Nursing Demand and Supply in California: Current State & Strategies for the Future

June 25, 2019
Today’s presenters

- Joanne Spetz
  - Professor, Philip R. Lee Institute for Health Policy Studies, University of California, San Francisco

- Teri Hollingsworth
  - Vice President, Human Resources Services, Hospital Association of Southern California

- Garrett Chan
  - President & CEO, HealthImpact; Associate Adjunct Professor, UCSF

- David Auerbach
  - Director, Research and Cost Trends for Interdisciplinary Health Workforce Studies, Montana State University
Goals for this webinar

- Learn how Chief Nursing Officers perceive the current RN labor market
- Track the latest hospital vacancy and turnover data
- Understand how recently-graduated nurses are faring

- Answer the question: Is there an RN shortage in California?
  - Will there be one in the future?

- Assess next steps for ensuring an adequate nurse supply
What is going on in our RN labor market?

U.S. still headed for nurse shortage

The U.S. Is Running Out of Nurses

The country has experienced nursing shortages for decades, but an aging population means the problem is about to get much worse. 

Rebecca Grant | Febr 3, 2016 | Health

California is on the brink of a severe nursing crisis. The state's population of adults 65+ years is projected to grow ~90%—or by 4M people—by 2030.¹

+4 million seniors

+193k

California’s existing nursing shortage will become the largest in the nation by 2030 unless ~193,000 new nurses are added.²
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Survey of Chief Nursing Officers

- Fielded by UCSF
- Web-based survey with option to return paper survey via fax or email
- Surveys conducted fall 2010 – fall 2018
- Data received for 118 hospitals in 2018 (25.8%)
### Perceptions of employers: Overall labor market

<table>
<thead>
<tr>
<th>Year</th>
<th>High demand</th>
<th>Moderate demand</th>
<th>Balance</th>
<th>Less than supply</th>
<th>Much less than supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>41.3%</td>
<td>43.8%</td>
<td>8.3%</td>
<td>6.6%</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>37.9%</td>
<td>49.7%</td>
<td>8.3%</td>
<td>4.1%</td>
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</tr>
<tr>
<td>2016</td>
<td>34.3%</td>
<td>55.2%</td>
<td>7.6%</td>
<td>2.9%</td>
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</tr>
<tr>
<td>2015</td>
<td>40.1%</td>
<td>46.9%</td>
<td>6.8%</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>18.4%</td>
<td>49.0%</td>
<td>13.1%</td>
<td>12.6%</td>
<td>6.8%</td>
</tr>
<tr>
<td>2013</td>
<td>8.6%</td>
<td>32.3%</td>
<td>18.7%</td>
<td>26.8%</td>
<td>13.6%</td>
</tr>
<tr>
<td>2012</td>
<td>5.5%</td>
<td>45.2%</td>
<td>19.8%</td>
<td>17.1%</td>
<td>12.4%</td>
</tr>
<tr>
<td>2011</td>
<td>4.7%</td>
<td>43.9%</td>
<td>6.8%</td>
<td>23.6%</td>
<td>20.9%</td>
</tr>
<tr>
<td>2010</td>
<td>5.3%</td>
<td>30.9%</td>
<td>11.8%</td>
<td>27.0%</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

- **Blue**: High demand: difficult to fill open positions
- **Light Turquoise**: Moderate demand: some difficulty filling open positions
- **Green**: Demand is in balance with supply
- **Orange**: Demand is less than supply available
- **Red**: Demand is much less than supply available

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Differences across regions: Overall RN labor market

<table>
<thead>
<tr>
<th>Region</th>
<th>2018</th>
<th>2015</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Border</td>
<td>4.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inland Empire</td>
<td>4.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>4.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central CA</td>
<td>4.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF Bay</td>
<td>3.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sacramento &amp; North</td>
<td>4.24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Differences across regions: Experienced RNs

<table>
<thead>
<tr>
<th>Region</th>
<th>2018</th>
<th>2015</th>
<th>2013</th>
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<tr>
<td>S. Border</td>
<td>4.33</td>
<td>4.29</td>
<td>4.17</td>
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<tr>
<td>Inland Empire</td>
<td>4.11</td>
<td>4.20</td>
<td>4.17</td>
</tr>
<tr>
<td>LA</td>
<td>4.20</td>
<td>4.17</td>
<td>4.17</td>
</tr>
<tr>
<td>Central CA</td>
<td>4.17</td>
<td>4.00</td>
<td>3.68</td>
</tr>
<tr>
<td>SF Bay</td>
<td>3.68</td>
<td>4.29</td>
<td></td>
</tr>
<tr>
<td>Sacramento &amp; North</td>
<td>4.29</td>
<td></td>
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</table>

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Differences across regions: New Grad RNs

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Rural vs. urban perceptions

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Employment of temporary/traveling RNs – Change in the past year

Traveling nurse
- Decreased employment: 37.5%
- No change: 35.2%
- Increased employment: 27.3%

Temporary (agency nurse)
- Decreased employment: 29.7%
- No change: 40.5%
- Increased employment: 29.7%

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Recruitment of internationally-educated RNs

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Hiring requirements and preferences

- No specific requirements
  - 2018: 18.1%
  - 2015: 21.2%
  - 2013: 54.3%
  - 2011: 69.5%

- Baccalaureate degree preferred
  - 2018: 54.3%
  - 2015: 69.5%

- Baccalaureate degree required
  - 2018: 18.1%
  - 2013: 4.6%

- Minimum experience requirement
  - 2018: 48.3%
  - 2011: 52.3%

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Overall hiring expectations for the next year

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Hiring expectations for new graduates

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Reasons for expected increase in new graduate hiring

- High vacancies
- Anticipating more retirements
- Developing programs to mentor new graduates
- Improved relationships with nursing schools, including collaborations on residency programs

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
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RN Vacancies, HASC Survey, 2010 - 2018

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Quarterly hiring of full-time personnel, HASC Survey, Q3 2013 – Q3 2018

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
Quarterly turnover of full-time personnel, HASC Survey, Fall 2013 - Fall 2018

Source: Chu, Spetz, & Bates, 2019, Survey of Nurse Employers Fall 2018 [report coming this summer]
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2017-2018 Newly Licensed Nurse Survey

- Sample Size: Random 50% of 10,600 = 5,300 survey mailed
- RNs newly licensed between September 2017 and August 2018
- Response Rate: 21.5%

Source: HealthImpact, 2019, Survey of Recent RN Graduates
New Graduate Employment Rate

Source: HealthImpact, 2019, Survey of Recent RN Graduates
Some Regional Differences

LA County: 82%
SF Bay: 70%
Orange/Inland: 85%
N CA: 73%
San Diego/Imperial: 74%
Central Valley: 88%
Sacramento: 79%
N Sac Valley: 71%
Central Coast: 91%

Source: HealthImpact, 2019, Survey of Recent RN Graduates
Employment rate varies by education

Source: HealthImpact, 2019, Survey of Recent RN Graduates
Employment Locations

- Hospital Inpatient: 59.1%
- Hospital Outpatient: 14.9%
- Community: 5.8%
- LTC/Rehab: 10.0%
- B/H Health: 2.4%
- Home Health: 2.2%
- Corrections: 1.8%
- Other: 3.8%

Source: HealthImpact, 2019, Survey of Recent RN Graduates
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California RN graduations per year

- 2003-04: 6,158
- 2005-06: 6,158
- 2007-08: 7,852
- 2009-10: 11,512
- 2011-12: 11,512
- 2013-14: 11,890
- 2015-16: 11,890
- 2017-18: 11,242
- 2019-20*: 11,242
- 2021-22*: 11,242

Source: California Board of Registered Nursing, Annual Schools Reports
Changes that affect the 2019 projections

- More RNs requesting endorsement into California
  - Nearly all have out-of-state addresses – will they move here?
  - Based “best” forecast on newly-licensed RNs with California addresses 2016-2018 (subtracting new grads)
    – A bit lower than last projection model, probably too low
- Small increase in international graduates (603 in 2016, 851 in 2018)
  - International grads are a little older
- Fewer nurses moving out of California (small change)
- Slightly lower employment rates for most age groups
Supply & demand forecasts for regions, 2035:
Adjusted for commuting, APRNs, temps

Source: Spetz, Regional Forecasts, published by HealthImpact, December 2018
California Registered Nurse supply and forecast
Notes

  - Total N = 63,013
- Workforce figures are in full-time equivalents, based on reported usual hours worked and a 40-hour workweek
- RNs analyzed between the ages of 23 and 64 (~96% of FTE workforce)
Total % growth in the RN workforce per capita by region: 2015-2030* and 2017-2030 (update)

-5% 0% 5% 10% 15% 20% 25% 30% 35% 40% 45%

CT MA ME NH RI VT
NJ NY PA IL IN MI
OH WI MO NE ND SD IA KS MN
DE DC FL GA MD NC SC VA WV AL KY MS TN
AR LA OK TX
AZ CO MT NV NM UT WY ID
AK CA HI OR WA

New England Mid Atlantic East North Central West North Central South Atlantic East South Central West South Central Mountain Pacific

*per cap growth 2015-30 % per cap growth 2017-2030 (update)

California has had a surge in young RNs

Analysis and forecast model based data from the Current Population Survey and American Community Survey
CA 2030 RN forecast increased from 316,000 to 348,000 after inclusion of data for 2015-2017

Analysis and forecast model based data from the Current Population Survey and American Community Survey
## Comparing projections

<table>
<thead>
<tr>
<th></th>
<th>2030 Supply</th>
<th>2030 Demand</th>
<th>2030 Gap</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auerbach et al. (2019)</td>
<td>348,487</td>
<td></td>
<td></td>
<td>Cohort supply model, CPS &amp; ACS 1979-2017</td>
</tr>
<tr>
<td>Spetz (2019)</td>
<td>323,258</td>
<td>336,107</td>
<td>-12,849</td>
<td>(-3.8%) Stock-and-flow supply, population-adjusted straight-line demand</td>
</tr>
<tr>
<td>HRSA (2017)</td>
<td>343,400</td>
<td>387,900</td>
<td>-44,500</td>
<td>(-11.5%) Microsimulation model based on national data</td>
</tr>
<tr>
<td>California EDD (2026 projection)</td>
<td>327,800</td>
<td></td>
<td></td>
<td>Derived from national multi-industry, multi-occupation model</td>
</tr>
<tr>
<td>Zhang et al. (2017)</td>
<td></td>
<td></td>
<td>-141,348</td>
<td>(-51.5%) Cohort supply model, CPS 2006-2015 Demand model based on projected health spending and national RNs-per-capita</td>
</tr>
</tbody>
</table>
Summary: What is happening in California?

- Supply and demand are balanced statewide
  - There are important regional differences, with some areas facing surplus and others facing shortage
  - Education expansion needs to be regionally targeted
- Employers want experienced & specialty RNs
  - Are they turning overseas for this?
  - Does this explain the rise in endorsements from other states?
- More employers are requiring bachelor’s degrees
  - Primarily in urban areas
  - Still less than 20% of hospitals
Outcomes and Recommendations for Perioperative Nursing Specialty Courses: An Academic Practice Partnership Project funded by the South Bay WIB as an Incumbent Worker “Pilot”

Teri Hollingsworth, Lisa Mitchell
Judee Berg, MS, RN, FACHE, Carolyn Orlowski, MSN, RN,
Mary Lynne Knighten, DNP, RN, NEA-BC

www.hasc.org
Academic Practice Partnership Project Outcomes

- Seventeen nurses filled critical vacancies
  - Five new grad RNs and one unlicensed new grad
  - 100% pass rate at $\geq 80\%$ on AORN Periop 101 exam
  - AORN 101 skills checklists and QSEN Competencies
  - One hospital provided promotions and salary increases

- Qualitative Outcomes Interview tool developed

- One CNO completed the ROI calculation

- Recommendations for “model curriculum”, “ideal” Periop course, and outcomes metrics
Check out the UCSF website!
http://rnworkforce.ucsf.edu
Interactive data displays

From fall of 2010-2016, CNOs were asked to describe the RN labor market in their area using a rank order scale of 1 to 5,
where:

5=High demand for RNs
3=Balanced demand/supply
1=Low demand for RNs

Regions
Statewide

Overall demand for RNs

Demand for experienced RNs
Also go to the BRN website

Forms & Publications

www.m.ca.gov/forms/reports.shtml

California Board of Registered Nursing

Reports

- School Reports
- Biennial RN Survey and Forecasting Reports
- Other RN-Specific Surveys and Reports
- Sunset Review Reports

School Reports

- 2015-2016 Pre-Licensure Nursing Program Annual School Report: Data Summary and Historical Trend Analysis
Questions?

Thoughts?

Ideas?

Perspectives?