for pay in any job that requires your NP or CNM certification?

Working in profession that requires NP or CNM certification	Selected [%]
No	22.86
Yes	77.14
Number of cases:	**1,423**

SECTION B: FOR NURSES CURRENTLY EMPLOYED AS AN NP OR CNM

Q13: In how many NP/CNM positions do you currently work for pay?

Number of NP/CNM positions	Selected [%]
One	82.24
Two	14.05
Three	3.70
Four or more	0.01
Number of cases:	**1,056**

Q14: How many months per year do you work in your NP/CNM position(s)?

Primary position

Mean	Std. Err.	[95% Conf. Interval]	
11.75	0.05	11.64	11.85

Secondary position

Mean	Std. Err.	[95% Conf. Interval]	
9.80	0.37	9.06	10.54

Q15: How many hours per week do you work (on average) in your NP/CNM position(s)?

Primary position

Mean	Std. Err.	[95% Conf. Interval]	
33.91	0.44	33.05	34.78

Secondary position

Mean	Std. Err.	[95% Conf. Interval]	
12.52	0.89	10.77	14.28

Q16: How are you paid for in your primary NP/CNM position? (if employed)

Primary payment scheme	Selected [%]
Annual Salary	30.28
By the hour	38.22
Percentage of Billing	1.38
Base salary with bonus (based on billing, quality, etc.)	4.21
Per patient	0.69
Hourly or salary	0.97

Practice owned / Private practice	0.20
Other	0.32
No answer	23.73
Number of cases:	**1,430**

Q17 Indicate the zip codes for each site you work at in your top two NP/CNM position(s).

The question is omitted due to privacy protection.

Q18: How long have you worked with your current employer?

Primary position

Mean	Linearized Std. Err.	[95% Conf. Interval]	
7.42	0.34	6.74	8.10

Secondary position

Mean	Linearized Std. Err.	[95% Conf. Interval]	
5.10	0.75	3.61	6.59

Q19: Which one of the following best describes the job title of your NP/CNM position(s)?

Job title: Primary NP/CNM position	**Selected [%]**
Nurse Practitioner	89.77
Nurse-Midwife	4.76
Management	1.96
Faculty in NP education program	1.92
Faculty in CNM education program	0.00
Faculty in RN education program	0.22
Other	*1.37*
Number of cases:	**1,051**

Q20: Approximately what percentage of your time is spent on each of the following functions during typical week in your NP/CNM position?

Primary Job

Patient Care	**Selected [%]**
0%	2.11
1-25%	1.64
26-50%	4.31
51-75%	8.85

76-100%	83.08
Number of cases:	**1,016**

Administration	**Selected [%]**
0%	51.72
1-25%	40.73
26-50%	5.29
51-75%	1.28
76-100%	0.97
Number of cases:	**1,016**

Teaching/precepting for pre-licensure nursing education program	**Selected [%]**
0%	93.85
1-25%	5.79
26-50%	0.00
51-75%	0.33
76-100%	0.03
Number of cases:	**1,016**

Teaching/precepting for NP/CNM education program	**Selected [%]**
0%	82.78
1-25%	15.91
26-50%	0.55
51-75%	0.17
76-100%	0.56
Number of cases:	**1,016**

Research	**Selected [%]**
0%	90.92
1-25%	8.22
26-50%	0.50
51-75%	0.15
76-100%	0.19
Number of cases:	**1,016**

Other	**Selected [%]**
0%	95.43
1-25%	4.13
26-50%	0.02
76-100%	0.41
Number of cases:	**1,016**

Secondary Job

Patient care	Selected [%]
0%	15.71
1-25%	0.93
26-50%	3.15
51-75%	0.15
76-100%	80.07
Number of cases:	**181**

Administration	Selected [%]
0%	74.11
1-25%	20.27
26-50%	2.23
51-75%	1.98
76-100%	1.41
Number of cases:	**181**

Teaching/precepting for pre-licensure nursing education program	Selected [%]
0%	96.31
1-25%	0.10
26-50%	1.12
76-100%	2.47
Number of cases:	**181**

Teaching/precepting for NP/CNM education program	Selected [%]
0%	82.67
1-25%	4.63
26-50%	4.35
76-100%	8.35
Number of cases:	**181**

Research	Selected [%]
0%	97.74
1-25%	2.12
76-100%	0.15
Number of cases:	**181**

Other	Selected [%]
0%	97.61
1-25%	1.24
51-75%	0.05
76-100%	0.10
Number of cases:	**181**

Q21 - Please estimate the total annual earnings for your NP/CNM positions in 2016 before deductions for taxes, social security, etc.

Primary income (grouped)

Total annual earnings/income)	Selected [%]
less than $25,000	4.61
$25,000-$49,000	6.31
$50,000-$74,999	9.13
$75,000-$99,999	14.23
$100,000-$124,999	26.34
$125,000-$149,999	20.55
$150,000-$174,999	13.03
more than $175,000	5.79
Number of cases:	**971**

Mean	Linearized Std. Err.	[95% Conf. Interval]	
$112,708.50	2,430	$107,833.3	117,369.6

Secondary income (grouped)

Total annual earnings/income)	Selected [%]
less than $25,000	56.22
$25,000-$49,000	24.60
$50,000-$74,999	10.42
$75,000-$99,9999	4.80
$100,000-$124,999	2.26
$125,000-$149,999	0.85
$150,000-$174,999	0.85
Number of cases:	**180**

Mean	Std. Err.	[95% Conf. Interval]	
$29,572.54	2804.92	$24,056.72	$35,088.37

Q22 - Which of the following best describes the type of setting of your NP/CNM positions? (check only one setting for each position based where you spend the most of time)

Primary Job

Job setting: primary NP/CNM position	Selected [%]
Hospital, acute/critical care	9.70
Hospital, emergency room/urgent care	3.88
Hospital, labor and delivery	1.88
Hospital, outpatient services	9.61
Private physician-led practice	23.24
HMO-based practice	9.13
NP/CNM-led health clinic	2.19
Community Health Center/FQHC	11.20
Family Planning Center	1.64
Rural Health Center	2.29
Occupational/Employee health center	1.06
Public Health clinic	0.92
Retail based clinic	1.16
Urgent Care	1.18
College health service	1.28
School-based health center	2.22
VA health center (outpatient)	1.23
Freestanding Birthing Center	0.11
Home birth	1.49
Academic education program	1.96
Correctional system	1.71
Extended care/long term facility	0.90
HMO/Managed care company (no patient care)	1.21
Mental Health Facility	0.87
Public Health Department (not a health center)	0.87
Home Health agency	0.68
Hospice/Palliative care	1.01
Other	*3.22*
Clinic and Hospital (unspecified clinic type)	0.02
Hospital, labor and delivery + outpatient services	0.07
Hospital, labor and delivery + outpatient private practice	0.11
Hospital, labor and delivery + HMO based practice	0.15
Hospital, labor and delivery + NP/CNM led health clinic	0.10
Hospital, labor and delivery + Community Health Center	0.31
Hospital, labor and delivery + Family Planning Center	0.02
Hospital, labor and delivery + Rural Health Center	0.01
Other ambulatory setting	1.39
Number of cases:	**1,043**

Secondary Job

Job setting: secondary NP/CNM position	Selected [%]
Hospital, acute/critical care	7.49
Hospital, emergency room/urgent care	8.41
Hospital, labor and delivery	2.10
Hospital, outpatient services	4.17
Private physician-led practice	18.20
HMO-based practice	0.09
NP/CNM-led health clinic	3.95
Community Health Center/FQHC	8.01
Family Planning Center	1.23
Rural Health Center	2.40
Occupational/Employee health center	1.58
Public Health clinic	1.91
Retail based clinic	4.36
Urgent Care	3.07
College health service	0.96
VA health center (outpatient)	0.23
Freestanding Birthing Center	<0.01
Home birth	5.05
Academic education program	8.98
Extended care/long term facility	0.77
HMO/Managed care company (no patient care)	0.99
Mental Health Facility	0.07
Home Health agency	2.18
Hospice/Palliative care	4.86
Other	8.62
Hospital, labor and delivery + outpatient services	0.12
Hospital, labor and delivery + HMO based practice	0.09
Other ambulatory setting	0.12
Number of cases:	**208**

Q23 - Are you doing any volunteer work in your capacity as NP/CNM?

Volunteer work in capacity as NP/CNM	Selected [%]
No	89.73
Yes	10.27
Number of cases:	**1,047**

Q24 - Do you precept NP, CNM, MD and /or PA students through direct clinical observation?

Clinical observation

	Selected [%]
No Students	41.17
NP students	51.01
CNM students	4.44
MD students	11.33
PA students	5.19
Number of cases:	**677**

Q25 - Which of the following barriers if any, do you face regarding precepting NP/CNM students from California based programs? (check all that apply)

Barriers

	Selected [%]
Not interested in precepting	14.76
Lack of physical space for students	21.42
Lack of time due to clinical demands	51.69
Too much paperwork required	7.83
Administrative constraints on accepting students	31.31
Competition for spots from non-NP/CNM students	5.46
Competition from out of state programs	1.29
Other	6.04
Number of cases:	**954**

Q26 Are you required to maintain national certification in your NP/CNM role for your position?

Maintain national certification in NP/CNM	Selected [%]
Yes	72.61
No	22.52
Unsure	4.87
Number of cases:	**1,040**

Q27. In which clinical fields do you most frequently provide direct patient care in your top two paid NP/CNM position(s)? (Check all that apply for each position.)

Not involved in direct patient care

Not involved in direct patient care for both positions	Selected [%]
Not selected	97.34
Selected [%]	2.66
Number of cases:	**1,052**

Primary Job Clinical Field

	Selected [%]
Not involved in patient care in this position	1.84
Ambulatory/outpatient	55.35
Cardiology	6.59
Community/public health	8.75
Corrections/prison	2.10
Emergency/trauma	6.17
Endocrine/diabetes	6.33
Geriatrics/gerontology	10.59
Gynecology/women s health	19.19
Home health	1.76
Hospice/palliative care	4.14
Intensive care/critical care	3.80
Medical-surgical	5.61
Neonatal intensive care	0.51
Obstetrics/intrapartum	8.19
Oncology	3.71
Orthopedics	3.34
Newborn/Pediatrics	9.22
Psychiatry/mental health	9.44
School health (K 12 or college)	4.00
Surgery/pre-op/post-op/PACU/anesthesia	5.45
Other	10.32
Number of cases:	**1,030**

Secondary Job Clinical Field

	Selected [%]
Not involved in this posit	12.17
Ambulatory outpatient	33.44
Cardiology	4.97
Community public health	10.28
Emergency trauma	0.14

	Selected [%]
Corrections prison	14.94
Endocrine diabetes	5.07
Neonatal intensive care	5.60
Geriatrics gerontology	12.61
Gynecology women s health	3.44
Home health	3.96
Intensive care critical ca	5.38
Medical surgical	7.21
Hospice palliative care	0.84
Oncology	5.34
Orthopedics	4.57
Newborn Pediatrics	4.78
Psychiatry mental health	14.26
School health K 12 or col	2.23
Surgery pre op post op PAC	2.49
Other	10.52
Number of cases:	**194**

Q28 In your NP/CNM practice, please estimate what percent of your patients:

Primary Job

	0%	1-25%	26-50%	51%-75%	76%-99%	100%	Number of cases
Covered by Medicare	11.26	37.04	27.92	11.29	8.76	3.74	704
Covered by Medicaid	11.13	38.79	21.24	11.57	12.99	4.27	749
Covered by private insurance	29.88	35.69	17.06	7.27	8.20	1.90	500
Worker s compensation	51.70	32.08	4.65	1.99	1.43	8.14	372
Other government program (e.g., VA, IHS)	25.24	55.18	11.27	2.35	1.54	4.42	481
Uninsured	14.59	45.30	25.53	3.73	5.86	4.99	625

Secondary Job

	0%	1-25%	26-50%	51%-75%	76%-99%	100%	Number of cases
Covered by Medicare	19.88	33.95	24.05	6.77	6.26	9.09	114
Covered by Medicaid	20.07	31.03	23.74	10.40	4.71	10.05	112
Covered by private insurance	28.30	26.89	16.76	9.47	11.00	7.58	87
Worker s compensation	48.62	40.63	3.04	0.18	0.44	7.09	60
Other government program (e.g., VA, IHS)	42.54	43.37	6.37	3.64	0.34	3.74	75
Uninsured	16.78	41.66	24.04	5.04	10.79	1.69	101

Q29. Please estimate what percent of your patients are in a Managed Care plan or Accountable Care Organization (ACO), for any type of insurance program?

% of patients in Managed Care Plan or ACO	Selected [%]
1-25%	43.84
26-50%	18.89
51-75%	13.12
76-100%	24.15
Number of cases:	**724**

Q30. Which types of new patients is your practice currently accepting?

Primary Job

	Selected [%]
Covered by Medicare	78.08
Covered by Medicaid	68.71
Covered by private insurance	76.33
Worker s compensation	24.17
Other government program (e.g., VA, IHS)	37.20
Uninsured	53.86
Number of cases:	**948**

Secondary Job

	Selected [%]
Covered by Medicare	73.33
Covered by Medicaid	58.67
Covered by private insurance	78.53
Worker s compensation	32.67
Other government program (e.g., VA, IHS)	38.91
Uninsured	53.64
Number of cases:	**156**

Q31. For billing/reimbursement in your NP/CNM position(s), do you have a Medicare provider number/NPI?

Do you have Medicare provider number/NPI?	Selected [%]
No	7.26
Yes	92.74
Number of cases:	**1,019**

Q32. If you care for Medicare/Medi-Cal patients in your NP/CNM position(s), how are your services billed?

Primary Job

	Selected [%]	Number of cases
Medicare: Bill as primary provider	25.09	865
Medicare: Incident to physician	20.27	865
Medicare: Don't know	40.37	865
Medicare: Not Applicable	15.72	865
Medi-Cal: Bill as primary provider	26.99	864
Medi-Cal: Incident to physician	17.94	864
Medi-Cal: Don't know	38.20	864
Medi-Cal: Not Applicable	18.11	864

Secondary Job

	Selected [%]	Number of cases
Medicare: Bill as primary provider	20.08	150.00
Medicare: Incident to physician	23.07	150.00
Medicare: Don't know	35.97	150.00
Medicare: Not Applicable	20.88	150.00
Medi-Cal: Bill as primary provider	20.39	151.00
Medi-Cal: Incident to physician	21.49	151.00
Medi-Cal: Don't know	33.69	151.00
Medi-Cal: Not Applicable	24.43	151.00

Q33. Are you recognized as a primary care provider (PCP) in those insurance networks in which your practice(s) participate?

Primary Job

	Selected [%]
Aetna	43.25
Anthem Blue Cross	64.54
Blue Shield	59.39
Cigna	41.34
Health Net	47.43
Kaiser	20.93
United Healthcare	44.48
LA Care	17.60
Other	10.23
Tricare	0.75
VA	3.02
Number of cases:	**277**

Secondary Job

	Selected [%]
Aetna	62.84
Anthem Blue Cross	82.30
Blue Shield	80.11
Cigna	68.18
Health Net	60.25
Kaiser	11.31
United Healthcare	75.12
LA Care	8.67
Other	13.60
Number of cases:	**33**

Q34. Indicate if you have the following privileges at any hospital for your NP/CNM position(s).

Primary Job

	Selected [%]
Rounding on patients	53.24
Write orders without physician co-signature	83.14
Write orders with physician co-signature	32.54
Number of cases:	**476**

Secondary Job

	Selected [%]
Rounding on patients	55.75
Write orders without physician co-signature	83.19
Write orders with physician co-signature	29.23
Number of cases:	**76**

Q35. Do you work in primary care, involving common health problems and preventive measures, in your NP/CNM position(s)?

Primary Job

(work in PC) Primary job	Selected [%]
No	41.71
Yes	58.29
Number of cases:	**981**

What percent of time in your principal job do you provide primary care? (If Q35=yes)

Mean	Std. Err.	[95% Conf.	Interval]
77.54	1.54	74.50	80.58

Secondary Job

(work in PC) Secondary job	Selected [%]
No	49.49
Yes	50.51
Number of cases:	**247**

What percent of time in your secondary job do you provide primary care? (If Q35=yes)

Mean	Std. Err.	[95% Conf.	Interval]
68.94	4.98	59.12	78.76

Q36. In your NP/CNM position(s), are you

Allowed to practice to the fullest extent

Allowed to practice the fullest extent of the legal scope of practice in California	Selected [%]
Always	59.51
Almost always	23.13
To a considerable degree	12.08
Occasionally	2.28
Seldom	1.68
Never	1.33
Number of cases:	**1,034**

Using NP/CNM skills fully

Using your NP/CNM skills fully?	Selected [%]
Always	58.63
Almost always	20.88
To a considerable degree	14.96
Occasionally	3.41
Seldom	1.55
Never	0.56
Number of cases:	**1,033**

Contributing to the development or revision of procedures

Contribute to the development or revision of standardized procedures?	Selected [%]
Always	40.30
Almost always	16.25
To a considerable degree	14.96
Occasionally	9.93
Seldom	11.05
Never	7.52
Number of cases:	**1,022**

Working with underserved populations

Working with underserved populations?	Selected [%]
Always	47.60
Almost always	11.44
To a considerable degree	15.12
Occasionally	13.09
Seldom	7.29
Never	5.46
Number of cases:	**1,029**

Q37. Are you considering applying for a waiver to prescribe buprenorphine?

Waiver to prescribe buprenorphine	Selected [%]
Yes	6.54
No	70.03
Unsure	23.43
Number of cases:	**1,020**

Q38. Do you have a panel of patients for whom you are the main care provider and that you manage on an ongoing basis?

Manage panel of patients on ongoing basis	Selected [%]
No	62.79
Yes	37.21
Number of cases:	**1,023**

Number of hours per month

Mean	Std. Err.	[95% Conf.	Interval]
85.02	4.19	76.79	93.26

Number of patients in panel

Mean	Std. Err.	[95% Conf. Interval]	
507.53	60.86	387.91	627.16

Q39. Where is your collaborating/supervising physician located? (Check all that apply.)

Primary Job

	Selected [%]
Physician is in another practice/system than mine	11.33
Physician is at another site within the same practice/system	26.35
Physician is on site	72.25
Number of cases:	**1,018**

Secondary Job

	Selected [%]
Physician is in another practice/system than mine	18.15
Physician is at another site within the same practice/system	32.49
Physician is on site	56.79
Number of cases:	**170**

Q40. How often is a physician present on site to discuss patient problems as they occur in your principal NP/CNM positions? (Check one for each applicable position.)

Physician on site of principal position - % of time	**Selected [%]**
Never (0% of the time)	7.68
Seldom (1%-25% of the time)	16.97
Sometimes (26%-50% of the time)	9.89
Usually (51%-75% of the time)	12.99
Nearly always (76%-100% of the time)	52.47
Number of cases:	**1,023**

Physician on site of secondary position - % of time	**Selected [%]**
Never (0% of the time)	25.68
Seldom (1%-25% of the time)	14.12
Sometimes (26%-50% of the time)	11.23
Usually (51%-75% of the time)	13.79
Nearly always (76%-100% of the time)	35.19
Number of cases:	**186**

Q41. What type of professional relationship do you have with the physician(s) in your NP/CNM practice? (Check all that apply.)

Primary Job

	Selected [%]
Equal colleagues/no hierarchy	43.30
S/he is the medical director who oversees all of our practice, and I am accountable to the director as are all other providers	46.45
Hierarchical/supervisory in which I must accept his/her clinical decision about the patients I see	16.45
Physician sees and signs off on the patients I see	10.38
Other	1.39
Physician reviews some share of my charts	1.07
Physician co-signs charts/records/orders	0.87
Collaborative practice	1.36
Hierarchical/supervisory but not to the degree described above	0.65
Provides consultation as needed	0.88
Number of cases:	**1,007**

Secondary Job

	Selected [%]
Equal colleagues/no hierarchy	47.23
S/he is the medical director who oversees all of our practice, and I am accountable to the director as are all other providers	38.53
Hierarchical/supervisory in which I must accept his/her clinical decision about the patients I see	8.35
Physician sees and signs off on the patients I see	13.21
Other	5.16
Number of cases:	**170**

Q42. Are you certified in California as a nurse-midwife?

Certified in CA as nurse mid-wife	Selected [%]
No	94.24
Yes	5.76
Number of cases:	**1,050**

Q43. Are you employed in a nurse-midwife role?

Employed in a nurse mid-wife role	Selected [%]
No	22.86
Yes	77.14
Number of cases:	**236**

Q44. How important are each of the following factors for not practicing nurse-midwifery?

	N/A	Not important	Somewhat important	Important	Very important	Number of cases
Childcare/family responsibilities	51.38	7.59	7.14	8.13	25.76	31.00
Stress specific to midwife role	48.51	1.56	8.87	22.51	18.55	31.00
Dissatisfied with midwifery salaries	54.81	8.98	3.31	11.74	21.16	31.00
Dissatisfied with the midwifery profession	55.69	13.04	12.03	2.44	16.80	31.00
Inconvenient schedules	51.01	1.56	5.34	18.52	23.56	31.00
Overall lack of CNM jobs	53.25	5.79	6.22	16.38	18.37	31.00
Lack of CNM jobs/practice opportunities in desired location	53.25	8.58	5.34	14.17	18.66	31.00
Denied CNM job due to lack of experience or qualification	56.08	12.03	6.22	7.43	18.24	31.00
Challenges associated with scope of practice restrictions for midwives/physician supervision	52.03	4.23	9.01	14.37	20.37	31.00
Dissatisfaction with the degree of collaboration with other providers	54.37	13.57	7.43	8.95	15.69	31.00
Liability insurance or concerns	53.54	4.73	6.48	13.65	21.61	31.00
Cost of business is too high	55.10	5.29	8.13	11.09	20.38	31.00

Q45. Do you attend births in your CNM position(s)?

	Selected [%]
None	1.35
1-5 per month	13.17
6-10 per month	30.08
11-15 per month	23.64
16-19 per month	3.42
20 or more per month	28.34
Number of cases:	**146**

Q46. Do you participate as an RN first assistant in Cesarean deliveries in your CNM position(s)?

	Selected [%]
No	2.29
1-2 per month	40.37
3-4 per month	24.18
5 per month	19.12
6 or more per month	14.04
Number of cases:	**103**

SECTION C: SATISFACTION WITH NP/CNM PRACTICE

Q47. How satisfied are you with your NP and/or CNM career?

Overall satisfaction with NP and/or CNM job	**Selected [%]**
Very dissatisfied	6.61
Dissatisfied	3.54
Neither satisfied nor dissatisfied	7.22
Satisfied	42.84
Very satisfied	39.80
Number of cases:	**1,027**

Q48. How much of a problem is each of the following issues with regard to your ability to provide quality care?

	N/A	Not a problem	Minor Problem	Major Problem	Number of cases
Inadequate time with patients	2.18	29.87	43.88	24.07	1,036
Difficulties communicating with patients due to language or cultural barriers	2.60	35.20	53.76	8.43	1,029
Lack of qualified specialists in your area	4.14	51.20	29.27	15.39	1,039
Not getting timely reports from other providers and facilities	5.39	38.72	43.78	12.11	1,035
Denial of coverage care decisions by insurance companies	11.29	26.96	39.56	22.18	1,036
Scope of practice restrictions/lack of full practice authority	2.86	56.60	28.50	12.03	1,037
Quality issues outside of your control	5.85	32.67	46.53	14.95	1,026
Patients' inability to receive needed care because of inability to pay	8.77	32.71	42.13	16.39	1,032
Insufficient income in my practice to support quality	8.62	57.36	25.48	8.54	1,026

	N/A	Not a problem	Minor Problem	Major Problem	Number of cases
Too little involvement in decisions in your organization	5.93	42.34	34.24	17.50	1,035
Non-paying patients/bad debt	19.95	50.78	25.03	4.24	1,023
High liability insurance rates	17.95	51.66	23.16	7.23	1,014
Non-reimbursable overhead costs	21.65	48.29	22.33	7.72	1,011
Lack of call coverage	22.86	54.87	17.82	4.45	1,018
Lack of administrative support	4.12	44.81	34.36	16.71	1,041
Lack of ancillary clinical support (such as MAs)	4.28	49.16	32.58	13.98	1,034
Lack of access support for educational advancement	4.44	53.56	28.62	13.38	1,035
Varying degrees of collaboration	3.84	52.24	33.81	10.11	1,032
Inadequate or slow 3rd party payment	26.43	49.30	16.54	7.73	1,004
Other	52.41	37.52	6.01	4.06	335

Q49. In the last three years, indicate if you have you encountered either of the following obstacles to practicing as an NP/CNM? (Check all that apply.)

Last three years obstacles: difficulty finding employment as an NP/CNM	**Selected [%]**
Not selected	54.12
Selected	45.88
Number of cases:	**261**

Last three years obstacles: lack of adequate mentoring	**Selected [%]**
Not selected	28.88
Selected	71.12
Number of cases:	**261**

Q50. Has your NP/CNM employment changed during the last three years? (Check all that apply.)

	Selected [%]
Increased NP/CNM hours	17.33
Decreased NP/CNM hours	12.21
Changed employer(s)	28.81
Added services in a practice	1.79
Ceased offering specific services	1.10
Closed practice(s)	9.88
Opened practice(s)	1.54
Changed roles at same employer	9.24

	Selected [%]
No change in NP/CNM employment	40.51
Other	7.85
Number of cases:	**1,012**

Q51. Within the next five years, what are your intentions regarding your NP/CNM employment?

	Selected [%]
Plan to increase hours of NP/CNM work	12.54
Plan to work approximately as much as now	59.57
Plan to reduce hours of NP/CNM work	14.92
Plan to leave nursing entirely but not retire	1.29
Plan to retire	15.02
Plan to move to another state for NP/CNM work	7.85
Number of cases:	**1,035**

SECTION D: FOR PERSONS NOT EMPLOYED IN AN NP/CNM PRACTICE

Q52. What was the last year you worked for pay as an NP/CNM?

	Selected [%]
Never worked as NP/CNM	13.72
1980-1989	2.30
1990-1999	7.61
2000-2009	31.26
2010-2017	45.11
Number of cases:	**310**

Q53. How important are each of the following factors in your not being employed as an NP/CNM?

	N/A	Not important	Somewhat important	Important	Very important	Number of cases
Retired	55.98	11.70	5.27	4.53	22.52	322
Childcare/family responsibilities	39.42	13.62	8.67	6.38	31.90	304
Moving to a different location	52.37	13.57	5.68	11.82	16.57	292
Stress on the job	28.37	14.24	16.05	23.04	18.29	306
Illness/injury	56.89	21.63	6.90	5.67	8.91	298
Dissatisfied with benefits/salary	41.24	15.49	9.45	12.43	21.38	298
Dissatisfied with NP/CNM profession	42.93	24.64	9.85	14.62	7.95	299
Wanted to try another occupation	48.03	20.31	8.93	10.06	12.67	300

	N/A	Not important	Somewhat important	Important	Very important	Number of cases
Inconvenient schedules	39.59	18.36	12.83	10.09	19.13	300
Overall lack of NP/CNM jobs	34.82	18.24	10.88	15.06	20.99	301
Lack of NP/CNM jobs/practice opportunities in desired location	31.85	16.13	5.56	14.93	31.53	300
Lack of NP/CNM jobs in desired type of facility	34.13	16.64	7.78	10.76	30.69	301
Lack of NP/CNM jobs in desired specialty	32.59	15.06	6.93	19.30	26.12	303
Denied NP/CNM job due to lack of experience or qualification	51.28	17.72	9.17	7.03	14.80	299
Dissatisfaction with ability to practice at the NP/CNM level	45.98	18.15	10.23	9.46	16.18	300
Dissatisfaction with the degree of collaboration with other providers	46.01	17.43	10.23	11.21	15.13	295
Liability insurance or concerns	37.42	24.64	11.46	10.79	15.70	298
Lack of good management/ leadership	38.44	15.94	9.74	14.51	21.37	301
Difficulty managing the practice	54.17	23.92	9.45	5.77	6.68	296
Cost of business is too high	58.06	24.30	2.79	5.42	9.43	291
Other	53.84	10.08	0.17	14.14	21.78	168

Q54. Which of the following best describes your current intentions regarding work as an NP/CNM? (Check only one.)

Current intentions regarding work	Selected [%]
Currently seeking employment as an NP/CNM	13.33
Plan to return to NP/CNM practice within 1 year	9.98
Plan to return to NP/CNM practice in 1-3 years	8.57
Plan to return to NP/CNM practice in more than 3 years	4.82
Definitely will not return to or seek NP/CNM position	25.49
Undecided	37.81
Number of cases:	**332**

Q55. Are you doing volunteer work as an NP/CNM?

Volunteer work as an NP/CNM	Selected [%]
No	92.22
Yes	7.78
Number of cases:	**339**

Number of volunteer hours per month

Mean	Std. Err.	[95% Conf.	Interval]
17.71	4.03	9.75	25.67

SECTION E: EMPLOYMENT OUTSIDE NP/CNM ROLES

Q56. Are you currently working for pay as an RN (not as an NP or CNM)?

Currently working as RN (not NP/CNM)	Selected [%]
No	80.57
Yes	19.43
Number of cases:	**1,382**

Q57. How many nursing (non-NP/CNM) positions do you hold?

Number of nursing (non-NP/CNM) positions	Selected [%]
One	88.48
Two or more	11.52
Number of cases:	**222**

Q58. How many months per year do you work as an RN (non-NP/CNM)?

Mean	Std. Err.	[95% Conf.	Interval]
11.41	0.12	11.16	11.66

Q59. How many hours per week do you normally work in any RN position?

Mean	Std. Err.	[95% Conf.	Interval]
28.63	1.19	26.29	30.98

Q60. Please estimate the total annual earnings for all of your RN (non-NP/CNM) positions in 2016

Mean	Std. Err.	[95% Conf.	Interval]
$89,824.45	$5499.708	$79,002.7	$100,646.2

Annual income in non-NP/CNM position	Selected [%]
Less than $25,000	11.42
$25,000-$49,000	9.77
$50,000-$74,999	19.00
$75,000-$99,999	15.21
$100,000-$124,999	23.68
$125,000-$149,999	7.85

$150,000 -$174,999	6.96
More than $175,000	6.12
Number of cases:	**122**

Q61. Which of the following best describes the type of setting(s) of your RN (non-NP/CNM) position(s)? (Check all that apply.)

	Selected [%]
Hospital (any department)	64.56
Home health agency / home health service	2.20
Nursing home, extended care, or skilled nursing facility	2.63
Mental health / substance abuse	2.10
Medical practice, clinic, or surgery center	8.97
Public health or community health	3.70
Government agency	4.10
Case management / disease management	2.64
Other	7.24
School health service (K-12 or college)	10.50
University or college	8.73
Number of cases:	**218**

Q62. Which one of the following best describes your job title in your RN (non-NP/CNM) nursing position(s)? (Check all that apply.)

	Selected [%]
Staff nurse / direct care nurse	58.60
Clinical Nurse Specialist	4.83
Patient care coordinator / case manager / discharge planner	5.51
Management / administration	9.22
Nurse Coordinator	8.85
Quality Improvement nurse, utilization review	7.65
Telenursing	3.94
Patient educator	5.65
Educator, academic setting (professor, instructor)	8.59
Educator, service setting (in-service educator)	7.88
Other	3.54
School Nurse	4.92
Number of cases:	**217**

Q63. Are you currently employed in a non-nursing position (that does not require an RN license)?

Employed in non-nursing position	Selected [%]
No	96.08

Yes	3.92
Number of cases:	**1,370**

Q64. Does your position utilize any of your nursing knowledge?

Does non-nursing position utilize nursing knowledge	**Selected [%]**
No	31.40
Yes	68.60
Number of cases:	**63**

Section F: DEMOGRAPHIC INFORMATION

Q65. Gender

Gender	**Selected [%]**
Female	90.42
Male	9.58
Number of cases:	**1,428**

Q66.Year of birth

	Selected [%]
1920-1929	0.08
1930-1939	0.41
1940-1949	8.21
1950-1959	24.65
1960-1969	20.34
1970-1979	25.70
1980-1989	20.44
1990-1999	0.19
Number of cases:	**1,430**

Q67. Are you currently married or in a domestic partner relationship?

Married/Partnership	**Selected [%]**
No	27.34
Yes	72.66
Number of cases:	**1,418**

Q68. What is your ethnic/racial background (select the one with which you most strongly identify)?

Race/ethnicity	Selected [%]
African-American / Black / African	4.51
Caucasian / White / European / Middle Eastern	62.83
American Indian / Native American / Alaskan Native	0.26
Other	5.86
Asian; Cambodian	0.29
Asian; Chinese	3.34
Asian; Indian	1.67
Asian; Indonesian	0.41
Asian; Japanese	0.52
Asian; Korean	1.81
Asian; Laotian	0.12
Asian; Pakistani	0.14
Asian; Thai	0.14
Asian; Vietnamese	1.47
Latino/Hispanic; Central American	1.89
Latino/Hispanic; South American	1.05
Latino/Hispanic; Cuban	0.25
Latino/Hispanic; Mexican	4.37
Latino/Hispanic; Other Hispanic	0.60
Native Hawaiian/Pacific Islander: Fijian	0.14
Native Hawaiian/Pacific Islander: Filipino	7.87
Native Hawaiian/Pacific Islander: Guamanian	0.16
Native Hawaiian/Pacific Islander: Hawaiian	0.01
Native Hawaiian/Pacific Islander: Other	0.29
Number of cases:	**1,412**

Q69. In what languages, other than English, do you have medical fluency? (Check all that apply.)

	Selected [%]
None	56.48
Spanish	27.87
Korean	1.48
Vietnamese	1.30
Tagalog other Filipino dialect	5.10
Hindi/Urdu/Punjabi/Other South Asian language	1.90
French	0.47
Mandarin	2.15
Cantonese	1.06
Other Chinese Dialect	0.58
Other	6.30
German	0.50
Number of cases	**1,353**

Q70. Do you have children living at home with you?

Kids living at home	Selected [%]
No	54.05
Yes	45.95
Number of cases:	**1,422**

Number of kids 0-2 years

(kids) 0-2 years	Selected [%]
0	79.30
1	19.70
2	0.74
3	0.27
Number of cases:	**595**

Number of kids 3-5 years

(kids) 3-5 years	Selected [%]
0	79.31
1	18.97
2	1.18
3	0.54
Number of cases:	**595**

Number of kids 6-12 years

(kids) 6-12 years	Selected [%]
0	66.85
1	19.76
2	11.63
3	1.76
Number of cases:	**595**

Number of kids 13-18 years

(kids) 13-18 years	Selected [%]
0	0.43
1	95.97
2	3.06
3	0.52
4	0.02
Number of cases:	**1,430**

Number of kids 19+ years

(kids) 19+ years	Selected [%]
0	64.36
1	25.73
2	8.20
3	1.44
4	0.27
Number of cases:	**595**

Q71. Home zip and City and State

The question is omitted due to privacy protection.

Q72. Which category best describes how much income your total household received last year? This is the before-tax income of all persons living in your household, including yourself:

Total household income	Selected [%]
Less than $50,000	2.26
$50,000-$74,999	2.98
$75,000-$99,999	7.42
$100,000-$124,999	13.02
$125,000-$149,999	14.70
$150,000-$174,999	15.64
$175,000-$199,999	11.33
$200,000 or more	32.64
Number of cases:	**1,409**

BOARD OF REGISTERED NURSING
Nursing Practice Committee
Agenda Item Summary

AGENDA ITEM: 10.4
DATE: February 20, 2020

ACTION REQUESTED: **Discussion and Possible Vote:** The APRN Advisory Committee will discuss and determine the necessity of establishing a calendar to periodically review the BRN current advisories and possibly vote to approve potential new advisories affecting APRNs. This process would develop joint statement recommendations related to scope of practice and advanced practice nurse functions.

REQUESTED BY: Garrett Chan, CNS

BACKGROUND:

There are approximately 27 NP publications, 8 CNS publications, 20 CNM publications, and 4 CRNA publications listed on the BRN website under APRN Practice Information (https://rn.ca.gov/forms/pubs.shtml#adv). The oldest publication is 09/1998. One of the BRN goals is to develop recommendations for joint statements related to scope of practice and advanced practice nurse functions.

The APRN Advisory Committee should decide on a calendar of review of the current advisories and discuss and approve a slate of potentially new advisories for APRNs.

RESOURCES: APRN Practice Information: https://rn.ca.gov/forms/pubs.shtml#adv

NEXT STEPS: Board

FISCAL IMPACT, IF ANY: None

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BOARD OF REGISTERED NURSING
Nursing Practice Committee
Agenda Item Summary

AGENDA ITEM: 10.5
DATE: February 20, 2020

ACTION REQUESTED: **Discussion and Possible Action:** Develop a standard process to make recommendations regarding potentially urgent items to the Nursing Practice Committee when scheduling an advisory committee meeting is not feasible.

REQUESTED BY: Elissa Brown, CNS

BACKGROUND:

The APRN Committee will discuss a standard process to review topics, subjects and laws of potential urgency needing an immediate response and possible action from the APRN Advisory Committee then forwarded to the Nursing Practice Committee, prior to a scheduled APRN Advisory Committee meeting.

The APRN Advisory Committee meetings are scheduled several months in advance to provide APRN members time to adequately prepare. Nevertheless, it is possible that an issue of emergent nature that is not already on the agenda, may arise. Developing a standard process will allow this APRN Committee to review such developing topics and decide whether or not to request that the issue(s) be added to the agenda.

The committee will then forward the agenda request to the Nursing Practice Committee prior to the scheduled APRN Advisory Committee meeting. This facilitates timely discussion at the meeting, avoiding the problem of having to wait until the next APRN meeting to address those specific topics.

RESOURCES: Committee policy and rules
NEXT STEPS: Board

FISCAL IMPACT, IF ANY: None

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BOARD OF REGISTERED NURSING
Nursing Practice Committee
Agenda Item Summary

AGENDA ITEM: 10.6
DATE: February 20, 2020

ACTION REQUESTED: **Discussion and Possible Action:** Meeting schedule for 2020 calendar year and possible recommendation to Nursing Practice Committee to recommend to the Board allowance for one additional meeting by teleconference.

REQUESTED BY: Elissa Brown, CNS

BACKGROUND:

The APRN Advisory Committee will review and vote on the future meeting schedule at every scheduled meeting including the current 2020 schedule and potentially coordinate with the BRN Board's meeting schedule. Advance Practice Registered Nursing Advisory Committee (APRN) meeting schedule includes three (3) per year, as well as seeks approval from the BRN Practice Committee for one (1) teleconference meeting as needed per 10.4 and 10.5 The committee chair will provide board members with the submission schedule for agenda items that is subject to Board of Registered Nursing (BRN) legal and administrative approval and submission deadlines.

Since the APRN Advisory Committee has a number of meetings to be scheduled each year, it would be most helpful to add a standing agenda item to "review and vote on the future meeting schedule", while all of the Committee members are present. Allowing such discussion, may lead to consideration to request date change(s) if needed, e.g., if several of the members cannot attend a scheduled meeting. This would likely call for a request for consideration of a change in meeting date(s). All of this is subject to BRN, legal and administrative approval.

RESOURCES: Issue of enabling a fair discussion of scheduled meeting dates.

NEXT STEPS: Board

FISCAL IMPACT, IF ANY: None

PERSON(S) TO CONTACT:
Janette Wackerly, MBA, BSN, RN
Supervising Nursing Education Consultant
Phone: 916-574-7686
Email: janette.wackerly@dca.ca.gov

BOARD OF REGISTERED NURSING
Advanced Practice Registered Nursing Committee
Agenda Item Summary

AGENDA ITEM: 10.7
DATE: February 20, 2020

ACTION REQUESTED: **Discussion and Possible Action:** Develop recommendation to Nursing Practice Committee to recommend to the Board a position on AB 890.

REQUESTED BY: Charlotte Gullap-Moore, MSN, ANP-BC

BACKGROUND:

During the APRN Advisory Committee meeting that occurred September 26, 2019, the members discussed supporting AB 890 which was passed the policy committee hearing of the Assembly Committee on Business and Professions and requested the BRN to communicate with the author of the bill in opposition of creating an additional board under the DCA and new infrastructure. A motion was made to recommend revision the draft letter (see attached).

September 26, 2019 10.2 AIS Background:
The submission of AB 890 represents the ongoing struggle for APRNs to seek full scope of practice authority in California. This discussion will provide reference around some of the looming concerns around health care professional workforces, access to health care in California, and health delivery solutions.

The attached letters represent the position of the APRN Advisory Committee that seeks BRN Board Support and submission.

RESOURCES:

NEXT STEPS:

FISCAL IMPACT, IF ANY: None

PERSON(S) TO CONTACT:
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AB-890 Nurse practitioners. (2019-2020)

Date Published: 02/20/2019 09:00 PM

CALIFORNIA LEGISLATURE— 2019–2020 REGULAR SESSION

ASSEMBLY BILL No. 890

Introduced by Assembly Member Wood
(Coauthors: Assembly Members Aguiar-Curry, Eggman, Friedman, Gallagher, and Gipson)
(Coauthors: Senators Caballero, Hill, Leyva, and Stone)

February 20, 2019

An act to add Section 2837.1 to the Business and Professions Code, relating to healing arts.

LEGISLATIVE COUNSEL'S DIGEST

AB 890, as introduced, Wood. Nurse practitioners.

Existing law, the Nursing Practice Act, provides for the certification and regulation of nurse practitioners by the Board of Registered Nursing. Existing law authorizes the implementation of standardized procedures that authorize a nurse practitioner to perform certain acts, including certifying disability after performing a physical examination and collaboration with a physician and surgeon. A violation of the act is a misdemeanor.

This bill would authorize a nurse practitioner who holds a certification as a nurse practitioner from a national certifying body to practice without the supervision of a physician and surgeon if the nurse practitioner meets specified requirements, including having practiced under the supervision of a physician and surgeon for an unspecified number of hours. The bill would authorize a nurse practitioner to perform specified functions in addition to any other practices authorized by law, including ordering and interpreting diagnostic procedures, certifying disability, and prescribing, administering, dispensing, and administering controlled substances. Because the bill would expand the scope of a crime, the bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 2837.1 is added to the Business and Professions Code, to read:

2837.1. (a) Notwithstanding any other law, a nurse practitioner who holds a certification as a nurse practitioner from a national certifying body may practice under this section without supervision by a physician and surgeon if the nurse practitioner has practiced under the supervision of a physician and surgeon for at least _____hours.

(b) In addition to any other practices authorized by law, a nurse practitioner may do all of the following without supervision by a physician and surgeon:

(1) Conduct an advanced assessment.

(2) Order and interpret diagnostic procedures.

(3) Establish primary and differential diagnoses.

(4) Prescribe, order, administer, dispense, and furnish therapeutic measures, including, but not limited to, the following:

(A) Diagnose, prescribe, and institute therapy or referrals of patients to health care agencies, health care providers, and community resources.

(B) Prescribe, administer, dispense, and furnish pharmacological agents, including over-the-counter, legend, and controlled substances.

(C) Plan and initiate a therapeutic regimen that includes ordering and prescribing nonpharmacological interventions, including, but not limited to, durable medical equipment, medical devices, nutrition, blood and blood products, and diagnostic and supportive services, including, but not limited to, home health care, hospice, and physical and occupational therapy.

(5) After performing a physical examination, certify disability pursuant to Section 2708 of the Unemployment Insurance Code.

(6) Delegate tasks to a medical assistant pursuant to Sections 1206.5, 2069, 2070, and 2071, and Article 2 (commencing with Section 1366) of Chapter 3 of Division 13 of Title 16 of the California Code of Regulations.

(7) Perform additional acts that require education and training and that are recognized by the nursing profession as appropriate acts to be performed by a nurse practitioner.

(c) A nurse practitioner shall refer a patient to a physician and surgeon or other licensed health care provider if a situation or condition of a patient is beyond the scope of the education and training of the nurse practitioner.

(d) A nurse practitioner practicing under this section shall maintain professional liability insurance appropriate for the practice setting.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

Memo

Date: September 26th, 2019

To: Board of Registered Nursing
PO Box 944210
Sacramento, CA 94244-2100

From: Board of Registered Nursing Advanced Practice Registered Nurse Committee

Dear BRN Board Members,

The Board of Registered Nursing Advanced Practice Registered Nurse (APRN) Advisory Committee wishes to provide recommendations related to AB 890 (Wood) and to write a new letter to Assemblyman Wood.

As currently written, AB 890 will establish the Advanced Practice Registered Nursing Board within the Department of Consumer Affairs, which would consist of 9 members. Three members this board shall be physicians and surgeons licensed by the Medical Board of California or the Osteopathic Medical Board of California. At least one of the physicians and surgeon members shall work closely with a nurse practitioner. The remaining physician and surgeon members shall focus on primary care in their practice.

The BRN APRN Advisory Committee is asking the BRN to write an "oppose unless amended" letter recommending to Assemblyman Wood to amend AB890 by eliminating the creation of the new Advanced Practice Registered Nursing Board and replacing the oversight of nurse practitioner practice by the Board of Registered Nursing APRN Committee. Another nurse practitioner oversight alternative to creating a new APRN Board within the Department of Consumer Affairs and the BRN APRN Committee could be that one of the public member positions on the Board of Registered Nursing could be filled by a physician or surgeon. These two recommendations will allow the fiscal cost for AB890 to be significantly decreased and possibly move out of the Assembly Business and Appropriation Committee.

The APRN Advisory Committee consists of ten members professionally representing each APRN discipline and can help with identifying the many processes that already exist for licensees to practice in California.

Should you have any additional questions, please contact Mr. Mitchel Erickson, Chair of the BRN APRN Committee. Thank you for your consideration.

Respectfully,

Mitchel Erickson
Chair
BRN APRN Advisory Committee

THE STEINBERG INSTITUTE SUPPORTS AB 890 TO GRANT FULL PRACTICE AUTHORITY TO NURSE PRACTITIONERS

Posted on Thursday, February 21, 2019

Proposed law follows release of groundbreaking report recommending an end to outdated regulations so California can fill growing healthcare workforce gaps

SACRAMENTO, CA – The Steinberg Institute hails AB 890 by Assemblymember Jim Wood (D-Santa Rosa) as an important bill that would help California meet patient mental health needs by giving nurse practitioners, including psychiatric specialists, the ability to work to the full extent of their training.

California needs fully empowered nurse practitioners to help alleviate a “looming crisis” of inadequate access to quality, affordable care, particularly in the area of mental health as the state is facing a growing shortage of psychiatrists, according to a report released this month by the California Future Health Workforce Commission.

Yet California is the only western state that still restricts nurse practitioners by requiring that they only practice and prescribe with physician oversight, said the commission, which was co-chaired by University of California President Janet Napolitano and Dignity Health President and CEO Lloyd Dean. Twenty two other states don’t have such restrictions.

“The time has come for California to stop letting its citizens suffer from preventable or treatable illnesses just because qualified and highly trained nurse practitioners are shackled by outdated rules,” said Steinberg Institute Executive Director Maggie Merritt. “Let nurse practitioners do their jobs.”

HEADLINES

projects from getting bogged down

Steinberg Institute sponsors bill to ensure follow-up for patients leaving ...

The Steinberg Institute supports AB 890 to grant full practice authority to...

Governor Newsom names Darrell Steinberg to lead new Statewide Commission on...

Steinberg Institute appoints Patrick Hoge as Communications Director

Newsom Proposes Visionary Investment in Mental Health Care

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Freeing up nurse practitioners from unnecessary physician oversight – as AB 890 would do, following a transitional period of physician supervision – can help address the gap in mental health services, particularly in rural and underserved areas, and their numbers should be increased, the commission said. A large body of research, meanwhile, has linked restrictions on nurse practitioners with keeping their numbers down.

Those who argue for the status quo regulatory regime for nurse practitioners say physician oversight is necessary to ensure quality of care, but dozens of studies demonstrate that the quality of nurse practitioner care is comparable to that of physician care and that there is no difference in the quality of care when there are no physician oversight requirements, the commission said.

Studies have also found that allowing nurse practitioners full practice authority is associated with greater access to care and lower costs. So reported the prestigious Bay Area Council Economic Institute in 2014.

Regarding mental healthcare, the need for psychiatric nurse practitioners will only grow, the commission warned, as the Healthforce Center at UCSF projected a 34 percent decrease in the number of psychiatrists in California between 2016 and 2028. Nearly 17 percent of California's population has mental health needs and one in 20 suffers from serious mental illness, but half of the people with mental illness receive no care, the commission said.

AB 890 will be heard in the Assembly Business and Professions Committee next month.

For more information: Patrick Hoge (office) 916-297-4494, (cell) 510-435-2320, patrick@steinberginstitute.org

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Nurse Practitioners

A SOLUTION TO AMERICA'S PRIMARY CARE CRISIS

Peter Buerhaus

SEPTEMBER 2018

AMERICAN ENTERPRISE INSTITUTE

Executive Summary

For the past few decades, the United States has not produced enough primary care physicians. Moreover, too few physicians practice in rural and medically underserved areas, and the number of people lacking adequate access to primary care has increased. Meanwhile, studies have piled up pointing to the high quality of care that nurse practitioners (NPs) provide, and increasing numbers of policy-influencing bodies have recommended expanding the use of NPs in primary care. Yet, barriers to the expanded use of NPs persist, and, consequently, tens of millions of Americans lack adequate access to primary care services. This report describes and integrates new evidence from a research program focused on the primary care workforce, NPs' role in primary care, and the potential for NPs to help solve the problem of Americans' access to quality primary care.

Among other things, the research summarized in this report establishes that it is unrealistic to rely on the physician workforce alone to provide the primary care Americans need, particularly for Americans in rural areas, who are generally older, less educated, poorer, and sicker. Many primary care physicians are expected to retire over the next decade, while demand is increasing for primary care. So current shortages of primary care are projected to worsen, with even fewer physicians practicing in rural areas. And as the proportion of physicians who are married to highly educated spouses increases, the already formidable challenges of attracting physicians to Health Professional Shortage Areas will become even more daunting.

Our findings examine trends in the supply of NPs and physicians, showing that the NP workforce has increased dramatically and is projected to continue growing while the physician workforce will grow minimally. Further, we find, as do other studies, that compared to primary care medical doctors, primary care nurse practitioners (PCNPs) are more likely to practice in rural areas, where the need for primary care is greatest.

Our research shows that people living in states with laws that reduce or restrict NPs' scope-of-practice had significantly less access to PCNPs. This finding indicates that such state regulations have played a role in impeding access to primary care. This alone should be cause for concern among policymakers seeking to improve public health.

Using different data and methods, the studies described in this report consistently show that NPs are significantly more likely than primary care physicians to care for vulnerable populations. Nonwhites, women, American Indians, the poor and uninsured, people on Medicaid, those living in rural areas, Americans who qualify for Medicare because of a disability, and dual-eligibles are all more likely to receive primary care from NPs than from physicians. NPs, whether they work independently of primary care physicians or with them, are more likely to accept Medicaid recipients, provide care for the uninsured, and accept lower payments than are physicians who do not work with NPs.

Another major finding is that, after controlling for differences in patient severity and sociodemographic factors, the cost of care provided to Medicare beneficiaries by NPs was significantly lower than primary care provided by physicians. Even after accounting for the lower payment NPs receive relative to physicians, the cost of NP-provided care was still significantly lower.

However, the viability of increased reliance on NPs still depends on the simple question at the core of this project: Can NPs provide health care of comparable quality to that provided by primary care physicians? Our studies showed that beneficiaries who received their primary care from NPs consistently received significantly *higher-quality* care than physicians' patients in several respects. While beneficiaries treated by

physicians received slightly better services in a few realms, the differences were marginal. These results held when vulnerable populations of Medicare beneficiaries were analyzed separately and compared to those cared for by physicians, aligning with the findings of many other studies conducted over the past four decades.

Furthermore, state-level NP scope-of-practice restrictions do not help protect the public from subpar health care. Analysis of different classifications of state-level scope-of-practice restrictions provided no evidence that Medicare beneficiaries living in states that imposed restrictions received better-quality care. Some physicians and certain professional medical associations have justified their support for state regulations to limit NP scope-of-practice on the grounds that they are necessary to protect the public from low-quality providers and to assert that physicians must be the leaders of the health care team. We found no evidence to support their claim.

Further, our analysis showed that Medicare beneficiaries living in states with reduced or restricted NP scope-of-practice were more likely to use more resources than were beneficiaries in states without such restrictions. This indicates that these beneficiaries had less access to the positive contributions of NPs.

Despite this body of evidence, our national survey of primary care clinicians revealed that around one-third of primary care physicians believe increasing the number of NPs would impair the safety and effectiveness of care. This could indicate that physicians are not aware of the findings of research. Or alternatively, it is an excuse for a barrier to entry, meant to protect some physicians' narrow interests at the expense of accessible primary care for many Americans who need it.

The evidence leads to three recommendations that can help overcome the growing challenges facing the delivery of primary care in the US. First, private policymakers such as hospital boards and credentialing bodies should allow NPs to practice to the fullest extent of their training and ability. Second, physicians must understand that NPs provide quality health care to those in need. NPs and physicians should work together to build relationships that allow for their respective roles and practices to evolve, respecting each other's strengths and ultimately leading to a workforce that is more responsive to communities' health needs. Third, public policymakers should remove restrictions on NPs that limit their scope-of-practice.

Nurse Practitioners

A SOLUTION TO AMERICA'S PRIMARY CARE CRISIS

Peter Buerhaus

> *The doctors are fighting a losing battle. The nurses are like insurgents. They are occasionally beaten back, but they'll win in the long run. They have economics and common sense on their side.*
>
> —Uwe Reinhardt, Professor of Economics at Princeton University[1]

Nearly 30 years ago, in 1991, well-known physician and thought leader Gordon Moore wrote in the *Journal of the American Medical Association*: "Primary care is the most affordable safety net we can offer our citizens."[2] The National Academy of Medicine defines primary care as "the provision of *integrated, accessible health care services* by clinicians who are *accountable* for addressing a large *majority of personal health care needs*, developing a *sustained partnership* with *patients*, and practicing in the *context of family and community*."[3]

Primary care clinicians typically treat a variety of conditions, including high blood pressure, diabetes, asthma, depression and anxiety, angina, back pain, arthritis, thyroid dysfunction, and chronic obstructive pulmonary disease. They provide basic maternal and child health care services, including family planning and vaccinations. Primary care lowers health care costs, decreases emergency department visits and hospitalizations, and lowers mortality.[4]

Primary care is a crucial component of American health care, but it faces steep challenges, beginning with ever-increasing demand for primary care services. Demand for primary care has been growing for decades and is expected to increase.[5] The Affordable Care Act (ACA) expanded the number of people with health insurance and increased access to primary care services by eliminating patient cost sharing for a wide array of preventive services and screenings.[6]

Demand for primary care will continue to increase as the 76 million baby boomers age into the Medicare program. Currently, 54 million people are enrolled in Medicare, the nation's health insurance program for citizens 65 and older and those with end-stage renal disease and other qualifying disabilities. As baby boomers age, Medicare enrollment is expected to increase to 80 million by 2030.[7]

Not only are baby boomers expected to live longer than previous generations, but also the prevalence of multiple chronic diseases is increasing. By 2030, four in 10 baby boomers are expected to have heart disease or diabetes, and 25 percent will have cancer. The percentage of those enrolled in Medicare with three or more chronic diseases will increase from 26 percent in 2010 to 40 percent in 2030.[8] Add to this the increasing number of people with Alzheimer's disease (a leading cause of death in the US) and other dementias, and it is clear that the demand for primary care will increase in coming decades, especially the need for care geared toward the elderly.[9]

If the growth in demand for primary care is a challenge, the current and projected shortages of primary care physicians only make matters worse. The Association of American Medical Colleges (AAMC) estimates that by 2030 we will have up to 49,300 fewer primary care physicians than we will need (an even-larger estimate than the AAMC reported in 2016).[10] Many specialist physicians also provide considerable primary

care, but projected shortages of such physicians (by as many as 72,700 by 2030) only adds to concerns over the adequacy of the primary care physician workforce.[11] Despite decades of effort, the graduate medical education system has not produced enough primary care physicians to meet the American population's needs.[12]

When geographic distribution of primary care medical doctors (PCMDs) is taken into account, the problem begins to feel like a crisis. In 2018 the federal government reported 7,181 Health Professional Shortage Areas in the US and approximately 84 million people with inadequate access to primary care, with 66 percent of primary care access problems in rural areas.[13]

Thankfully, there is a solution. Increasingly, researchers, workforce analysts, and organizations that influence health policy support expanding the role of nurse practitioners (NPs) to fill the void left by the lack of primary care physicians and to improve the uneven geographic distribution of primary care. This report presents results from original research projects that support this view and document the evidence base for an expanded role for NPs in remedying these pressing and growing access problems.

Nurse Practitioners: A Regulated Solution

After practicing as a professional nurse for several years, many registered nurses acquire advanced clinical knowledge, training, and patient care responsibilities to become nurse practitioners. In the words of the American Association of Nurse Practitioners (AANP): "All NPs must complete a master's or doctoral degree program, and have advanced clinical training beyond their initial professional registered nurse preparation."[14] Didactic and clinical courses prepare NPs with specialized knowledge and clinical competency to practice in primary care, acute care, and long-term health care settings.

NPs assess patients, order and interpret diagnostic tests, make diagnoses, and initiate and manage treatment plans.[15] They also prescribe medications, including controlled substances, in all 50 states and DC, and 50 percent of all NPs have hospital-admitting privileges.[16]

The AANP reports that the nation's 248,000 NPs (87 percent of whom are prepared in primary care) provide one billion patient visits yearly.[17] NPs are prepared in the major primary care specialties—family health (60.6 percent), care of adults and geriatrics (21.3 percent), pediatrics (4.6 percent), and women's health (3.4 percent)—and provide most of the same services that physicians provide, making them a natural solution to the physician shortage.[18] NPs can also specialize outside primary care, and one in four physician specialty practices in the US employs NPs, including psychiatry, obstetrics and gynecology, cardiology, orthopedic surgery, neurology, dermatology, and gastroenterology practices.[19]

Further, NPs are paid less than physicians for providing the same services. Medicare reimburses NPs at 85 percent the rate of physicians, and private payers pay NPs less than physicians.[20] On average, NPs earn $105,000 annually.[21]

NPs' role in primary care dates to the mid-1960s, when a team of physicians and nurses at the University of Colorado developed the concept for a new advanced-practice nurse who would help respond to a shortage of primary care at the time.[22] Since then, numerous studies have assessed the quality of care that NPs provide (see Appendix A), and several policy-influencing organizations (such as the National Academy of Medicine, National Governors Association, and the Hamilton Project at the Brookings Institution) have recommended expanding the use of NPs, particularly in primary care.[23] Even the Federal Trade Commission recognizes the role of NPs in alleviating shortages and expanding access to health care services.[24] Most recently, the US Department of Veterans Affairs amended its regulations to permit its nearly 5,800 advanced-practice-registered nurses to practice to the full extent of their education, training, and certification regardless of state-level restrictions, with some exceptions pertaining to prescribing and administering controlled substances.[25]

Nonetheless, physicians have met such efforts with mixed response. Many physicians favor the use of NPs, at least in theory. A 2012 national survey of PCMDs found that 41 percent reported working in

collaborative practice with primary care nurse practitioners (PCNPs) and 77 percent agreed that NPs should practice to the full extent of their education and training. Additionally, 72.5 percent said having more NPs would improve timeliness of care, and 52 percent reported it would improve access to health services.

However, about one-third of PCMDs said they believe the expanded use of PCNPs would impair the quality and effectiveness of primary care.[26] The survey also found that 57 percent of PCMDs worried that increasing the supply of PCNPs would decrease their income, and 75 percent said they feared NPs would replace them.

Although PCMDs generally favor using NPs at current levels, they seem to fear that increased PCNP-based care will usurp them or make them obsolete. These PCMDs are rationally self-interested, and understandably so. But for the good of patients around the country, hospital boards and state lawmakers should prioritize patients over PCMDs' concerns and relieve the shortage of primary care providers with PCNPs.

Current Restrictions on PCNP Practice

To protect the interests of PCMDs, the American Medical Association, American Academy of Family Physicians, and some state and county medical associations favor state-level legal restrictions on the services that an NP may provide, whether in primary care or acute care delivery settings. In fact, many states impose varying degrees of legal restrictions on NPs, which the AANP has classified as follows.[27]

- **Full Practice.** State practice and licensure laws allow all NPs to evaluate patients, diagnose patients, order and interpret diagnostic tests, and initiate and manage treatments—including prescribing medications and controlled substances—under the exclusive licensure authority of the state board of nursing. The National Academy of Medicine and National Council of State Boards of Nursing recommend this model.

- **Reduced Practice.** State practice and licensure laws reduce NPs' ability to engage in at least one element of NP practice. State law limits the setting of one or more elements of NP practice or requires a career-long regulated collaborative agreement with another health care provider in order for the NP to provide patient care.

- **Restricted Practice.** State practice and licensure laws restrict NPs' ability to engage in at least one element of NP practice. State law requires career-long supervision, delegation, or team management by another health care provider in order for the NP to provide patient care.

Over the past two decades, the trend among states has been to remove scope-of-practice restrictions.[28] As shown in Table 1, in 2018, 23 states allowed the full practice of NPs, 16 states reduced certain areas of NP practice, and 12 states were classified as restricting NP practice.[29]

These restrictions infringe on the clinical activities NPs are trained to perform. In 1992, Yale Law School Associate Dean Barbara Safriet made a compelling case for increasing NPs' roles in primary care:

> Advanced practice nurses have demonstrated repeatedly that they can provide cost-effective, high-quality primary care for many of the neediest members of society, but their role in providing care has been has been [*sic*] severely limited by restrictions on their scope of practice, prescriptive authority, and eligibility for reimbursement. Eliminating these restriction [*sic*] would enable advanced practice nurses to increase access to health care while preserving quality and reducing costs.[30]

Safriet contends that scope-of-practice restrictions on NPs impede their ability to practice to the full extent of their education and training, which is undesirable for both NPs and PCMDs. Eighteen years later, she again argued for removing these regulatory obstacles to allow Americans better access to care at a more affordable cost and to reform the health care regulatory framework to enhance all providers' abilities and

Table 1. State-Level Scope-of-Practice Regulatory Restrictions on Nurse Practitioners, 2018

Full Practice	Reduced Practice	Restricted Practice
Alaska	Alabama	California
Arizona	Arkansas	Florida
Colorado	Delaware	Georgia
Connecticut	Illinois	Massachusetts
District of Columbia	Indiana	Michigan
Hawaii	Kansas	Missouri
Idaho	Kentucky	North Carolina
Iowa	Louisiana	Oklahoma
Maine	Mississippi	South Carolina
Maryland	New Jersey	Tennessee
Minnesota	New York	Texas
Montana	Ohio	Virginia
Nebraska	Pennsylvania	
Nevada	Utah	
New Hampshire	West Virginia	
New Mexico	Wisconsin	
North Dakota		
Oregon		
Rhode Island		
South Dakota		
Vermont		
Washington		
Wyoming		

Source: American Association of Nurse Practitioners, "State Practice Environment," https://www.aanp.org/legislation-regulation/state-legislation/state-practice-environment/66-legislation-regulation/state-practice-environment/1380-state-practice-by-type-restricted-practice.

competencies.[31] This report builds on Safriet's argument and adds a potential framework for reform that would allow NPs to best practice according to their abilities and allow Americans more affordable access to health care, especially in rural areas.

Research

The concept of expanding the use of NPs and removing restrictions on their practice has gained traction since the ACA was being developed. Health workforce analysts have long been concerned with the shortage of primary care physicians and the persistent inability of graduate medical education programs to produce enough physicians to make up the difference. Indeed, the ACA contains many provisions aimed at addressing these and other workforce-supply problems.

One such provision was the establishment of the National Health Care Workforce Commission to advise Congress and the administration on national health workforce policy. I was appointed to the commission and agreed to serve as its chairman. Anticipating that the commission would be asked to address the shortage of primary care physicians, I assembled teams of investigators to assess the feasibility and desirability of expanding PCNPs' roles in primary care.

The workforce issues discussed most frequently among health policymakers, members of Congress, state legislators, and their staffs concern the quality

and costs of NPs and their potential to alleviate the shortage of primary care physicians. These issues guided the assessment of whether NPs can fix the labor supply problems among primary care providers. The specific questions on the minds of the policy community included:

- Geographically, where do primary care physicians practice, and where do PCNPs practice?
- How large are current shortages of primary care physicians? Will the primary care physician workforce increase or decrease in the future?
- Will the NP workforce grow in the future?
- Are PCNPs willing to accept people enrolled in Medicaid?
- How do the services that PCNPs provide compare to the services that PCMDs provide?
- Are there differences in the characteristics of people who are treated by PCNPs and PCMDs?
- What is the potential for NPs to increase access to primary care and help alleviate shortages and uneven distribution of primary care physicians?
- Do state-level regulatory restrictions placed on NPs limit Americans' access to primary care?

The answers to the above questions will help bring us toward a framework for more effective primary care.

This report describes key results of research conducted since 2011 that aimed to answer these questions. It integrates the studies' findings with the results of other published research and makes recommendations for both public and private policymakers on improving the capacity of the nation's primary care workforce. The results of these studies are presented as further proof of the benefits of using NPs to provide more Americans in more places with the primary care they need.

Solutions: Study Results

To address these questions, the research was divided into three areas of analysis: (1) assessing the contributions of NPs providing primary care, (2) projecting the supply of physicians and NPs while assessing the geographical disparities of the primary care workforce, and (3) revealing perceptions of the PCNP workforce. Each area focused on a different element of primary care shortages and how well NPs could address them. The focuses of each of these areas parallel the questions we set out to answer:

- The analysis of NP contributions identified the types, quantity, costs, and quality of primary care that NPs and physicians provide to Medicare beneficiaries. It also assessed whether state-level NP scope-of-practice restrictions affect the quality of primary care that Medicare beneficiaries receive.
- The projections and geographical analyses examined the geographic locations of the primary care physician and NP workforce, investigated barriers physicians face in locating their practice in rural locations, and projected the future supply of physicians and NPs.
- Assessing perceptions of NPs involved conducting a national survey of PCMDs and PCNPs to identify their practice characteristics and examine their attitudes, knowledge, and behavior on various themes, including shortages of primary care professionals, expanding the number of PCNPs, quality of care provided by PCNPs, responsibility for providing specific services and procedures, and career recommendations.

The most obvious and crucial question is whether NPs can provide the same quality and types of care that physicians currently provide. Driving down the cost of and increasing accessibility to health care is a worthwhile goal. But if the quality of primary care

provided by PCNPs is not up to par, they present a far less attractive remedy.

For these reasons, this report begins with the findings of the NP analysis team, which asked: What are the types, costs, and quality of primary care services provided by PCNPs, and how do they compare to the primary care provided by PCMDs? Are there differences in the characteristics of people treated by PCNPs versus PCMDs? And do state-level scope-of-practice restrictions on PCNPs affect the quality of primary care?

While hundreds of studies have assessed different ways that NPs contribute to providing primary care, there are lingering questions about the costs and quality of NP-provided care, questions not fully answered by prior studies. Consequently, it is difficult to generalize the results from many of these studies to broader populations, let alone make apples-to-apples comparisons between the care provided by NPs and physicians. In all, despite the large number of studies that showed favorable results for the care delivered by NPs (see Appendix A), there is room to learn more, improve and expand the measurement of primary care, make more direct comparisons between primary care clinicians, use different data to enable better generalization of results, and apply advanced statistical techniques to overcome methodological shortcomings.

What Types of Primary Care?

The analysis of NP contributions to primary care began with using Medicare claims and other Medicare administrative data to identify the number and distribution of PCNPs throughout the US who billed for care provided to Medicare beneficiaries. This was then used to describe the types, quantities, and overall costs of services that PCNPs provide and compare them to those that PCMDs provide.[32]

Results showed that in 2008 approximately 45,000 NPs were providing services to Medicare beneficiaries and billing under their own national provider identification (NPI) number. NPs in rural states had the highest rates of billing under their own NPI numbers. Findings also indicated that just over 80 percent of the payments that both PCNPs and PCMDs received were for evaluation and management services (i.e., new patient and established patient office visits, home visits, and nursing home visits). Relative to PCMDs, NPs had a significantly greater proportion of payments associated with procedures (9.1 vs. 4.6 percent), billed for fewer tests (4.8 vs. 5.8 percent), and had a lower proportion of their payments associated with imaging (1.3 vs. 3.9 percent). Overall, findings indicated there was great overlap in the types of primary care provided.

Who—what kind of American—was receiving PCNP-provided primary care through Medicare? Compared to beneficiaries receiving primary care from PCMDs, beneficiaries receiving primary care from PCNPs were significantly more likely to be female, younger, American Indian, nonwhite, dually eligible for Medicare and Medicaid (an important proxy for poverty), and qualified for Medicare due to a disability.

And where are these patients and providers located? The study revealed that PCNPs caring for Medicare beneficiaries were significantly more likely to practice in a federally designated Health Professionals Shortage Area and in rural areas compared to PCMDs. These findings are supported by the results of other investigators (see Appendix A), who have also found that NPs provide primary care to vulnerable populations and that PCNPs are more likely to practice in rural and underserved areas.

Costs of Primary Care

Because enrollment in Medicare will expand rapidly as baby boomers age, total Medicare spending will increase substantially in the years ahead. Consequently, providing access to health care without bankrupting the Medicare program is a growing concern.

The next study was undertaken to determine whether PCNPs can help address this concern, aiming to compare the costs of PCNPs and PCMDs providing primary care to Medicare beneficiaries. The study analyzed Medicare payment claims during a 12-month

period (2010), including claims for inpatient and outpatient care. It examined five measures of the cost of care, adjusted for differences in payment rates and severity of a patient's health condition.[33]

Across all five measures, the study found that the cost of PCNP-provided care ranged between 11 percent and 29 percent less than the cost of PCMD-provided care. The gap was most pronounced for evaluation and management services—composing 80 percent of claims that PCMDs and PCNPs bill to Medicare. Beneficiaries treated by PCNPs who received such services cost Medicare 29 percent less than beneficiaries who received their primary care from PCMDs. The large differences in costs between PCNPs and PCMDs persisted even after taking into account that Medicare pays NPs at 85 percent of the rate of physicians for the same services.

Due to limitations inherent in using claims data, we could not fully investigate the reasons for the differences in costs. But we believe they may be explained in part by differences in the style of NP practice, as NPs tend to provide more holistic care relative to the more disease-and-cure orientation of many physicians. Preliminary evidence from ongoing analysis also suggests that PCNPs order about one-third fewer services, and they are more likely than physicians to use less expensive services.[34] Of course, if that reflected decreased quality of care, it would be a major problem for a proposal to expand NP practice.

As noted in Appendix A, this study is not the first to find that NPs provide cost-effective care.

Quality of Care

While numerous studies have concluded that NP-provided care is comparable and in some cases better than PCMD-provided care (see Appendix A), some of these studies analyzed a limited number of clinical conditions, did not adequately control for patient-selection biases and disease severity, and assessed quality measures over brief time periods, which makes it difficult to generalize results to broader populations. To address these concerns, the next study used national Medicare claims data from 2012 and 2013 to assess 16 indicators of the quality of primary care that PCNPs and PCMDs provided to Medicare beneficiaries. To include beneficiaries who may have received care by a team of PCNPs and PCMDs, the analysis covered a third group of beneficiaries who had received primary care services from both types of clinicians over a 12-month period.[35]

Across all five measures, the study found that the cost of PCNP-provided care ranged between 11 percent and 29 percent less than the cost of PCMD-provided care.

Overall, study findings indicated that specific types of care were better when provided by PCNPs, and others were better when provided by PCMDs. For example, Medicare beneficiaries who received primary care from PCNPs were less likely than those cared for by PCMDs to have preventable hospital admissions, all-cause hospital readmissions within 30 days of being discharged, inappropriate emergency department visits, and low-value MRIs associated with low back pain. On the other hand, beneficiaries who received their primary care predominantly from PCMDs were more likely to receive slightly more of recommended chronic disease management services and cancer screenings (such as mammography screenings for breast cancer and colonoscopies for colorectal cancer).

The third group of beneficiaries, which received primary care from both PCNPs and PCMD, was expected to have received higher-quality care than those who received care from either a PCNP or PCMD alone. However, results indicated that in only one measure

was primary care improved: cancer screening. This suggests that the care these beneficiaries received was fragmented and not well coordinated.

Quality of Care Provided to Vulnerable Medicare Beneficiaries

As noted above, the first study using Medicare claims data found that PCNPs were significantly more likely than PCMDs to provide primary care to beneficiaries who had a disability or who were dually eligible for Medicaid and Medicare, a strong indicator of poverty.[36] With approximately 38 million Americans living with disabilities and several million in poverty, providing high-quality health care at a reasonable cost to the poor and disabled is a major and growing challenge.[37]

Medicare and Medicaid often work in tandem to pay for dually eligible Americans. This kind of health care is disproportionately expensive: Dually eligible beneficiaries make up 20 percent of the Medicare population, but they account for 34 percent of Medicare spending.[38] They are also at increased risk of serious health problems, as they are more likely to have multiple comorbidities, such as diabetes, chronic lung disease, and Alzheimer's disease, and to self-report lower health status.[39]

For all these reasons, the need for effective and cost-efficient solutions for primary care is particularly salient for dually eligible patients, whether disabled or simply low income. People with disabilities are less likely to receive recommended preventive care such as screenings for breast and cervical cancer.[40] On average, people with disabilities receive differential treatment for cancer and are more likely to receive potentially inappropriate medications.[41] Similarly, low-income patients face significant access barriers to care and receive fewer screenings (such as colonoscopies) and preventive services (such as vaccinations).[42]

Could increased practice by PCNPs help remedy this inequity? This question was addressed by using 2012 and 2013 Medicare claims data to identify and compare the quality of care provided by PCNPs and PCMDs and received by beneficiaries in three subpopulations: (1) those who initially qualified for Medicare based on a disability, (2) dually eligible beneficiaries, and (3) beneficiaries who qualified initially by having a disability and were also dually eligible for Medicare and Medicaid.[43] The quality of primary care that these subpopulations received was examined across the same four domains of primary care noted above: chronic disease management, the incidence of adverse outcomes, preventable hospitalizations, and cancer screenings.

Results showed that when PCNPs cared for Medicare beneficiaries who were dually eligible or qualified for Medicare due to a disability, the beneficiaries had similar results to the larger study of Medicare beneficiaries reported above. Specifically, these vulnerable Medicare beneficiaries had a lower risk of preventable hospitalizations and emergency department use than those cared for by PCMDs. They also used fewer of other health care resources such as low-value imaging for low back pain. In addition, being managed by a PCNP helped beneficiaries in the area of chronic disease management, as these beneficiaries were no less likely than those treated by PCMDs to receive health care services consistent with established guidelines.

However, diabetic patients across these subpopulations who were cared for by PCNPs were less likely than those cared for by PCMDs to have eye screenings. The subpopulations served by NPs also received fewer cancer screenings.[44] These findings may be explained by unmeasured differences in patient characteristics, preferences for clinician type, clinician practice style, geographical access to screening technology (such as ease of obtaining mammograms in rural areas), care delivery patterns, organizational characteristics, and performance incentives that could not be measured and analyzed in the Medicare claims data.

Overall, the study's results suggest that increasing PCNP involvement in care could be a key policy strategy to expand access to primary care at a lower cost while not compromising quality for Medicare's most vulnerable beneficiaries.

Forecasts of Primary Care Workforce Supply and Location

The key findings of the studies we conducted, briefly summarized in this section, are:

- On the eve of the 2014 ACA insurance expansions, rural areas throughout the country had the highest numbers of uninsured people, particularly in non-Medicaid-expanding states.
- PCNPs, though fewer in number than PCMDs, are more likely to practice in rural areas than are physicians.
- People living in states that do not restrict NP scope-of-practice had significantly greater geographic access to primary care.
- Between 2016 and 2030, the size of the NP workforce will increase dramatically, growing 6.8 percent annually, compared to 1.1 percent growth of the physician workforce. Combined, the physician and NP workforce will increase by approximately 400,000 by 2030. NPs will account for 61 percent of this growth (240,000 workers).
- The number of physicians practicing in rural areas has been decreasing since 2000, and this decline will continue through 2030 while rural populations age and need more health care.
- The proportion of physicians married to highly educated spouses has grown dramatically over the past 50 years, and these physicians are significantly less likely to practice in rural shortage areas.
- The supply of physicians practicing in rural areas decreased by 15 percent between 2000 and 2016 and is forecasted to decline further through 2030.

Can PCNPs help remedy the acute shortage of primary care in rural areas? The first study conducted to answer this question focused on identifying the geographic location of individuals who were newly eligible for the ACA's insurance expansions starting in January 2014. It assessed whether geographic access to primary care clinicians differed across urban and rural areas and across states with varying scope-of-practice laws.[45] The study also constructed a detailed understanding of the geographic location of primary care clinicians—physicians, NPs, and physician assistants(PAS)—on the eve of the ACA's insurance expansions.

Findings showed that, in 2014, large urban areas had 131 uninsured people per primary care clinician, whereas the most rural areas of the country had 357 uninsured people per primary care clinician. The number of uninsured was considerably higher in the states that did not expand Medicaid enrollment as of January 2015: Rural areas of non-expanding states averaged 441.1 uninsured per primary care clinician compared with 192.8 per primary care clinician in similar areas of Medicaid-expanding states. Furthermore, and importantly for our policy prescriptions, primary care physicians were more likely to be concentrated in urban areas, while PCNPs were more likely to be located in rural areas with more uninsured people.

Finally, geographic access to primary care was significantly higher in states that did not restrict NP scope-of-practice compared to those that did: 63 percent of people living in nonrestrictive states had geographic access to counties with a high capacity of primary care clinicians compared to 34 percent of people living in states that restricted NP scope-of-practice. Results also showed that states with restricted NP scope-of-practice had 40 percent fewer NPs compared to those without. These findings suggest that lifting state-level scope-of-practice restrictions on NPs would, over time, increase access to primary care, particularly in rural areas. As shown in Appendix A, other studies have also reported similar findings.

Two additional economic studies focused on projecting the future national supply of physicians and NPs. Applying a peer-reviewed cohort supply model developed in 2000 and used in many studies of the nurse and physician workforces, we analyzed trends

since 2000 in the supply of physicians, NPs, and PAs, and forecasted changes in the supply of each profession through 2030.[46]

Results show healthy numbers of NPs entering the workforce, with minimal growth in the physician population. The study found that between 2010 and 2016, the rate of growth for NPs accelerated to 9.4 percent annually, while growth in the number of PAs slowed to 2.5 percent. During this same period, annual growth in the number of physicians dropped to 1.1 percent. Since 2001, the combined number of NPs and PAs per 100 physicians nearly doubled, increasing from 15.3 to 28.2.[47]

Results also showed that states with restricted NP scope-of-practice had 40 percent fewer NPs compared to those without.

As for the future, regarding the physician shortage that concerns workforce analysts, we found that, between 2016 and 2030, the number of physicians is expected to grow slightly more than 1 percent annually due to the aging and retirement of the physician workforce and the lack of younger physicians to replace them. However, the number of NPs and PAs is projected to grow 6.8 percent and 4.3 percent, respectively, due largely to the number of young people entering these professions. As a result, the workforce will add an estimated combined 477,000 physicians, NPs, and PAs. NPs will contribute nearly 50 percent of this total growth. The combined number of NPs and PAs per 100 physicians will double to about 56.4 by 2030.[48]

In a different study, we focused on the location of the physician workforce, examining a different factor: whether a physician has a highly educated spouse and whether such physicians were less likely to work in rural and underserved areas.[49] Guiding the study was the hypothesis that highly educated dual-career households would more easily accommodate both spouses in large metropolitan areas.

Analyzing data going back to 1960, the study found that physicians were increasingly likely to be married to highly educated spouses—those with an M.D., Ph.D., or graduate degree. The proportion of married physicians whose spouse was highly educated increased steadily from 9 percent in 1960 to 54 percent in 2010. In every year over this period, approximately one-third of physicians' spouses who held graduate degrees were themselves physicians. The increased likelihood of having a spouse with a graduate degree occurred partly because women were a growing proportion of married physicians (from 4 percent in 1960 to 31 percent in 2010) and because female physicians were far more likely than male physicians to be married to a spouse with a graduate degree (68 percent of women versus 48 percent of men in 2010).

Study results showed that physicians married to a highly educated spouse were significantly less likely to live and practice in rural shortage areas. Further, the study found that younger physicians were more likely to be married to a highly educated spouse than physicians born before the 1980s.[50] Taken together, these findings point to an increasingly strong demographic headwind facing rural health workforce policy. Overcoming the challenges in enticing physicians to move to rural and medically underserved areas will be an increasingly steep uphill climb.

The final physician forecasting study that the economics team conducted examined trends in the number of physicians who practice in rural versus non-rural areas.[51] Results showed that the number of physicians per capita in rural areas declined 15 percent between 2000 and 2016 compared to 8 percent growth in non-rural areas.

This is due largely to the aging of physicians working in rural areas and the scarcity of new, younger physicians in rural areas. The number of physicians under 50 practicing in rural areas declined from 9.4 physicians per 10,000 residents to 5.6 physicians

per 10,000 people, a decrease of over 40 percent. As a consequence, the number of physicians practicing in rural areas decreased from 14 per 10,000 people in 2000 to 12 per 10,000 people in 2016.

Looking ahead, we forecast that the number of physicians practicing in rural areas will continue decreasing to 9.0 physicians per 10,000 people in 2030, a drop of 35 percent from 2000 and 23 percent relative to 2016 when the rate was 11.7 physicians per 10,000 people. Meanwhile, the number of non-rural physicians is projected to remain steady at just under 31 per 10,000 people, roughly the same proportion observed for 2016.

How Do State-Level Restrictions Affect Access to and Quality of Care?

Health care economist Paul Feldstein describes at least five types of legislative or regulatory strategies a health care professional association may pursue to further its members' self-interest. These strategies include (1) securing policies that increase demand for services provided by its members, (2) maximizing reimbursement or payment for services provided by its members, (3) decreasing the price or increasing the quantity of complementary health professionals, (4) decreasing the availability or increasing the price of substitute providers, and (5) restricting the supply of professions that may compete with its members. These policies are often justified on the grounds of protecting the public from low-quality health care.[52]

Regarding NPs, this framework suggests that some primary care physicians would conceivably support state regulations that limit the supply of NPs, restrict the types of services NPs provide to decrease possible competition with physicians, and require that physicians supervise NPs, so that NPs practice as an economic complement rather than as a substitute. A new study on physician political spending and state-level occupational licensing supports these hypotheses. Results showed that increased spending by physician interest groups increased the probability that a state maintains licensing laws that restrict NPs' practice.[53]

This conceptual framework led us to investigate two means by which a state's NP scope-of-practice laws could influence the quality of care that PCNPs provide. First, the study assessed whether the quality of primary care provided by PCNPs was better in states that either reduced or restricted NP practice than in states with no such restrictions. Higher-quality care in reduced and restricted states would suggest that restrictions do protect quality of care—a position that some physician groups advocate. Drawing on the above studies—which found that beneficiaries receiving care from NPs had lower rates of preventable hospitalization, hospital readmissions, emergency department visits, and low-value care—this study also investigated whether beneficiaries living in restrictive states would have less access to NP-provided primary care and more preventable hospital admissions, readmissions, emergency department use, and low-value care than those living in nonrestrictive states.[54]

We used the AANP's system to divide states into the three aforementioned categories: full practice for NPs, reduced practice, and restricted practice. The AANP classification system is useful for several reasons. It is well established, is updated annually or more often, uses generally consistent definitions of a regulation's level of restrictiveness over time, started in the same year (2013) as the Medicare claims data used in the study, and captures the full range of activities and supervision requirements states have regulated.

Overall, using the AANP classification system, results provided no evidence that state-level scope-of-practice restrictions were related in any consistent or discernable way to the quality of care that PCNPs provide. There was no difference in the quality of care that Medicare beneficiaries received between states that reduced or restricted NP scope-of-practice and states that did not restrict NP scope-of-practice. To ensure the robustness of this result, a sensitivity analysis using each of five different scope-of-practice classification systems reported in the literature also found no consistent or discernable pattern.

Finally, study results showed greater use of outpatient services for beneficiaries cared for by both

PCNPs and PCMDs in full practice states, as well as lower rates of hospitalization, readmission, and emergency department use.[55] These findings provide further evidence that beneficiaries living in full scope-of-practice states have greater access to care.

The Future of Primary Care Providers: Attitudes, Knowledge, and Behavior

Understanding the future of PCMDs and NPs relies on projections for their fields: What kind of people are, and will grow to be, PCMDs and NPs? Where, how much, and for what pay do they work?

Our national survey of PCNPs and PCMDs (the first national survey of both types of clinicians) provides information to help address these questions.[56] The survey (61.2 percent response rate) gathered information on the practice characteristics of PCNPs and PCMDs. It also collected data on the attitudes, knowledge, and behavior of both types of clinicians toward shortages in the primary care workforce, the impact of expanding the number of PCNPs, NP scope-of-practice, quality of care, responsibility for providing specific services and procedures, job satisfaction, willingness to recommend a career in health care, and other issues. Key characteristics of sampled PCNPs and PCMDs include:

- On average, PCNPs are older but have five fewer years of experience than PCMDs.
- PCNPs work in a greater variety of health care delivery settings (community clinics, schools and universities, offices, parishes, prisons, etc.) than do PCMDs.
- The majority of PCNPs (81 percent) reported working with PCMDs, while 13 percent work independently of physicians. Additionally, 41 percent of PCMDs said they work with PCNPs.
- On average, PCNPs work fewer hours per week than PCMDs (37 hours versus 46 hours) and see fewer patients per week (67 patient visits versus 89 patient visits).
- PCNPs, alone and working with PCMDs, are more likely to treat vulnerable populations, including those on Medicaid, and to accept new Medicaid patients.
- Both types of primary care clinicians spend their time in nearly identical ways and provide similar services, but 56 percent of PCNPs received a fixed salary versus 24 percent of PCMDs. Only 14 percent of PCNPs had their salary adjusted for productivity or quality performance, whereas 50 percent of PCMDs received such salary adjustments.
- PCNPs reported that government and local regulations impede their ability to admit patients to hospitals, make hospital rounds on patients, and write treatment orders in hospitals and long-term care facilities.

In several areas, survey results indicated that physicians' attitudes as individuals do not match their behaviors as a group. Regarding NP scope-of-practice, most PCMDs (77 percent) agree that PCNPs should practice to the full extent of their education and training. However, they do not agree that a primary care practice led by an NP should be eligible to be certified as a medical home, that NPs should be legally allowed to have hospital-admitting privileges, or that they should be paid the same as physicians for providing the same services.

Asked whether expanding the supply of NPs would affect quality of care (measured by the Institute of Medicine's six aims for improving quality of health care and Triple Aim goals), large majorities of PCNPs reported that all dimensions of quality would be better. PCMDs' responses were more diverse and less enthusiastic, with about one-third saying that expanding the supply of NPs would make the safety and effectiveness of care worse. Surprisingly, when asked, "Given what you know about the state of health care, would you advise a qualified high school or college student to pursue a career as a PCNP or PCMD?" PCMDs were more likely to recommend being a *PCNP* than they would a PCMD (65 versus

51 percent), possibly reflecting physician burnout and dissatisfaction. But perhaps the survey finding that tells the story best is this: When asked how increasing the number of NPs would affect physician employment, 57 percent of PCMDs said their income would decrease, and three-quarters agreed they could be replaced by PCNPs.

Why Removing Restrictions on NPs Helps Remedy the Primary Care Shortage

From this overview of the research program conducted on the primary care NP and physician workforces, supported by the studies listed in Appendix A, several conclusions and observations are apparent.

First, it is unrealistic to rely on or expect the physician workforce alone to provide the primary care Americans need. Significant time, effort, and resources have been spent over many decades on various public and private policies to increase the supply and geographic reach of primary care physicians, yet today there is a growing national shortage of such physicians and continued uneven geographic distribution of primary care. These realities mean tens of millions of Americans lack adequate access to beneficial primary care services, often enduring significant delays before obtaining care. Hit particularly hard are people in rural and underserved areas, who are generally older, less educated, poorer, and sicker—the very populations who need primary care the most.

As large numbers of primary care physicians retire over the next decade and demand increases for primary care, current shortages of primary care are projected to worsen, and fewer physicians will be practicing in rural areas. The even-larger projected shortage of specialist physicians will only make matters worse, as many specialists provide considerable amounts of primary care. And, as the proportion of physicians who are married to highly educated spouses increases, the already formidable challenges of attracting physicians to rural and Health Professional Shortage Areas will become even more daunting.

In contrast, studies of the PCNP and PCMD workforces find that the number of PCNPs has been growing much more quickly than the physician workforce. The number of PCNPs will increase dramatically, while the number of PCMDs will grow little through 2030. And PCNPs are more likely to practice in rural areas, where the need is greatest.

When assessing state-level restrictions on NPs, our study showed that populations in states with reduced or restricted practice of NPs had significantly less geographic access to PCNPs. This finding has also been reported by others, indicating the role state regulations have in influencing access to primary care (Appendix A).[57] Clearly, state-level restrictions impede access to and quality of primary care. This alone should be cause for concern among policymakers seeking to improve public health.

Using different data and methods, the studies described in this report consistently show that PCNPs are significantly more likely than PCMDs to care for vulnerable populations. Nonwhites, women, American Indians, the poor and uninsured, people on Medicaid, those living in rural areas, Americans who qualified for Medicare as a disability, and dual-eligibles are all more likely to receive primary care from PCNPs than from PCMDs. PCNPs working independently of PCMDs and those working with them are more likely to accept Medicaid recipients, take care of those without insurance, and accept lower payments than are PCMDs who do not work with PCNPs.

Another major finding of this body of research is that, after controlling for differences in patient severity and sociodemographic factors, the cost of care provided to Medicare beneficiaries by PCNPs was significantly lower than primary care provided by PCMDs. Even after accounting for the lower payment PCNPs receive relative to PCMDs, the cost of PCNP-provided care was still significantly lower. Taken together, these findings paint a favorable picture of PCNPs' contributions.

However, the viability of increased reliance on PCNPs still depends on the simple question at the core of this project: Can PCNPs provide health care of comparable quality to that provided by PCMDs? Our studies showed that beneficiaries who received their primary care from PCNPs consistently received significantly higher-quality care than PCMDs' patients with respect to decreasing hospital admissions,

readmissions, emergency department use, and ordering of low-value care (specifically, MRI images for low back pain). While beneficiaries treated by PCMDs received slightly more services involved in managing chronic diseases than those receiving primary care from PCNPs, the differences were marginal.

State-level NP scope-of-practice restrictions do not help protect the public from subpar health care.

These results held when vulnerable populations of Medicare beneficiaries were analyzed separately and compared to those cared for by PCMDs. In fact, the differences in quality of chronic disease management between PCMDs and PCNPs narrowed considerably, and some disappeared altogether. These results align with the findings of many other studies conducted over the past four decades.

Furthermore, state-level NP scope-of-practice restrictions do not help protect the public from subpar health care. Analysis of different classifications of state-level scope-of-practice restrictions provided no evidence that Medicare beneficiaries living in states that imposed restrictions received better quality of care.[58] Some physicians and certain professional medical associations have justified their support for state regulations to limit NP scope-of-practice on the grounds that they are necessary to protect the public from low-quality providers and to assert that physicians must be the leaders of the health care team. We found no evidence to support their claim, as others have also recently reported.[59] Further, our analysis showed that Medicare beneficiaries living in states with reduced or restricted NP scope-of-practice used more resources (hospitalizations, readmissions, and emergency department admissions sensitive to primary care) than did beneficiaries living in states without such restrictions, indicating that these beneficiaries had less access to the positive contributions of PCNPs.

Despite this body of evidence, our national survey of primary care clinicians revealed that around one-third of PCMDs believe increasing the number of PCNPs would impair the safety and effectiveness of care. This could indicate that physicians are not aware of the findings of research. Alternatively, it should be called what it is: an excuse for a barrier to entry, meant to protect some physicians' narrow interests. And it comes at the expense of effective primary care for many Americans who need it.

The evidence leads to three recommendations that can help overcome the growing challenges facing the delivery of primary care in the US. Each recommendation is geared toward a different group: public policymakers, private policymakers, and PCMDs and PCNPs themselves.

1. Private policymakers—including hospital boards of directors, established and emerging integrated health care–delivery systems (e.g., large hospital-based systems and accountable care organizations), private commercial and not-for-profit insurers, health care and hospital associations, health education associations, and health care foundations—should develop forums to bring PCNPs, PCMDs, and their respective state and local associations together to engage in meaningful dialogue. Hospital boards and credentialing bodies should allow NPs to practice to the fullest extent of their training and ability. The evidence suggests this will be a great service to people lacking access to care and to the solvency of Medicare. Doctors (as individuals) overwhelmingly favor allowing NPs to practice to the full extent of their education and training. This can become a reality on a hospital-to-hospital, health-system-to-health-system basis.

2. Physicians must understand that NPs, too, are providing health care to those in need. NPs and physicians should work together to better

understand each other. It may behoove individual physicians and nurses to discuss how, together, disagreements can be better managed, even resolved. This could be a first step toward building a relationship that allows for roles and practices to evolve—that *respects* each other's strengths and ultimately leads to a workforce that is *more responsive* to communities' health needs, particularly in rural and underserved areas and among vulnerable populations.

3. Public policymakers: Drop the restrictions on PCNP scope-of-practice! These are regressive policies aimed at ensuring that doctors are not usurped by NPs, which is not a particularly worthwhile public policy concern, especially if it comes at the expense of public health. The evidence presented here suggests that scope-of-practice restrictions do not help keep patients safe. They actually decrease quality of care overall and leave many vulnerable Americans without access to primary care. It is high time these restrictions are seen for what they are: a capitulation to the interests of physicians' associations.

Conclusion

The evidence discussed in this report points to a commonsense solution to primary care workforce-supply problems. The NP workforce is growing, far outpacing the growth of the primary care physician labor force. NPs are more likely to work in rural areas, which already do and will increasingly need more primary care providers. They are more likely to serve poor and vulnerable Americans, and their services cost less. Most importantly, they provide primary care of equal or better quality compared to physicians.

For all those reasons, scope-of-practice restrictions should be lifted in states across the country, and health care administrators should allow NPs to take on expanded roles in primary care settings. For the health of Medicare and millions of people, NPs must be allowed to provide primary care to more Americans.

About the Author

Peter Buerhaus is a health care economist and professor of nursing at Montana State University and a member of the American Academy of Nursing and the National Academy of Medicine.

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Appendix A

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CALIFORNIA HEALTHCARE FOUNDATION

Scope of Practice Laws in Health Care: Exploring New Approaches for California

ISSUE BRIEF

Overview

In health care, scope of practice (SOP) laws establish the legal framework that controls the delivery of medical services. They dictate which professions may provide specific services, the settings in which they may provide them, and the parameters of their professional activities. The reach of SOP laws stretches from physicians to physical therapists, podiatrists to dental hygienists.

With few exceptions, determining SOP laws is the work of state governments. State legislatures consider and pass the statutes that govern health care practices. Regulatory agencies, such as medical and other health profession boards, implement those statutes, through the writing and enforcement of rules and regulations.

Due to the individualized, state-specific nature of this process, SOP laws and regulations vary widely among the health care professions. Some states allow individual professions broad latitude in the services they may provide, while others employ strict SOP limits. In some states, certain professions are not recognized at all.

Influencing the design of these legal frameworks is the large number of interest groups involved in SOP decision-making. These constituencies each bring their own goals, biases, and agendas to a process that is often highly politicized and lacking in standardized guidelines. This has resulted in episodic, and at times seemingly intractable, political battles over modifications to SOP laws, both in California and nationwide.

The cumulative effects of legal SOP boundaries are substantial, and not limited to market share or inter-professional competition. SOP laws can facilitate or hinder patients' ability to see a particular type of provider, which in turn influences health care costs, access, and quality.

Key Findings

- In California, the state legislature enacts scope of practice (SOP) laws, and all major changes to those laws;
- Most of the health professions boards, which implement the laws through regulation, function under the administrative oversight of state agencies such as the Department of Consumer Affairs, the Department of Public Health, or the Emergency Medical Services Authority;
- Policy and political battles over SOP laws have arisen in numerous state legislatures;
- The states of Iowa, Minnesota, New Mexico, and Virginia, and the province of Ontario, have established or are implementing processes to review changes to SOP laws. In addition, a bill in Texas proposing a new SOP review mechanism was recently defeated; and
- These processes have met with varying degrees of success, but have garnered positive evaluations from policymakers who have employed them in their SOP decision-making.

MARCH 2008

The Center for the Health Professions at the University of California, San Francisco has identified a number of relevant models for reviewing and modifying SOP laws. The analysis, completed in November 2007, was funded by the California HealthCare Foundation.

This issue brief highlights those models, comparing and contrasting SOP review programs and statutes across the United States and Canada. These review programs seek to complement legislative SOP decision-making with formal review processes, additional expertise, and the use of empirical evidence.

The issue brief also compares California SOP laws for four professions to those of other state and federal programs that offer broader, more expansive practice provisions. Given the often contentious nature of SOP discussions, the models presented here offer California ideas on how to approach the SOP review process in a more impartial manner.

The full UCSF analysis, *Promising Scope of Practice Models for the Health Professions*, is available online at http://futurehealth.ucsf.edu/pdf_files/Scope%20Models%20Fall%202007.pdf.

Professional Regulation and Scope of Practice Decision-Making: The California Experience

In California, as in most states, the state legislature makes SOP laws, and major modifications to those statutes. SOP laws, once enacted, come under the administrative authority of one of the following: the Department of Public Health (CDPH); the Emergency Medical Services Authority (EMSA); or the boards, bureaus, and committees housed in the Department of Consumer Affairs.

Scope of Practice Laws in California: Health Care Professions

The state of California administers scope of practice laws for a broad range of health care professionals. Regulated professions include:

- Acupuncturists;
- Audiologists;
- Behavioral sciences (marriage and family therapists, licensed clinical social workers, etc.);
- Chiropractors;
- Dentists, dental assistants and dental hygienists;
- Hearing aid dispensers;
- Home health aides;
- Laboratory professionals;
- Medical assistants;
- Midwives (nurse midwives and direct entry midwives);
- Naturopaths;
- Occupational therapists and occupational therapist technicians;
- Optometrists and opticians;
- Orthodontists and oral surgeons;
- Osteopaths;
- Paramedics and emergency medical technicians;
- Pharmacists and pharmacy technicians;
- Physical therapists and physical therapy assistants;
- Physicians (including psychiatrists, ophthalmologists, etc.);
- Physician assistants;
- Podiatrists;
- Psychiatric technicians and psychological assistants;
- Psychologists;
- Radiologic technologists;
- Registered nurses (including nurse practitioners), nursing assistants, and licensed vocational nurses;
- Respiratory care practitioners; and
- Speech pathologists.

Source:California Department of Consumer Affairs."DCA Boards/ Bureaus." www.dca.ca.gov/about_dca/entities.shtml; California Department of Public Health. www.cdph.ca.gov/certlic/occupations/Pages/default.aspx; California Emergency Medical Services Authority. www.emsa.ca.gov; California Board of Chiropractic Examiners. www.chiro.ca.gov.

These agencies provide administrative and regulatory oversight of the respective professions under their authority. This includes:

- Establishing minimum qualifications and levels of competency for licensure;
- Licensing, registering, and certifying practitioners; and
- Investigating complaints and disciplining violators.

The DCA has 15 boards, two bureaus, and two committees, which regulate the majority of the medical and behavioral science professions. The boards and bureaus are semi-autonomous bodies, with members appointed by the governor and the legislature; the department provides administrative support. The committees are under the purview of the bureaus in which they are housed.[1]

The CDPH regulates a smaller number of professions, including home health aides, radiologic technologists, and laboratory technicians; EMSA regulates paramedics, while local EMS agencies regulate emergency medical technicians (EMTs); and chiropractors fall under the Board of Chiropractic Examiners.

Given the role of the state legislature in SOP decision-making, changes to these laws are largely a function of the political process. Interest groups with strong lobbies play a significant role in shaping or blocking legislation. This has spawned numerous inter-professional battles, some of which have continued for years.

For example, psychiatrists and psychologists have clashed repeatedly over legal authority to prescribe psychotropic drugs. Both professions may treat patients through individual and group therapy, but psychologists do not have drug-prescribing authority. Psychologists have long sought to add drug prescribing to their practice scope, but psychiatrists, who may prescribe psychotropic drugs, have consistently fought this SOP expansion. In 2007, SB 993, authored by Sen. Sam Aanestad, R-Penn Valley, and Sen. Ron Calderon, D-Montebello, would have allowed psychologists to prescribe drugs. However, the bill faced opposition from organizations representing psychiatrists and other medical professionals with prescribing authority, and the bill failed to clear the Senate Business, Professions, and Economic Development Committee.[2]

The competition between physicians and nurse practitioners (NPs) is another policy area of significant legislative activity. NPs are registered nurses with advanced clinical training, who serve as primary care providers in a broad spectrum of acute and outpatient settings. The two professions have a long and contentious history concerning practice boundaries.

In 2007, two bills sought to expand SOP laws for NPs, in particular, allowing NPs to prescribe drugs without physician oversight. Physician lobbying organizations opposed both bills. One, AB 1643, authored by Assemblymember Roger Niello, D-Sacramento, was not scheduled for a committee hearing, and the author decided not to pursue the bill. The second bill, SBX1 24, by Sen. Roy Ashburn, R-Bakersfield, was removed at the author's request prior to its scheduled hearing before the Senate Health Committee; as of late February, a hearing had yet to be scheduled.[3]

Eye and vision care is another area where competition among professions has occurred. Ophthalmologists and optometrists have found themselves on opposite sides of debates on whether optometrists, whose SOP is generally the more restricted of the two, should be allowed to expand their SOP into areas such as diagnosis and treatment of glaucoma, and the prescription of medications.

In 2000, SB 929, by then-Sen. Richard Polanco, D-Los Angeles, expanded the SOP of optometrists to allow the treatment of additional diseases and conditions. The bill also declared a moratorium on further optometry SOP modifications until Jan. 1, 2009. That modification

process is now under way. SB 1406, introduced in February 2008 by Sen. Lou Correa, D-Santa Ana, would expand optometrists' SOP. It would permit optometrists to diagnose and treat the eyes, or any part of the visual system, for all conditions for which they are trained and authorized by the state Board of Optometry.

Scope of Practice Decision-Making: Other States, Other Models

Several state governments have begun to establish independent review committees to evaluate SOP modification proposals. These committees, using standardized review mechanisms and expert staff, evaluate proposals and transmit their findings to legislators. Policymakers then have objective, evidence-based reviews on which to draw in their deliberations. As illustrated by the brief descriptions that follow, four states and one Canadian province have established flexible, transparent review processes to support legislative decision-making.

Minnesota: Health Occupations Review Program

In 2001, Minnesota established the state Health Occupations Review Program, to provide legislators with impartial information on SOP modification proposals. The program reviews legislation on SOP changes, and emerging professions, at the request of state policymakers.

The program serves in an advisory capacity only, but generates important background information that helps legislators make informed decisions. The program helps frame issues; develops benchmark research that places proposals in context of other states' decisions; examines other professions in the state for standard practices; and raises questions for legislators to consider when reviewing SOP proposals.

The program consists of representatives from existing state health licensing boards. Initial review panels are composed of six members of those boards, with review processes taking an average of three to nine months. Legislators have given the program favorable reviews, including one policymaker who suggested that all health care profession bills go through program reviews.

In one example of the review process, a program panel evaluated a 2006 proposal to expand SOP for athletic trainers. The panel provided valuable analysis on key elements of the proposal, including:

- The plan to rename trainers' clients as "patients," as opposed to "athletes," would make Minnesota the first state to do so, but Michigan previously had changed its definition of "athlete" to "individual;"
- The plan to reduce from one year to six months the period of temporary trainer registration, which covers the time between completion of education and passage of the state credentialing exam, would be consistent with state rules for physician assistants and respiratory therapists;
- The plan to provide a three-month grace period for new trainers to be employed without a physician protocol (a formal physician-generated treatment guideline) in place was illogical, because this would make the standard for new trainers less stringent than that for trainers who are already registered, and who must work with physician protocols; and
- Athletic trainers are allied health professionals and should be required to adhere to HIPAA regulations.

New Mexico: Scope of Practice Review Commission

In 2007, the New Mexico Legislature passed House Joint Memorial 71, and House Memorial 88, requesting that the Interim Legislative Health and Human Services Committee establish an empirical process to provide legislators with objective information when deciding on proposed SOP changes. The committee will begin its study in the summer of 2008, as part of the state's health care reform initiative.

Texas: Scope of Practice Review Bill Fails to Clear the Legislature

In an example of the difficulties associated with modifying the scope of practice (SOP) review process, Texas state Rep. Dianne Delisi saw her second attempt to establish a formal review mechanism go down to defeat in the 2007 legislative session.

Delisi authored a bill in 2005 to create a Health Professions Scope of Practice Review Commission, which would evaluate proposed changes to SOP laws. The bill failed, and Delisi re-introduced it in the 2007 session.

The proposal called for a nine-member commission, including two public representatives and one representative from the Health, Law and Policy Institute at the University of Houston, as well as formal process protocols to evaluate proposed SOP changes. These protocols included an examination of other states that have implemented similar SOP review processes, with evaluations of subsequent impacts on access to care.

Further, the bill included notice requirements for committee meetings that are similar to those of corporate boards; made commission meetings open to the public; and articulated quorum requirements for commission votes.

The bill was referred to the House Public Health Committee in late March, 2007, where it died without receiving a hearing; Delisi plans to retire at the end of 2008.

Iowa: Reviewing Committees

In 1997, the Iowa General Assembly established a three-year pilot program to review SOP processes, after a state task force found that the existing system for resolving inter-professional conflicts was inadequate.

The pilot program instituted SOP review committees. These committees conducted impartial assessments of proposed changes in health profession regulations, used objective criteria to evaluate proposals, and developed non-binding recommendations for legislators.[4] The program sought to enhance both consumer protection and choice.

Under the program, committees received proposals for review in two ways, either by a request from the Iowa General Assembly, or a recommendation from the state Public Health Department. Reviews had to be completed within nine months. Review committees commonly had five members:

- One member representing the profession seeking a change in scope of practice;
- One member of the health profession directly affected by, or opposed to, the proposed change;
- One impartial health professional, whose constituency would not be affected by the proposed change; and
- Two members of the general public.

The program was well-received by the constituencies that interacted with it. Based on the pilot project's success, legislators extended the program twice—first until 2002, then until 2007.

Between 1997 and 2002, committees reviewed four proposals, two each from the General Assembly and the Public Health Department. The review process provided policymakers with information to aid their efforts to resolve conflicts among health professions:

- The Dubuque District Dental Assistant Society requested mandatory certification of dental assistants (DAs), which at the time were not governed by formal state regulation. The reviewing committee found that the lack of formal regulation could constitute a consumer protection issue, and that the lack of education or training requirements meant there were no minimum competency standards. The committee also found that there could be more cost-effective methods to regulate the profession than mandatory certification. The committee recommended that all DAs be required to register with the Board of Dental Examiners, and that the board should establish education and examination requirements. This recommendation became law in 2000, and the governor vetoed a bill in 2004 that would have eliminated the new exam requirements;

- The Iowa Midwives' Association requested formal recognition of direct entry midwifery, through legislative recognition of the Certified Professional Midwife credential established by the North American Registry of Midwives, and the establishment of a Board of Certified Professional Midwife Examiners within the state Public Health Department. Direct entry midwifery, also known in some states as lay midwifery, is performed by trained midwives who do not have a formal nursing degree or registered nurse license. The review committee recommended that legislators reject the association's request, but recommended legalization of direct entry midwifery. It further recommended that the state establish a Midwifery Advisory Council, composed of a range of professionals currently in clinical practice, to formulate regulations and clinical protocols for the profession.
- The Iowa Optometric Association requested that optometrists receive approval to use all classifications of pharmaceutical agents to diagnose and treat the eye. The review committee tapped the Des Moines University Osteopathic Medical Center to assist in its evaluation. University personnel attended committee meetings, evaluated laws in other states, reviewed clinical studies, and examined the curricula of Iowa optometry schools. The committee ultimately recommended against the association's request; and
- A committee reviewed the adequacy of existing nurse's aide education and competency testing regulations, recommending that all candidates for the nurse's aide registry be required to take a 75-hour training course.

Program reviews were positive. A survey of the initial pilot program, which queried review committee members, health care professionals, legislators, administrators, and program staff found that respondents felt the program had had a positive impact on health care policy, and 75 percent indicated that the review process should be continued.

Likewise, a 2002 evaluation identified a number of important program benefits:

- It had provided a mechanism to impartially review legitimate public policy issues outside the political arena;
- It helped give a voice to previously disenfranchised constituencies;
- It delivered legitimate public policy recommendations;
- It was cost-effective—all four reviews cost less than $20,000; and
- It was still needed, as SOP disputes among health professionals would continue to occur, demonstrating the need for a formal resolution mechanism.

The program ended in 2007; the Public Health Department is not aware of any effort to reinstate it.

Virginia: Board of Health Professions

Virginia employs 13 health boards to regulate their respective professions. In addition, a separate Board of Health Professions evaluates and makes recommendations to the state legislature on SOP regulatory issues. The board consists of 18 members, one from each of the 13 regulatory boards, and five citizens (consumers), all appointed by the governor.[5]

In a 2000 study, for example, the state legislature requested that the board examine the appropriate level of regulation for certified occupational therapy assistants (COTAs). The board's examination included:

- A public hearing;
- A survey of all states that regulate occupational therapists or COTAs, showing aggregate numbers of complaints, disciplinary actions, and malpractice claims over a two-year period; and
- A survey of occupational therapists in Virginia, detailing supervision and delegation patterns for COTA activities.

The legislature, following the recommendations in the board report, decided that COTAs needed no additional regulatory oversight in 2000.[6]

Ontario: The Regulated Health Professions Act

The Regulated Health Professions Act of 1991 (RHPA) established a common framework for the regulation of Ontario's 23 health professions, and the 21 "colleges" (similar to state boards in the United States) that regulate them, and provides provincial policymakers with enhanced flexibility in health care planning and delivery.

While the Ministry of Health is responsible for the overall administration of RHPA, the act also established the Health Professions Regulatory Advisory Council (HPRAC), which plays a key role in delivering analyses on SOP modifications. HPRAC reviews all proposals for new professions to come under RHPA regulation, as well as SOP modifications to currently regulated professions, and makes recommendations to the ministry on how to proceed.

As part of the review process, proposed SOP regulations pass through a process of "consultation." The ministry must notify every college of the proposal and permit each college's regulatory council to submit arguments to HPRAC. In addition, the registrar of each college also must notify its respective members of all proposals.

HPRAC consists of five to seven individuals, made up entirely of members of the public, who are recommended for their posts by the ministry. Public sector employees, current and former members of all regulated professions, and all former HPRAC members are ineligible to serve on the council.[7]

In its 17-year history, HPRAC has provided analysis on issues as diverse as studies on whether to regulate naturopathy, acupuncture, and traditional Chinese medicine; SOP expansion proposals for dental hygienists and nurse practitioners; proposals to allow optometrists to prescribe medications; and a broad-based review of the regulatory framework for diagnostic imaging and MRI professionals.

Scope of Practice Laws: Four Professions, Differing Approaches

Nationwide, SOP laws for the health professions vary widely from state to state, despite relatively standard education, training, and certification programs. A comparison of specific practice authorities of four important professions in California to more expansive authorities in other states highlights the variability of specific services that these professionals may provide, regardless of the fact that their education and training prepares these professionals to provide them.

The four examples of professions whose SOP could be expanded include:

1. Nurse practitioners and independent practice;
2. Physical therapists and the authority to refer and diagnose;
3. Physician assistants and the prescription of controlled substances; and
4. Paramedics and the administration of intravenous infusions.

The successful implementation of expansive SOPs for these four professions, in state-by-state comparisons with California, illustrates how some practitioners may be used more productively, without compromising patient safety and quality of care. Further, these examples illustrate how SOP modifications can have an impact on health care cost and access. Given the often contentious nature of SOP expansion proposals, these practice authority examples from other states provide California an opportunity to review its proposals in a more impartial fashion.

1. Nurse Practitioners and Independent Practice

Nurse practitioners (NPs) are registered nurses who receive advanced training that allows them to serve as primary care providers. Although most states now require NPs to be certified by a national certification body, SOPs vary widely. For example, most states require NPs to practice in collaboration with a physician, but some states permit NPs to practice independently, without physician involvement. Significant variation also exists in NP authority to diagnose, order tests, make patient referrals to other providers, and prescribe drugs and controlled substances.

California: Mandated Physician Collaboration

NPs in California do not have a formal SOP beyond that of registered nurses. NPs may exceed the SOP of a registered nurse through individual "standardized procedures;" NPs must develop these procedures in collaboration with physicians under a written, jointly developed practice protocol. NPs may practice only in collaboration with physicians, and individual physicians may supervise no more than four drug-prescribing NPs. If a standardized procedure protocol specifically permits it, NPs also may diagnose, order tests and durable medical equipment, refer patients to other providers according to their practice protocol, and "furnish" or "order" drugs, including Schedules II-V controlled substances.[8]

Other States: Greater Autonomy for Nurse Practitioners

NPs are explicitly authorized to practice independently without physician oversight in 10 states and the District of Columbia; the states include Alaska, Arizona, Idaho, Iowa, Maine, Montana, New Hampshire, New Mexico, Oregon, and Washington. In all these states, the authority of NPs to practice independently includes the authority to prescribe drugs without physician involvement.[9]

Elsewhere in the United States, NPs practice with varying degrees of physician oversight. For example, stricter states, such as Oklahoma and Virginia, require NPs to practice under direct physician supervision. Most states, on the other hand, require NP-physician collaboration.

States may also require ranging levels of physician involvement depending on geographical location some states require differing levels of physician oversight, depending on location (such as inner cities or rural areas), practice setting (nursing homes, hospitals, etc.), and specific medical service.

For a more complete discussion of NP scopes of practice, the UCSF analysis, *Overview of Nurse Practitioner Scopes of Practice in 50 States*, chart and discussion, is available online at http://futurehealth.ucsf.edu; and the CHCF issue brief, *Scope of Practice Laws in Health Care: Rethinking the Role of Nurse Practitioners*, is available online at www.chcf.org/topics/view.cfm?itemID=133568.

2. Physical Therapists and the Authority to Refer and Diagnose

According to the Bureau of Labor Statistics, physical therapists (PTs) "provide services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease." PTs are licensed in all states, based on completion of an accredited PT program and a licensure exam. There is broad variation, nationwide, in the ability of PTs to:

- Treat patients without a referral from another provider;
- Initiate treatments without a referral;
- The categories of providers that may make a referral to a PT;
- Restrictions in the time before direct patient access can be made; and
- Specific diagnoses that allow direct access to a PT without a referral.[10]

California: Regulation of Physical Therapists

PTs in California must possess a post-baccalaureate degree in physical therapy, pass the National Physical Therapy Examination (NPTE), and pass the California Law Examination. California PTs enjoy a comparatively broad SOP, and are not required to have a referral from a physician to provide treatment. However, although PTs are authorized to perform physical therapy evaluations and treatment planning, they are not permitted to diagnose patients—and under California law, a disease or other physical condition cannot be treated without a diagnosis. Thus, PTs may not treat a patient without a prior diagnosis by a physician.[11]

Illinois' Alternative: Physical Therapists Enjoy Broad Practice Authorities

There are nuanced differences among the states in SOP laws for PTs. For example, Illinois SOP laws for PTs could be considered broader than California's. PTs in Illinois may not treat patients without a referral, but the group of providers that may refer patients to PTs extends significantly beyond physicians; the list includes dentists, advanced practice nurses, physician assistants, and podiatrists. Oral referrals from these providers constitute sufficient authorization, and while PTs are not permitted to diagnose patients, a diagnosis is not a prerequisite to PT treatment.[12]

Overall, 19 states allow patients unlimited, direct access to PTs, while another 31 states allow limited direct access, depending on factors such as the patient's condition.

3. Physician Assistants and Prescription of Controlled Substances

Physician Assistant (PA) programs require candidates to complete an accredited education program, and pass a national exam. PAs provide diagnostic, therapeutic, and preventive health care services under physician supervision, but again, specific laws and regulations vary among the states. For example, in some states, PAs may be principal care providers in rural or inner-city clinics, where a physician is present for only one or two days a week. The duties of PAs are determined by the supervising physician and by state law.[13]

California: Limited Advances in Prescribing Authority

In October 2007, the California legislature passed AB 3, which expanded PA prescribing authority. Under AB 3, PAs may now order controlled substances without advance approval by a supervising physician, if the PA completes specified training and meets other requirements.

However, California PAs do not have complete independence when prescribing drugs. PAs still must be supervised by physicians, and an individual physician may supervise a maximum of four PAs. In addition, under AB 3, each supervising physician who delegates the authority to issue a drug order to a PA must first prepare general written formularies and protocols that specify all criteria for the use of a particular drug. Protocols for Schedule II controlled substances, which generally have the highest potential for abuse and dependence, also must address the diagnosis for which the drug is being issued.

Indian Health Service's Alternative: Facility-Specific Prescribing

PAs have worked in the Indian Health Services (IHS) since the mid-1970s. Approximately 160 PAs nationwide work in IHS federal, urban, and tribal health facilities. In the IHS, PAs play a significant role in relieving physician shortages in primary care.[14] While grounded in the core requirement that a PA must be supervised by a medical doctor, the IHS policy on PAs recognizes the value of tailored SOPs, to meet individual and site-specific needs.

All PAs must have a supervising physician, and each facility must outline the scope of work for PAs employed at that facility. Facility medical managers determine individual PA clinical privileges, which are based on the individual PA's education, training, experience, and current competence. The supervising physician must meet with the PA in person on a periodic basis to discuss patient management.

PAs may receive prescribing privileges, based on their education and clinical competencies, and further, may prescribe controlled substances if authorized by the facility. IHS PA policy notes that, although PAs employed by IHS need not be licensed by the state in which they are practicing, U.S. Drug Enforcement Agency regulations require that PAs be authorized to prescribe controlled substances by the state in which they are licensed to practice.

The IHS recognizes that its PAs are often required to practice in isolated settings, where on-site physician consultation is not always available. IHS practice policy allows PAs to practice at remote sites, or after hours, without a supervising physician on site, as long as telephone or two-way radio contact with an advising physician is available. The advising physician may be either the PA's clinical supervisor, or a designated alternative. Notably, accountability for physician supervision may be determined prospectively, by scheduling, or retrospectively, by chart reviews, as determined by the physician-PA team.

Other States: More Expansive Prescribing Authority

According to the American Academy of Physician Assistants, four states (Alabama, Florida, Kentucky, and Missouri) do not allow PAs to prescribe controlled substances. The remaining states authorize PAs to prescribe controlled substances, to varying degrees. For example, Schedule II prescriptions by PAs in North Carolina and South Dakota are limited to 30-day supplies. Other states, such as Colorado, Georgia, Kansas, and Mississippi, do not have similar restrictions. The New York legislature recently passed legislation giving PAs broader authority to prescribe controlled substances.

4. Paramedics and Administration of Intravenous Infusions

California: Local Scope of Practice Variations

Paramedics are specially trained and licensed to render immediate medical care in the pre-hospital setting to the seriously ill or injured. They are typically employed by public safety agencies, such as fire departments, and by private ambulance companies. California has three levels of emergency providers: Emergency Medical Technician (EMT)-I (Basic); EMT-II (Intermediate); and EMT-P (Paramedic). Paramedics have the highest degree of training, as well as corresponding SOP authority. Paramedics are trained and licensed in advanced life support (ALS) practices, which include the use of a laryngoscope, endotracheal and nasogastric intubation, and the administration of 21 drugs.[15]

California's SOP protocols for paramedics are particularly complex. Not only do they differ from other states, they also vary from county to county within the state. Paramedics come under the jurisdiction of the state Emergency Medical Service (EMS) Authority, which implements regulations governing paramedic training, scope of practice, and licensure. However, actual day-to-day emergency medical service operations are the responsibility of local county or multi-county EMS agencies.

Notably, while paramedic licensure is valid statewide, paramedics also must have local agency accreditation to practice in the area where they are employed. This involves adhering to local agency protocols, and training in any "local optional scope of practice," or specific medical tasks performed by EMS personnel in that jurisdiction, that is required by the local EMS agency.

In addition to the state's basic SOP, paramedics may perform other procedures or administer other medications deemed appropriate by the medical director of the local EMS agency, and approved by the director of the state EMS Authority. Further, the state EMS Authority can approve the use of additional skills, and the administration of additional medications by paramedics, upon request by a local EMS medical director.

Local agencies also may constrict SOPs of paramedics. For example, under the state SOP, paramedics may monitor and adjust intravenous solutions containing potassium, equal to or less than 20 milli-equivalents per liter (mEq/L). However, this procedure is not permitted in Sacramento, San Mateo, Santa Clara, and Santa Cruz counties, although it is allowed in Marin, San Francisco, and Solano counties.

Paramedics Nationwide: Wide Variations in Scopes of Practice

The wide variability nationwide in laws and regulations affecting paramedics and other emergency professionals prompted the National Highway Traffic Safety Administration (NHTSA) to issue its National Emergency Medical Services Scope of Practice Model, designed as a guide for states in developing their scope of practice legislation. NHTSA issued findings that the "patchwork of EMS personnel certifications has created considerable problems, including but not limited to: public confusion; reciprocity challenges; limited professional mobility; and decreased efficiency due to duplication of efforts." NHTSA's national practice model would include intravenous infusion in the paramedic's scope of practice.[16]

Conclusions

When health care practitioners are not being used to their full capacity in terms of their education, training, and competence, systemic inefficiencies inevitably occur. These inefficiencies may manifest themselves in higher costs, insufficient access to practitioners, and concerns over quality and safety.

Efforts to address the mismatches between SOPs and competence, and the lack of uniformity among the states, have been limited. Some states' efforts are still in an early stage, and their impact has yet to be determined.

California policymakers recently have shown some willingness to seek complementary support for their SOP decision-making. ABX1 1, the failed comprehensive health care reform bill by Assembly Speaker Fabian Núñez, included a proposal to establish a Task Force on Nurse Practitioner Scope of Practice.

States that have attempted to de-politicize the SOP modification process with clearly delineated review programs appear to be making headway. These programs can equip policymakers with the unbiased professional analysis that will help them make difficult, often technical decisions on important public health issues.

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