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We need a workforce ready to improve access, outcomes, and costs

- Increasing demand for health services
 - · Rising income inequality
 - · Many Californians lack primary care access
 - · Affordable Care Act increased affordability for some
- High turnover rates in many occupations
 - · Front-line jobs in particular
- Shortages of health care workers
 - Not everywhere
 - · Not all professions





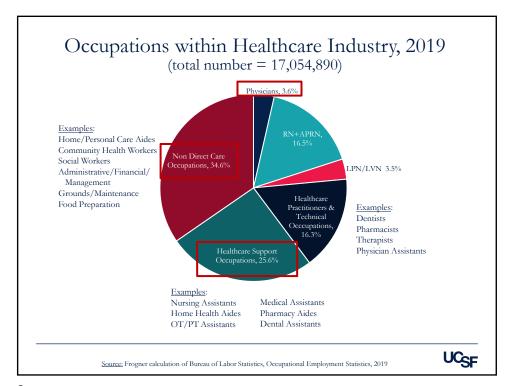


What I'll discuss tonight

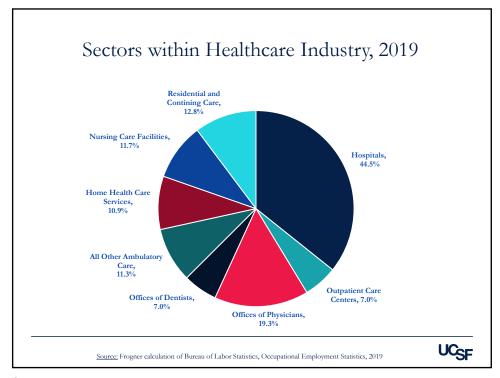
- What is the healthcare workforce?
 - What types of jobs, Where do they work, What is their education, What are their demographics?
 - An overview of pandemic effects on healthcare employment
- What was happening with healthcare workforce shortages before the pandemic?
 - · Deep dive on physicians and primary care
 - Deep dive on nursing
 - What has happened during the pandemic?
- What are some solutions?

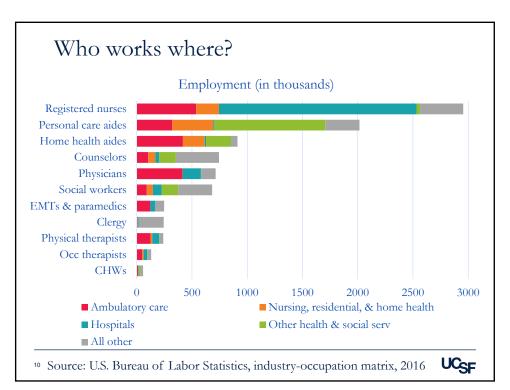


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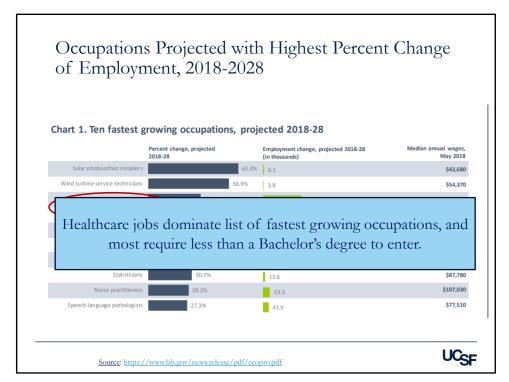




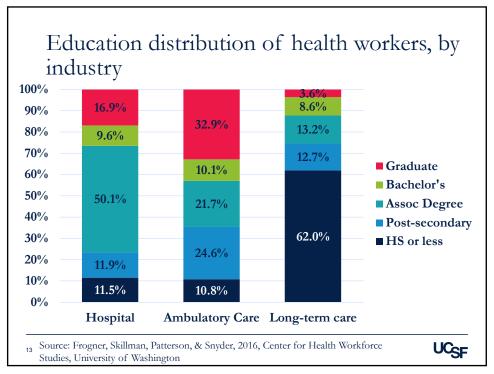


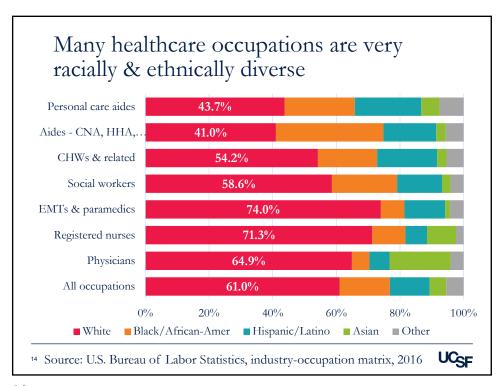


	Education	Training	Licensed?
Registered nurses	Associate/ bachelor's	None	Licensed
Personal care aides	High school	Short-term OJT	None
Home health aides	Post-HS cert	Short-term OJT	Certified
Counselors	Master's	Internship	Licensed
Physicians	Doctorate	Internship	Licensed
Social workers	Master's	Internship	Licensed
EMTs & paramedics	Post-HS cert	None	Licensed
Clergy	Bachelor's	Moderate OJT	None / Certified
	D	None	Licensed
Physical therapists	Doctorate	None	Licensea



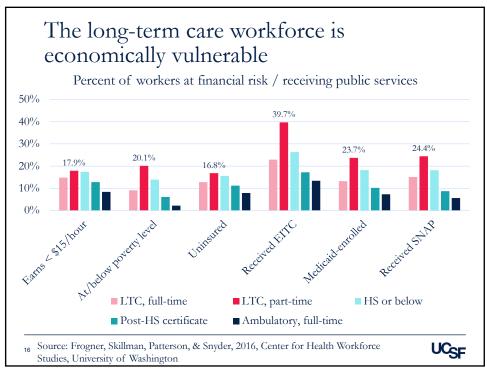








	Female	Not Born as US Citizen	
All Industries	47.2%	17.3%	
Health Care Industries	77.4%	16.0%	>
Office of physicians	78.1%	14.6%	_
Office of dentists	82.0%	15.7%	_
Office of chiropractors	66.3%	11.4%	†
Office of optometrists	76.2%	8.6%	†
Offices of other health	73.2%	10.8%	_
Outpatient care centers	77.1%	13.1%	1
Home health care services	88.4%	23.3%	>
Other health care services	69.5%	16.3%	
Hospitals	75.7%	16.8%	
Nursing care facilities	85.3%	15.3%	
Residential care facilities, without nursing	73.1%	16.6%	
ource: Authors calculation fr	om data and san	nple weights extracted	from Ruggles et al. 2010.





	Unemployed	At or below the 100% poverty threshold	
All Industries	9.3%	9.9%	>
Health Care Industries	4.8%	6.8%	
Office of physicians	4.7%	4.2%	_
Office of dentists	4.4%	4.4%	
Office of chiropractors	5.7%	6.8%	1
Office of optometrists	4.3%	4.6%	
Offices of other health practitioners	3.5%	4.7%	
Outpatient care centers	4.2%	5.5%	
Home health care services	9.2%	20.3%	⇒
Other health care services	5.3%	5.8%	
Hospitals	2.8%	3.5%	
vursing care facilities	7.2%	12.8%	
Residential care facilities,	7.2%	12.6%	7
	·	· ·	i from Ruggles et al. 2010. i) "The Demand for Health Care Worker

Table 2. Ten Most Common Prior Year Industry for Entrants and Current Year Industry for Leavers of the Health Care Industry Between 2003 and 2013.

Entrants' prior year industry (N = 15,742,141)	Percentage	Leavers' current year industry $(N = 23,729,493)$	Percentage
Not in the labor force or unemployed (excluding in school)	13.0	Not in the labor force	34.7
Leisure and hospitality	11.0	Unemployed	18.6
Retail trade (excluding pharmacies and drug stores)	8.8	Educational services	5.6
Educational services	8.4	Leisure and hospitality	4.6
In school	6.9	Professional, scientific, and technical services	4.3

Source: Frogner, The Health Care Job Engine: Where Do They Come From and What Do They Say About Our Future? Medical Care Research and Review, 2018



To Which Occupation/Industry Do Low Skilled Healthcare Workers Move?

•	LPN/LVN (n=6,835)		ssistant 2,480)
Occupation	Industry	Occupation	Industry
25.8%	14.7%	24.7%	15.1%
Office/Admin	Education	Office/Admin	Retail
12.0% Sales	12.2% Retail	14.5% Sales	14.6% Hospitality
10.2% Education	9.6% Hospitality	10.2% Education	10.2% Education

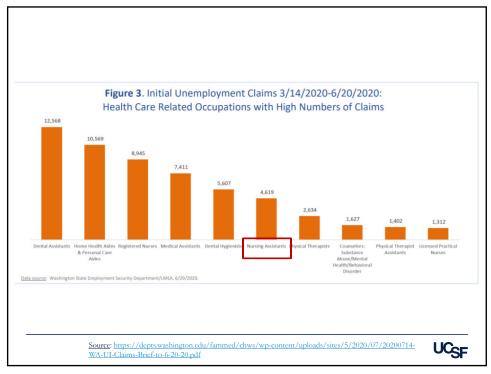
Source: Frogner, Is Health Care a Desirable Place to Work? Examining Trends in Competition for Health Care Labor. Work in Progress

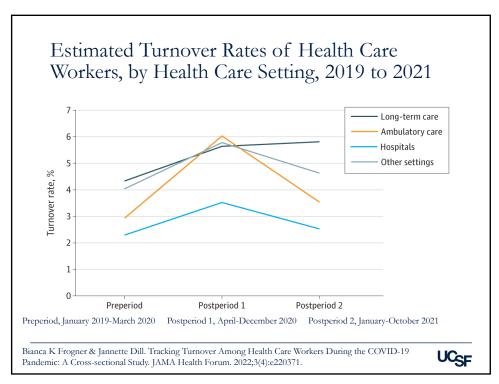
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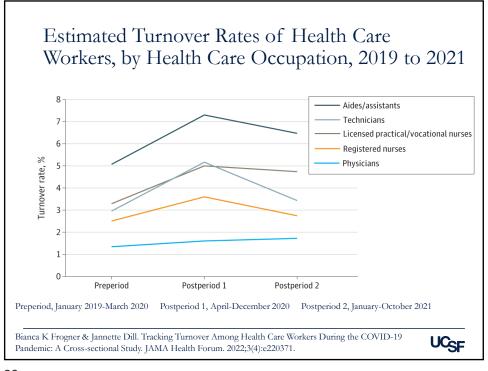
Healthcare employment during the pandemic

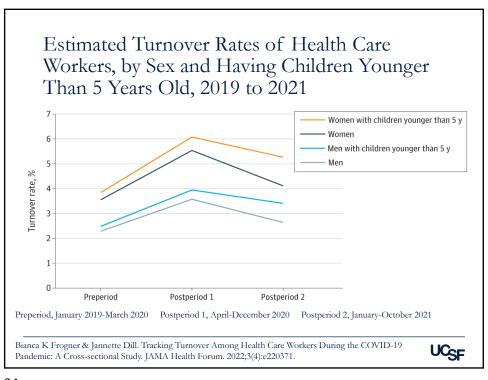




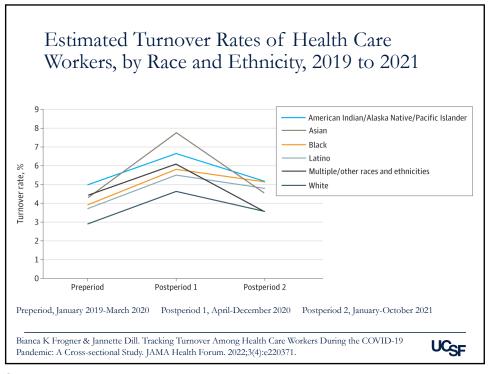












Healthcare workforce shortages: A pre-pandemic view UCSF







Does it seem like we always have shortages of physicians and nurses?

- Interest groups have reasons to like shortages
 - · More money for medical and nursing schools
 - · Higher pay
- But there may be some truth
 - · Baby boomers aging
 - · Smaller subsequent generations
 - · Residency funding has not increased
 - · Immigration of nurses and doctors may drop

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The range of the problem

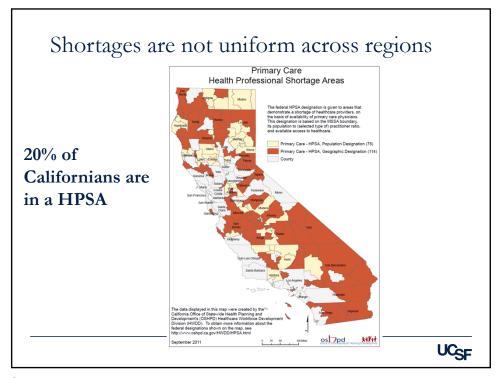
- We hear that there are fewer health workers than "needed" for delivering key health services
- But we also hear there are too many health workers, providing too much health care
- Beyond numbers, other key health workforce issues are critical
 - · Geographic distribution
 - Primary care / Specialty mix
 - Productivity
 - · Quality of care
 - · Other health care providers

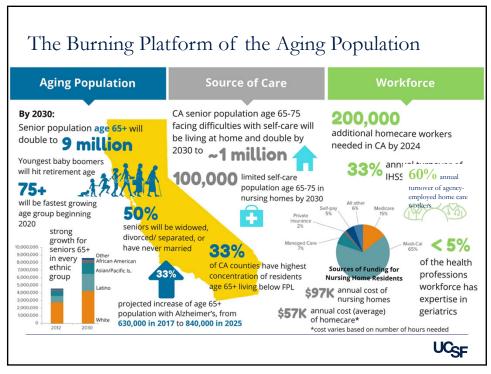














Costs of shortages and turnover

- Productivity losses due to instability in the workforce
- Premiums paid to temporary staff
- Costs of recruitment
- Losses when beds/clinics are closed, patients are deferred
- Expense of overtime pay
- Training and orientation costs
- Patient safety failures when understaffed





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A traditional way of thinking about the supply of health professionals...

Education
And Training
Programs



Health Care Facilities and Offices

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Problems with the traditional approach

- Ignores important behavioral characteristics of
 - Health workers (supply side)
 - Employers (demand side)
- Health workers respond to economic incentives that are unrelated to health care needs of the population
- *Employers* respond to economic, social, political incentives unrelated to health care needs of the population

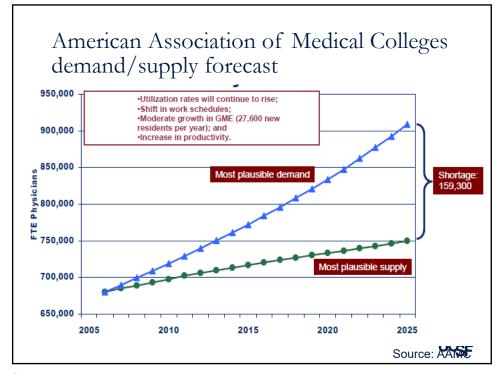


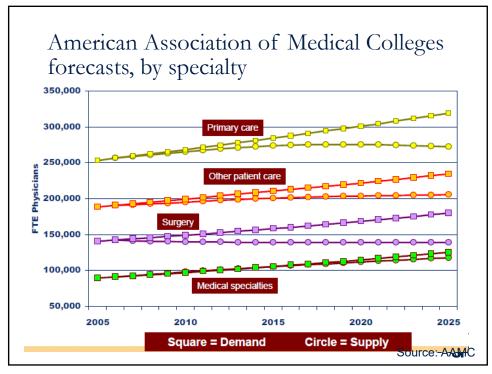
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Deep dive on shortages in the physician workforce









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Conflicting reports of shortage

- Supply varies widely across regions
- Little evidence that more physicians = better health outcomes
- In the past, expanded medical education has produced more specialists
- Lots of evidence of physician-induced demand

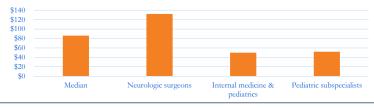


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Wage differences: specialists vs. primary care

- Primary care doctors earn much less than specialists
- Annals of Internal Medicine, 10/25/10
 - · Median \$86/hour
 - Neurologic surgeons \$132/hour
 - Internal medicine & pediatrics \$50/hour
 - Pediatric subspecialists \$52/hour



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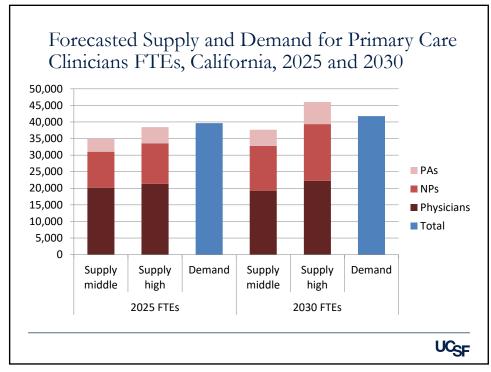


Why are earning so different?

- Medicare: reimbursement by "relative value units" (RVUs)
 - Updating process favors increases to procedures
- Most private insurers follow Medicare payment structure
- → Incentives are to do more procedures and fewer "evaluation and management" visits...

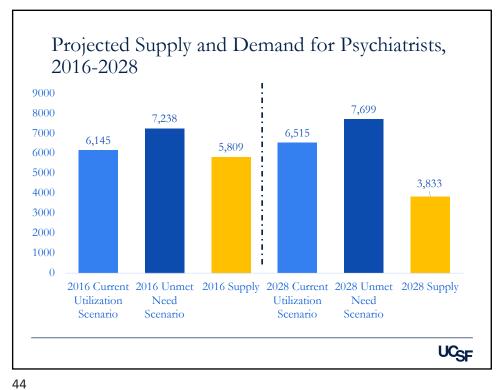
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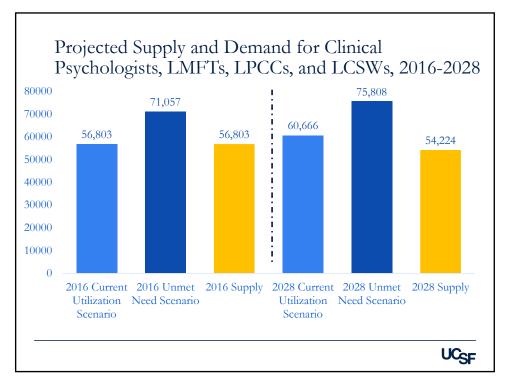


	2025 203					
	Demand	Supply	Gap	Demand	Supply	Gap
Statewide	39,645	34,909	-11.9%	41,759	37,656	-9.8%
Greater Bay Area	8,987	8,646	-3.8%	9,525	9,302	-2.3%
Sacramento, Sierra, and Northern	3,793	3,419	-9.8%	4,010	3,763	-6.2%
Central Valley & Central Coast	6,149	4,998	-18.7%	6,535	5,387	-17.6%
Los Angeles, Orange, Inland Empire	17,169	15,005	-12.6%	17,985	16,348	-9.1%
Southern Border	3,563	2,973	-16.6%	3,727	3,092	-17.0%
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Deep dive on shortages in the nursing workforce UCSF

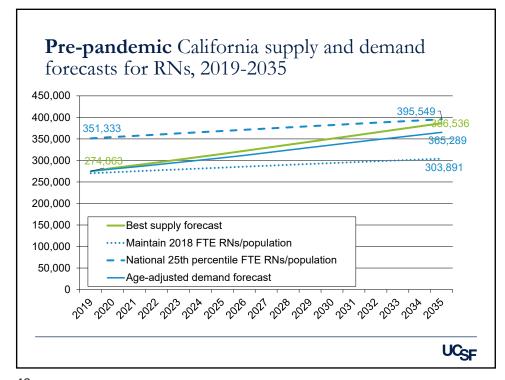
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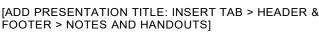


Nursing Labor Markets: Cycles of Shortage and Surplus

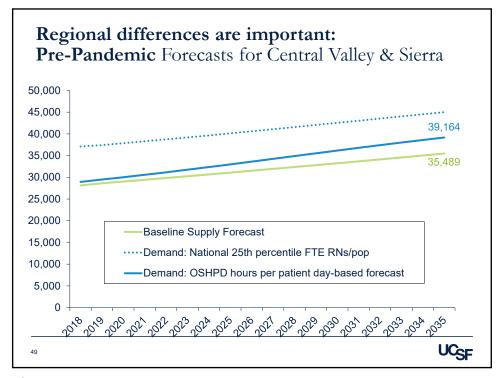
- Since WW2, there have been cycles of nursing shortages
 - · Cycles have been studied by policymakers and economists
- Recent history of shortage cycles
 - Shortage ~1988-1992
 - Surplus ~ 1993-1997
 - Shortage ~ 1998-2008 (longest one, perhaps ever)
 - Surplus ~ 2009-2013?
 - Shortage?? 2014-2019
 - Terrible shortage??? 2020-future??

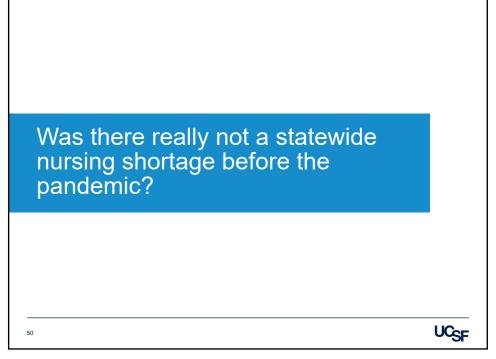
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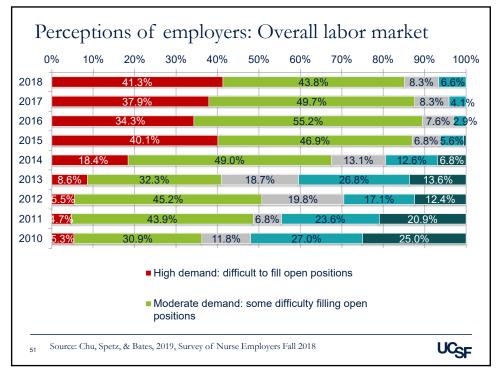


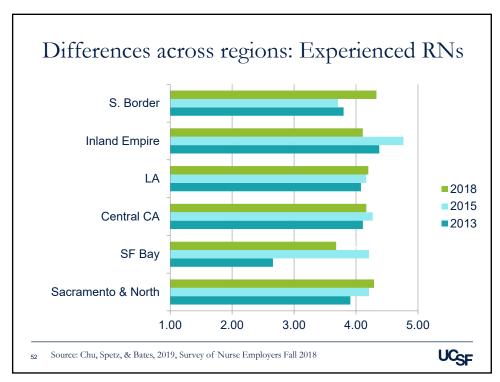




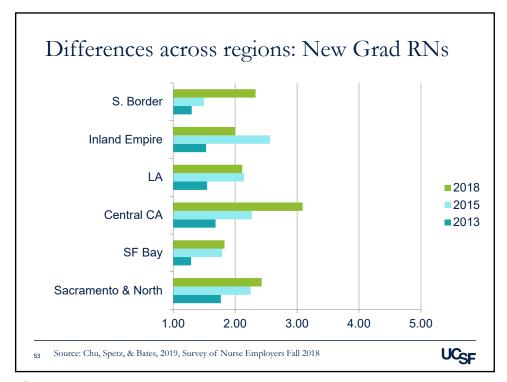


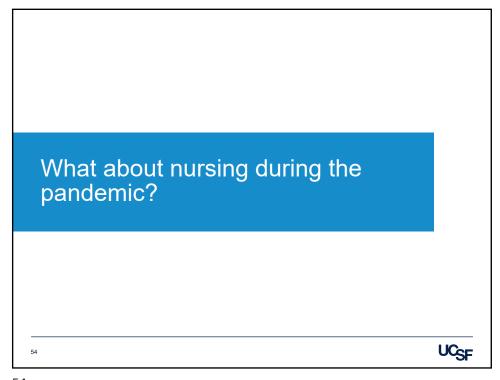
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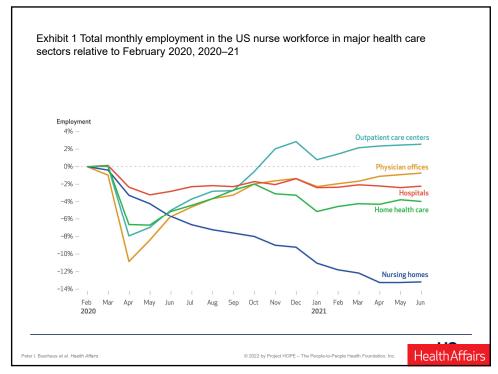


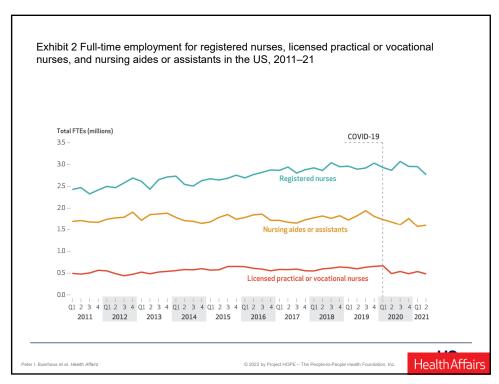


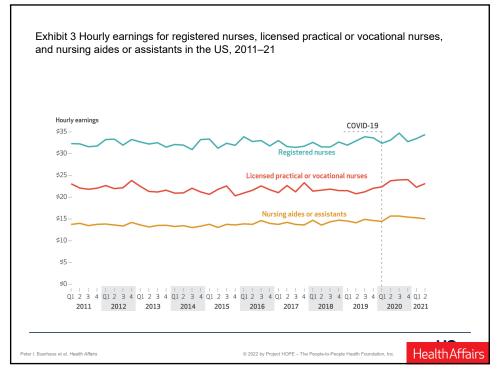


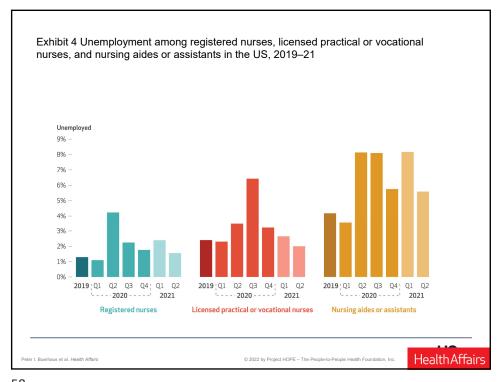




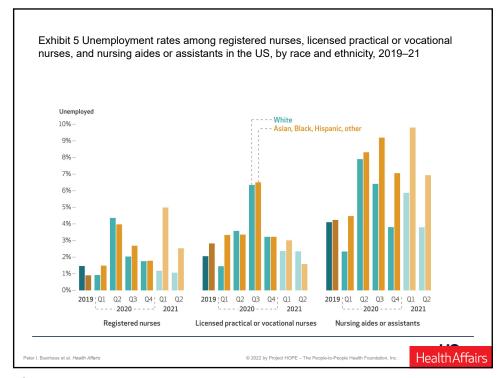


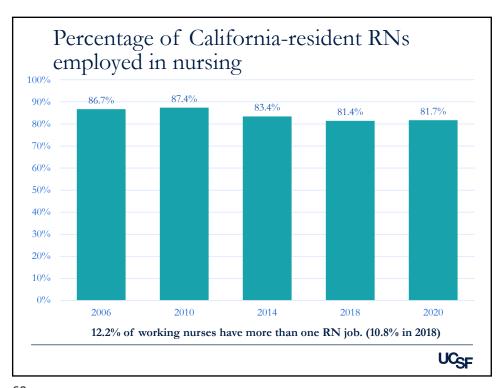




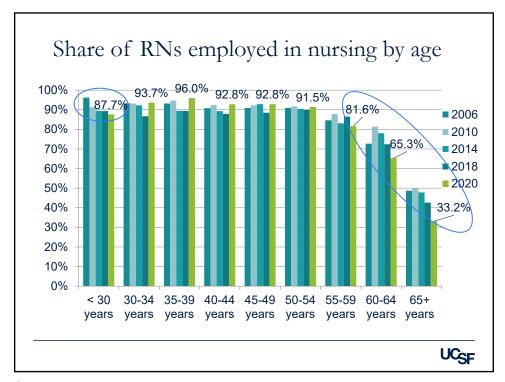


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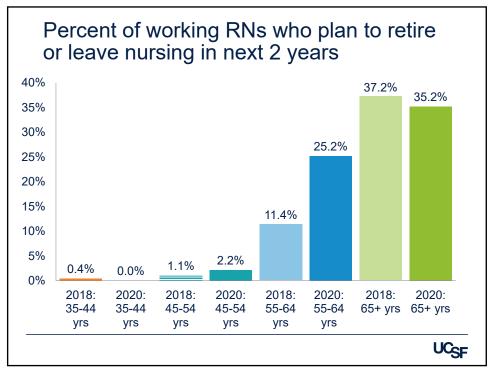


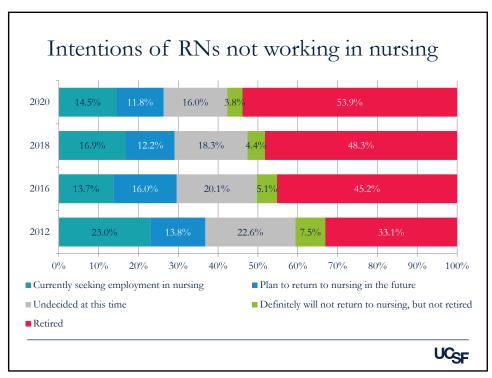


Hours usually worked 1	per week		
		_	
	2012	2018	2020
Average number of hours	36.0	36.8	33.6
Working full-time	60.3%	60.2%	53.0%
Working part-time	21.8%	18.4%	26.8%
Working, unknown hours	3.0%	2.8%	1.7%
Not working	14.9%	18.6%	18.5%
Average hours, acute hospital		36.5	32.7
Average hours, SNF		36.3	37.1
Average hours, home health		41.0	37.5
Average hours, clinic/office		38.5	34.0

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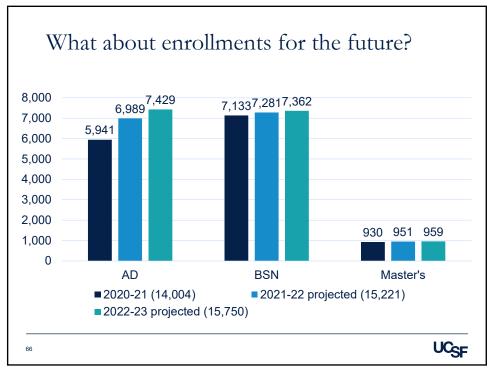
What is happening in RN education?

BRN Survey of California Nursing Schools, 2020-2021	2018-19 new enrollment	2019-20 new enrollment	2020-21 new enrollment	Change 2018-19 to 2020-21
Spaces available	14,897	15,204	14,368	-3.6%
Total enrollments	15,150	15,007	14,004	-7.6%
Associate degree enrollments	7,014	6,852	5,941	-15.3%
Bachelor's degree enrollments	7,266	7,242	7,133	-1.8%
Master's degree enrollments	870	913	930	6.9%
Public college/university enrollments	8,103	7,944	6,866	-15.3%
Private college/university enrollments	7,047	7,063	7,138	1.3%

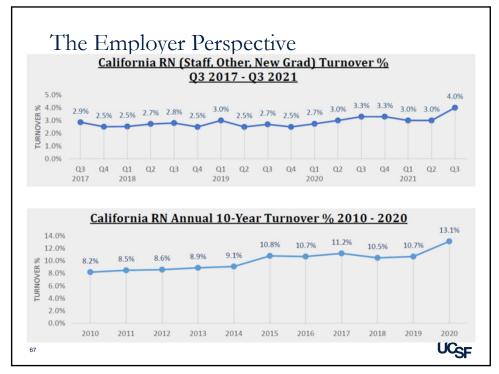
- Reasons for program enrollment declines:
 - Admitted students did not enroll
 - Unable to secure clinical placements
 - Insufficient faculty
 - Skipped a cohort or decreased size of cohort
- Concerns about safety of students/faculty in clinical settings



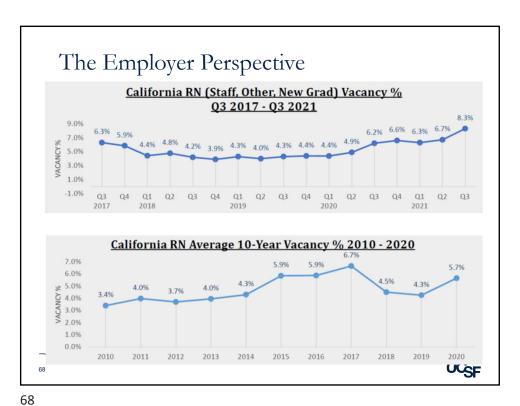
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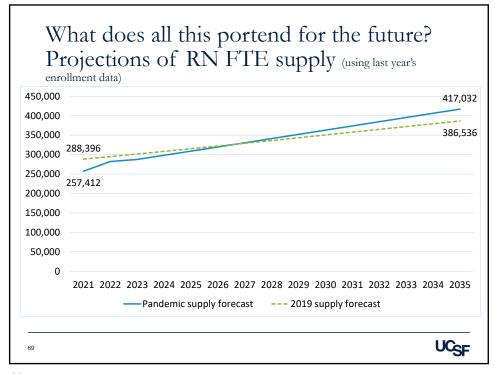


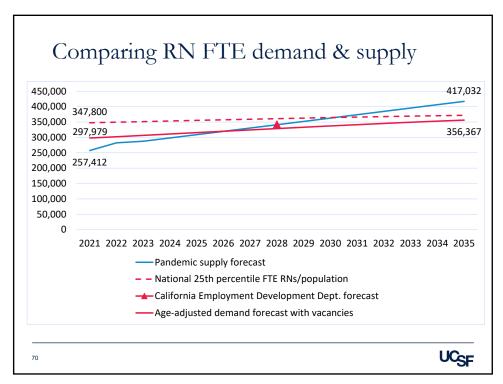
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How big is the gap?

Year	Pandemic supply forecast	Age- adjusted demand with vacancies	Gap between supply and demand	Percentage gap
2021	257,412	297,979	40,567	13.6%
2026	319,598	319,696	98	0.0%
2031	373,695	341,365	-32,330	-9.5%

We estimate that ~8,500 RNs were looking for jobs in late 2020. 30% of these were <30 years old



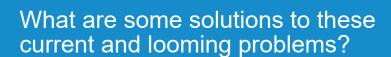
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Implications for the future

- RNs changed their employment during the pandemic
 - · Older RNs left or plan to leave
 - · Younger RNs were more likely to be unemployed
- Over the next 5 years, we will have a shortage of RNs in California
 - The shortage will dissipate as new graduates enter the labor market
- We need to retain our new graduates
 - Comparisons of graduations to numbers of new licenses between 2018 and 2020 indicate that we may be losing 1000 new younger graduates per year
- Employers need to address burnout and stress to retain their RNs







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Policy strategies: Education

- Need to target education growth to areas with greatest shortage
 - Nursing faculty vacancy rate: 8.1% in 2016-17
 - 19.7% of nursing faculty were age 61 years and older
- Partner with employers for health professions education
 - · Offer courses and programs in the areas of shortage
 - Expand partnerships in all types of care settings
 - Recruit students likely to work in underserved areas
 - · Look for opportunities for distance learning
 - New Mexico
 - Bakersfield College
 - Include employers in education program content discussions





Policy strategies: Employers

- Be proactive in supporting the needs of healthcare workers
 - Encourage people to take their vacations and sick leave
 - · Addressing stress and burnout is not just offering an app
- Support new graduate hiring & education
 - Less expensive than a shortage
 - Don't rely long-term on travelers
- Provide clinical faculty
 - Explore joint appointments with nearby education programs



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Policy strategies: Employers

- Invite faculty to sit on practice committees
- Flexible scheduling for employees pursuing advanced degrees
- Invest in transition to practice programs
- Strategically plan to retain staff who are approaching retirement
 - Flexible opportunities to contribute to healthcare





Policy strategies: State leaders

- Policymakers: Maintain education capacity
 - · Target growth to shortage regions
 - · Do not let enrollments drop
 - Shifts from some areas to others may be needed
- Support scholarship programs
- Support non-traditional clinical placement settings and use of simulation
- Support distance learning strategies
- Support community colleges and public education

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COMMISSION

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California Future Health Workforce Commission

- Charged to:
 - Develop a strategic plan for building the future CA health workforce (2030).
 - Seek commitments for effective plan implementation.
 - Build on, align with, and leverage relevant public and private efforts for greater collective innovation, efficiency, and impact.
 - Act as an expert commission with state government participation.
 - Educate and engage key public and private stakeholders to support success.





Top 10 Priority Recommendations

- 1.1: Expand and scale pipeline programs to recruit and prepare students from underrepresented and low-income backgrounds for health careers.
- 1.2: Recruit and support college students from underrepresented regions and backgrounds to pursue health careers.
- 1.3: Support scholarships for qualified students who pursue priority health professions and serve in underserved communities.



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Top 10 Priority Recommendations (cont.)

- **2.1:** Sustain and expand the PRIME program across UC campuses.
- **2.2:** Expand the number of primary care physician residency positions by 20%.
- **2.3:** Recruit and train students from rural areas to practice in community health centers in their home region.





Top 10 Priority Recommendations (cont.)

- 3.1: Maximize the role of nurse practitioners as part of the care team to help fill gaps in primary care.
- 3.2: Establish and scale a universal home care worker family of jobs with career ladders and associated training.
- 3.3: Develop a psychiatric nurse practitioner program that recruits from and trains providers to serve in underserved rural and urban communities.
- 3.4: Scale the engagement of community health workers, promotores, and peer providers.



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Questions? Comments?

Joanne.Spetz@ucsf.edu

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