Supply & Demand of Registered Nurses in the Southern Border region

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September 2018

Tales of a nursing shortage…

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U.S. still headed for nurse shortage

HEALTH NEWS   OCTOBER 19, 2017 / 10:12 PM / 5 MONTHS AGO

Short on staff: Nursing crisis strains U.S. hospitals

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 worse

REBECCA GRANT | FEB 3, 2016 | HEALTH

COLUMNISTS   77,973 SHARES

Is US headed for worst nursing shortage?

By: Howard Gerber - @inquirerdotnet   INQUIRER.net US Bureau / 01:51 AM November 30, 2017

Forecasting future RN supply & demand

- **National forecasts:** market is balanced
  - National Center for Health Workforce Analysis, 2017
    - National surplus of 293,800 RNs by 2030 (8.2%)
    - Assumes supply = demand in 2014
  - Auerbach et al. 2015 – 128,000 RN shortage by 2025 (4%)
- **California**
  - NCHWA 2017 – 44,500 short (11.5%)
  - Auerbach et al. 2017 – only 0.7% per capita supply growth in Pacific region
  - Spetz 2017 – no shortage overall, but skills & regional imbalance

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Perceptions of employers: Overall labor market
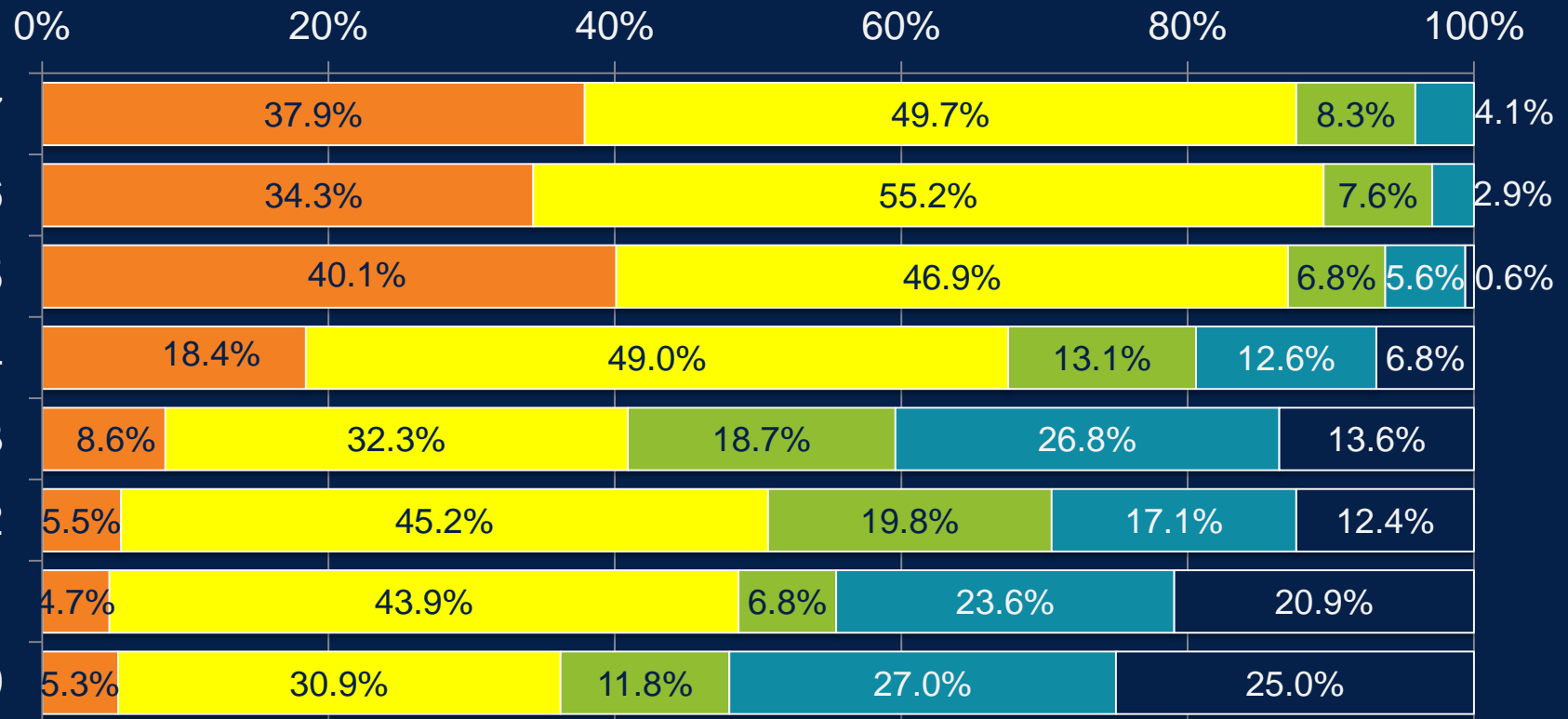
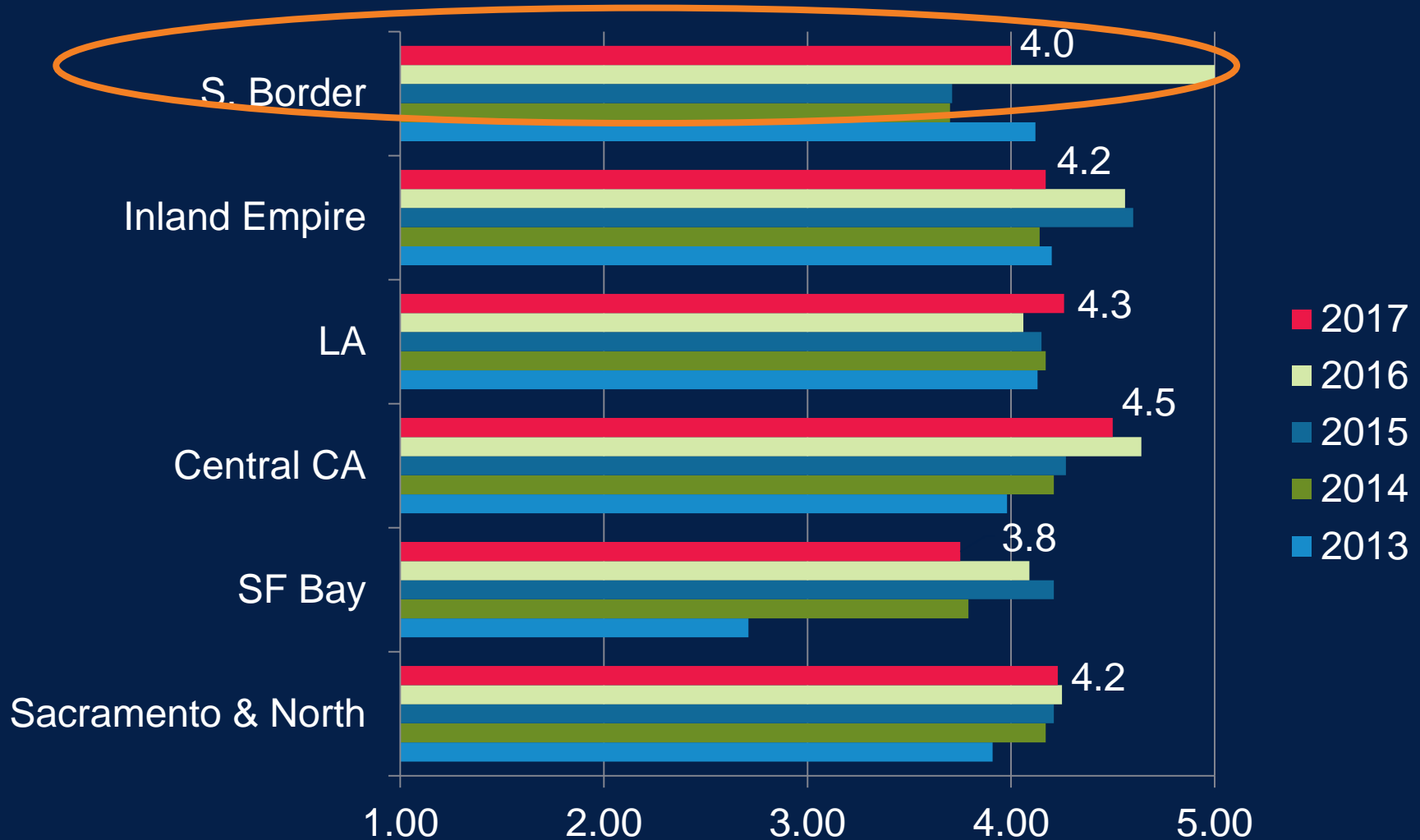| Year	High demand: difficult to fill open positions	Moderate demand: some difficulty filling open positions	Demand is in balance with supply	Demand is less than supply available	Demand is much less than supply available
2017	37.9%	49.7%	8.3%	4.1%	
2016	34.3%	55.2%	7.6%	2.9%	
2015	40.1%	46.9%	6.8%	5.6%	0.6%
2014	18.4%	49.0%	13.1%	12.6%	6.8%
2013	8.6%	32.3%	18.7%	26.8%	13.6%
2012	5.5%	45.2%	19.8%	17.1%	12.4%
2011	4.7%	43.9%	6.8%	23.6%	20.9%
2010	5.3%	30.9%	11.8%	27.0%	25.0%

Legend:
- High demand: difficult to fill open positions
- Moderate demand: some difficulty filling open positions
- Demand is in balance with supply
- Demand is less than supply available
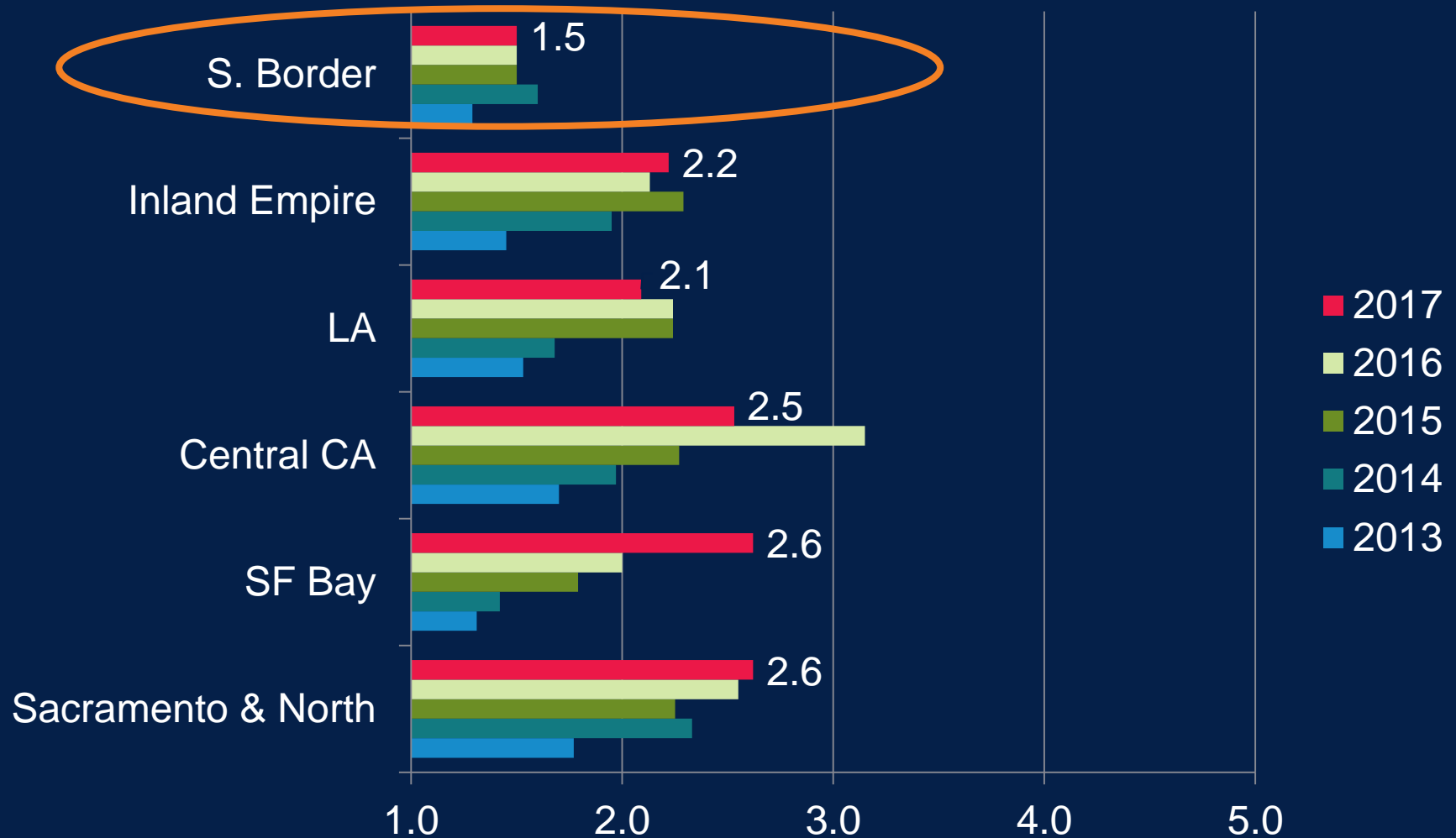- Demand is much less than supply available

Source: Chu & Spetz, 2018, Survey of Nurse Employers Fall 2017

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Differences across regions:
Overall RN labor market

Legend:
- 2017
- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010

Regions and 2017 values:
- S. Border: 4.7
- Inland Empire: 4.1
- LA: 4.1
- Central CA: 4.3
- SF Bay: 4.3
- Sacramento & North: 4.2

X-axis: 1.0, 2.0, 3.0, 4.0, 5.0

Source: Chu & Spetz, 2018, Survey of Nurse Employers Fall 2017

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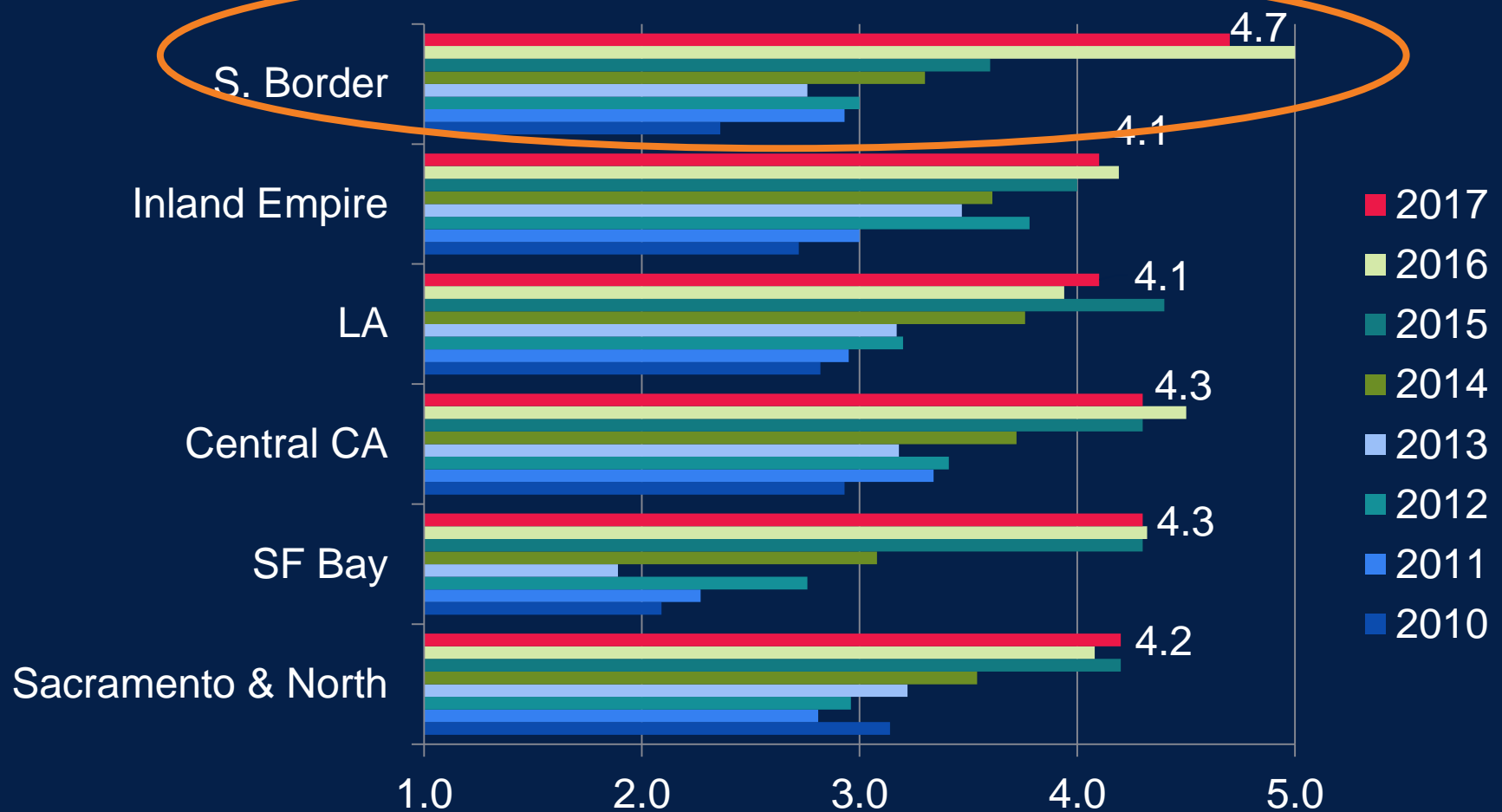
Differences across regions: Experienced RNs

Source: Chu & Spetz, 2018, Survey of Nurse Employers Fall 2017

Differences across regions: New Grad RNs

Source: Chu & Spetz, 2018, Survey of Nurse Employers Fall 2017

New Graduate Employment

Source: HealthImpact, 2018, Survey of Recent RN Graduates
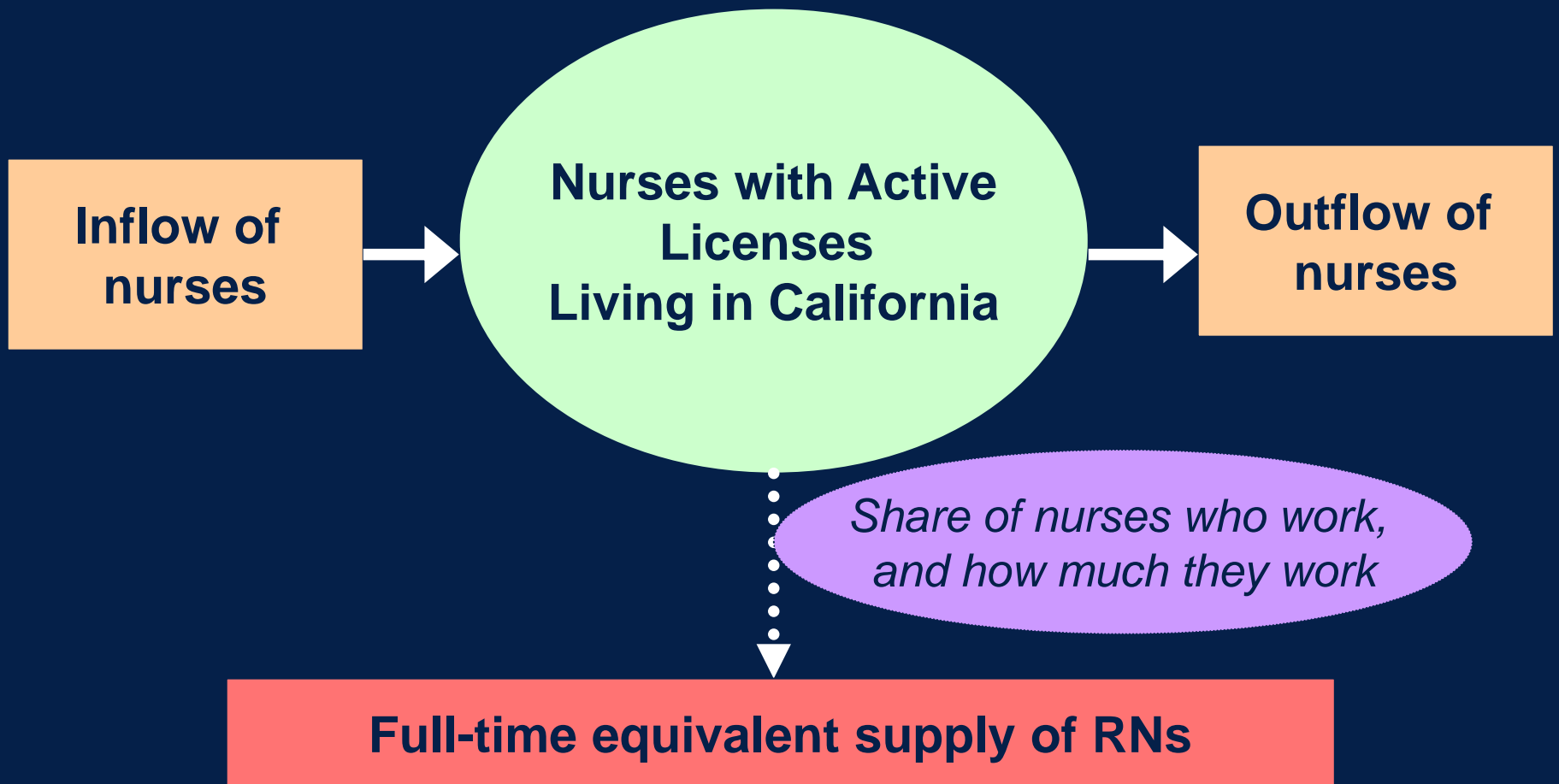
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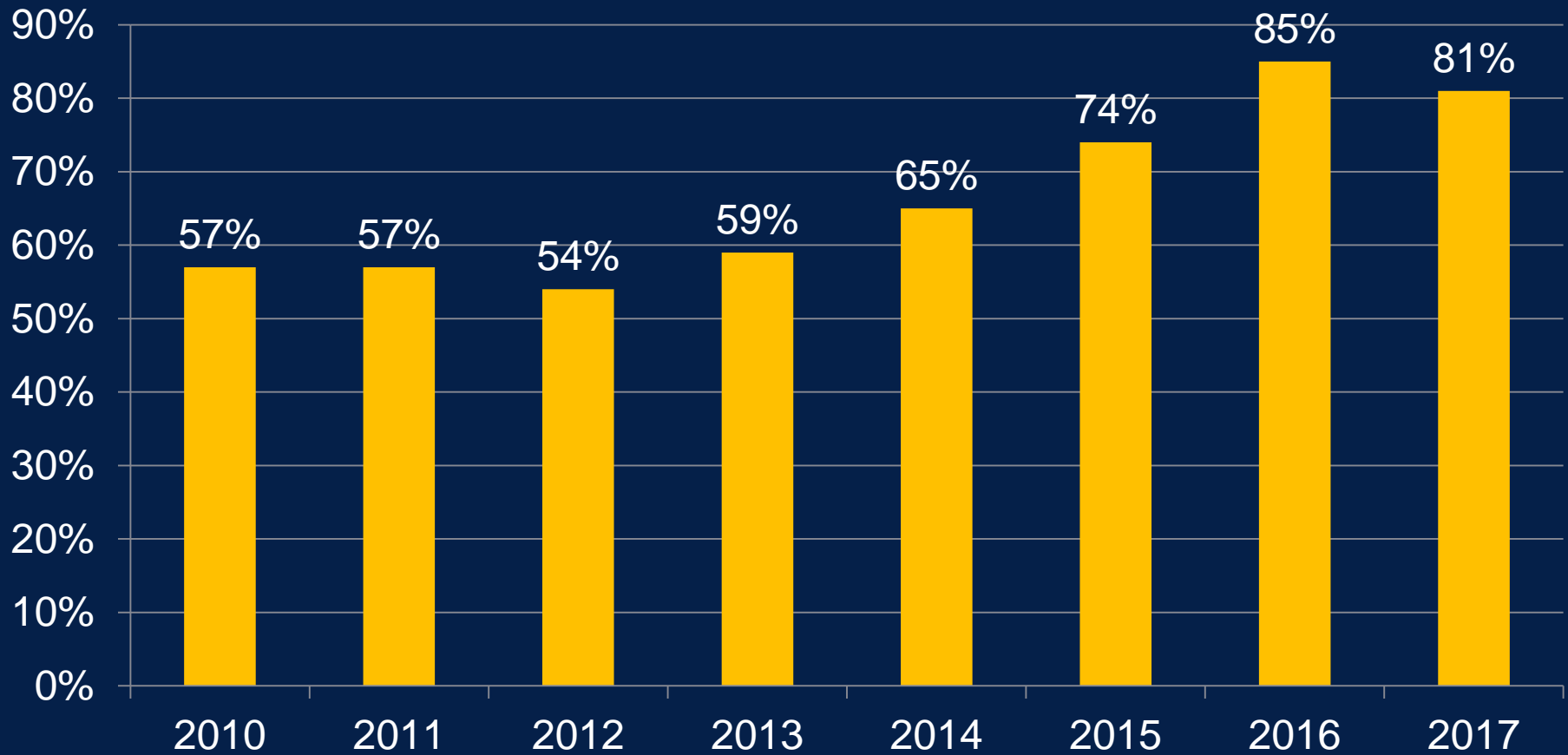
Regional Differences in New Grad Employment

Source: HealthImpact, 2018, Survey of Recent RN Graduates

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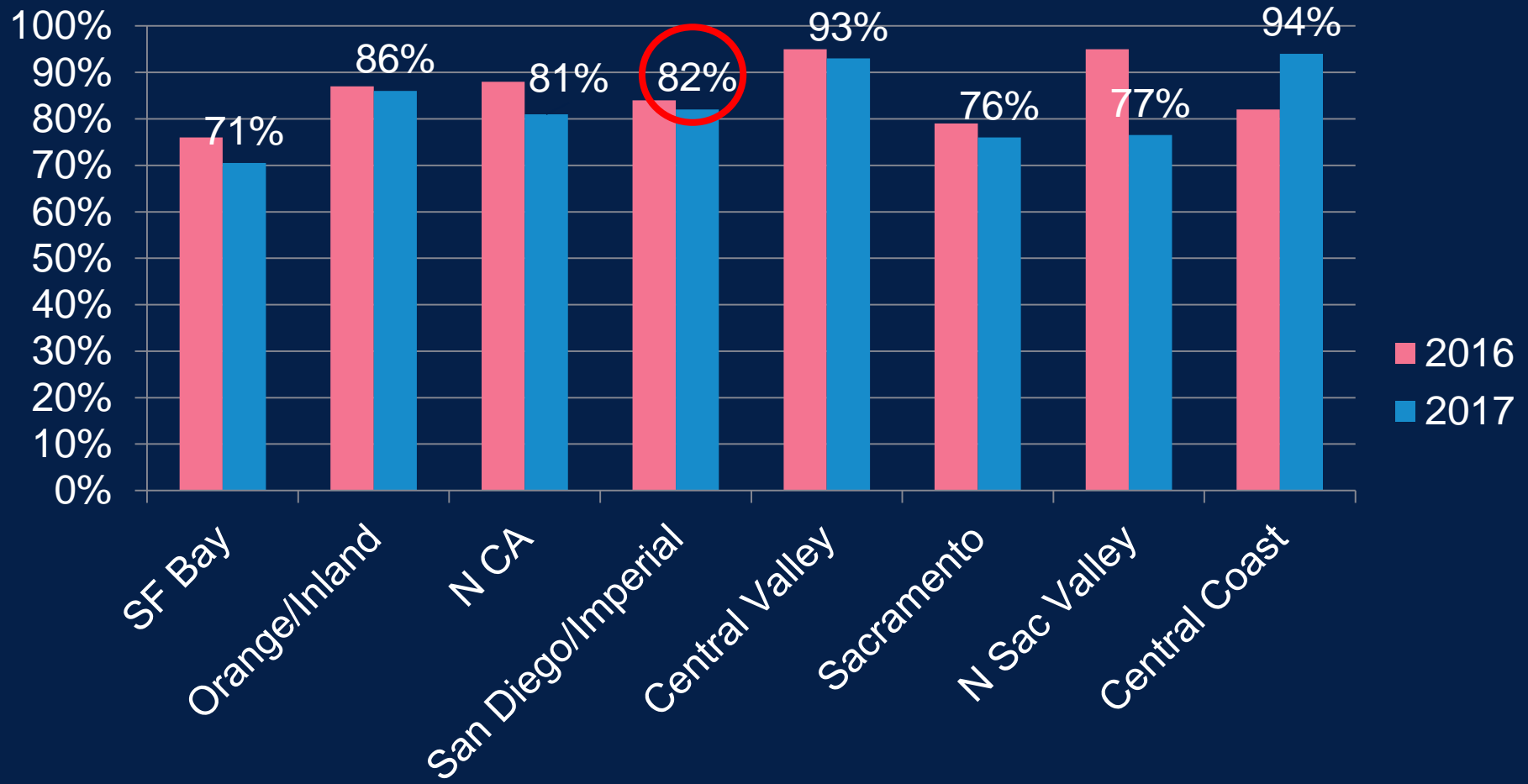
A model of the supply of RNs

Inflow of nurses

Nurses with Active Licenses Living in California

Outflow of nurses

Share of nurses who work, and how much they work
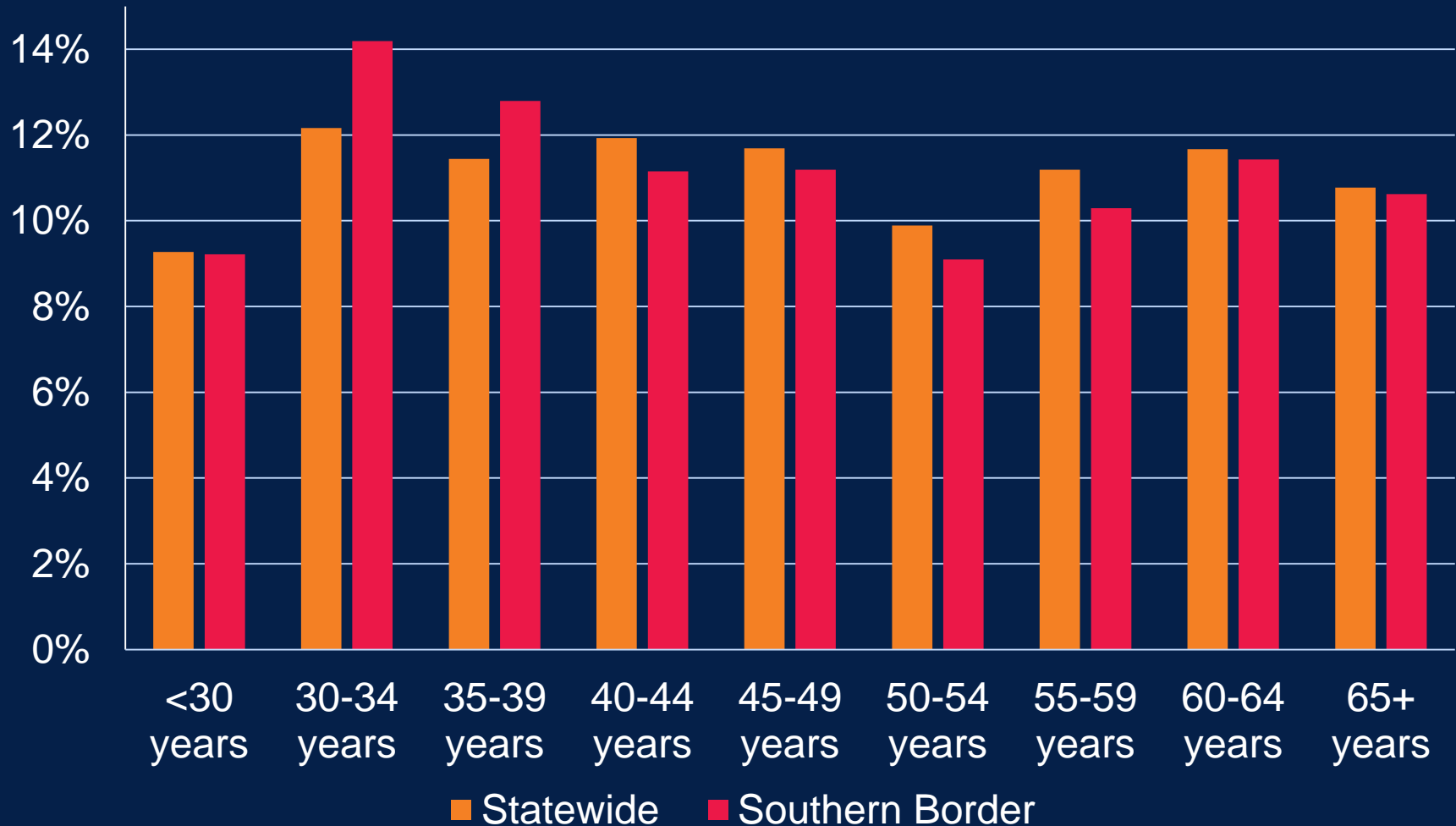
Full-time equivalent supply of RNs

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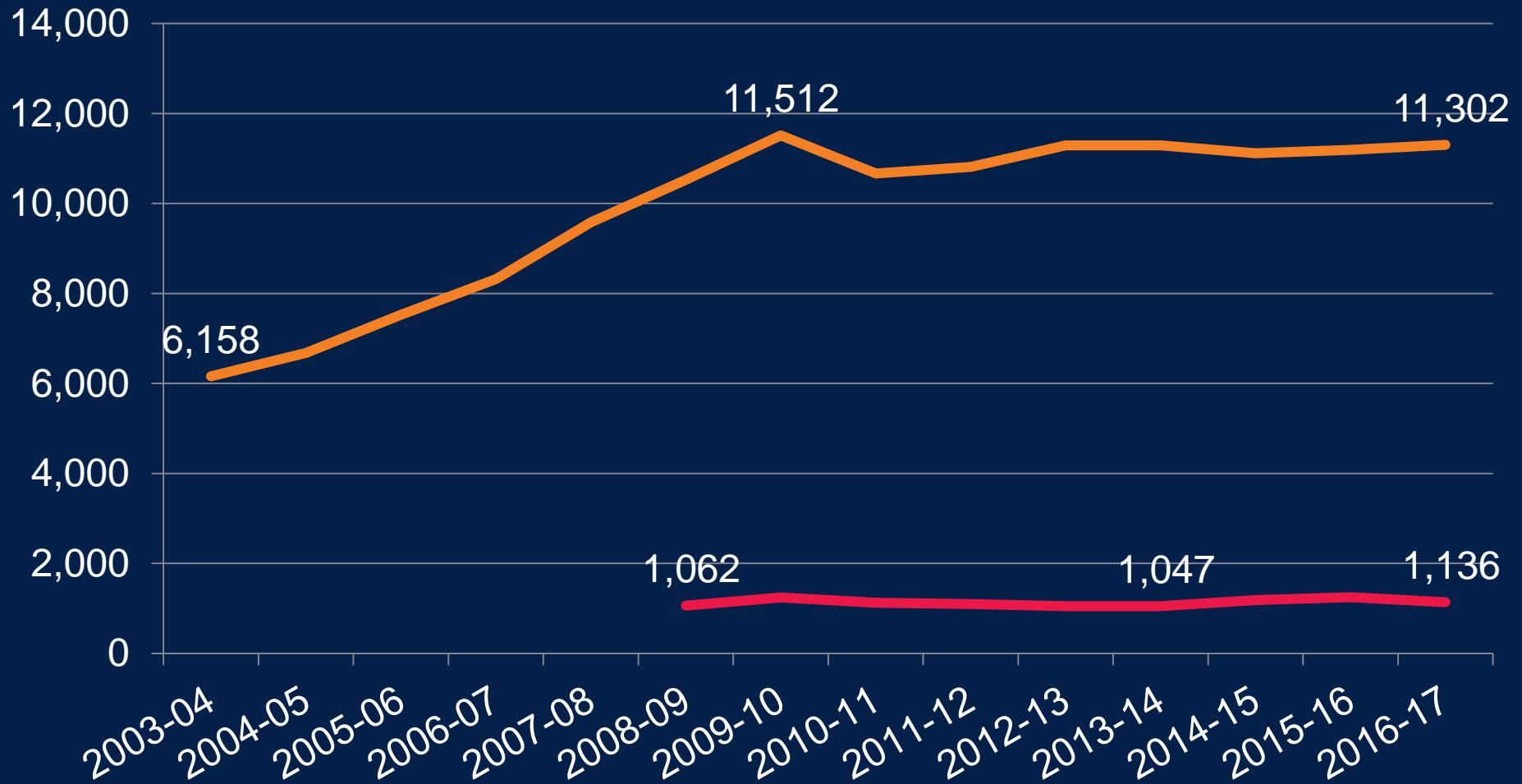# Forecasting demand is harder

- Number of nurses per capita

  - What is the target?

    - National average?

    - Some arbitrary benchmark?

    - Estimates of how many providers are needed to provide XYZ?

- Demand-based models can be based on economic demand models

  - Easier said than done….

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Age distribution of licensed RNs

Statewide ■ Southern Border

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RN graduations per year

14,000

12,000   11,512   11,302

10,000

8,000

6,000   6,158

4,000

2,000   1,062   1,047   1,136

0

2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16 2016-17

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California RN supply and demand forecasts, 2017-2035

Legend:
- **Best Supply Forecast**
- **Low Supply Forecast**
- **National 25th percentile FTE RNs/population**
- **National average FTE RNs/population**
- **OSHPD hours per patient day-based forecast**
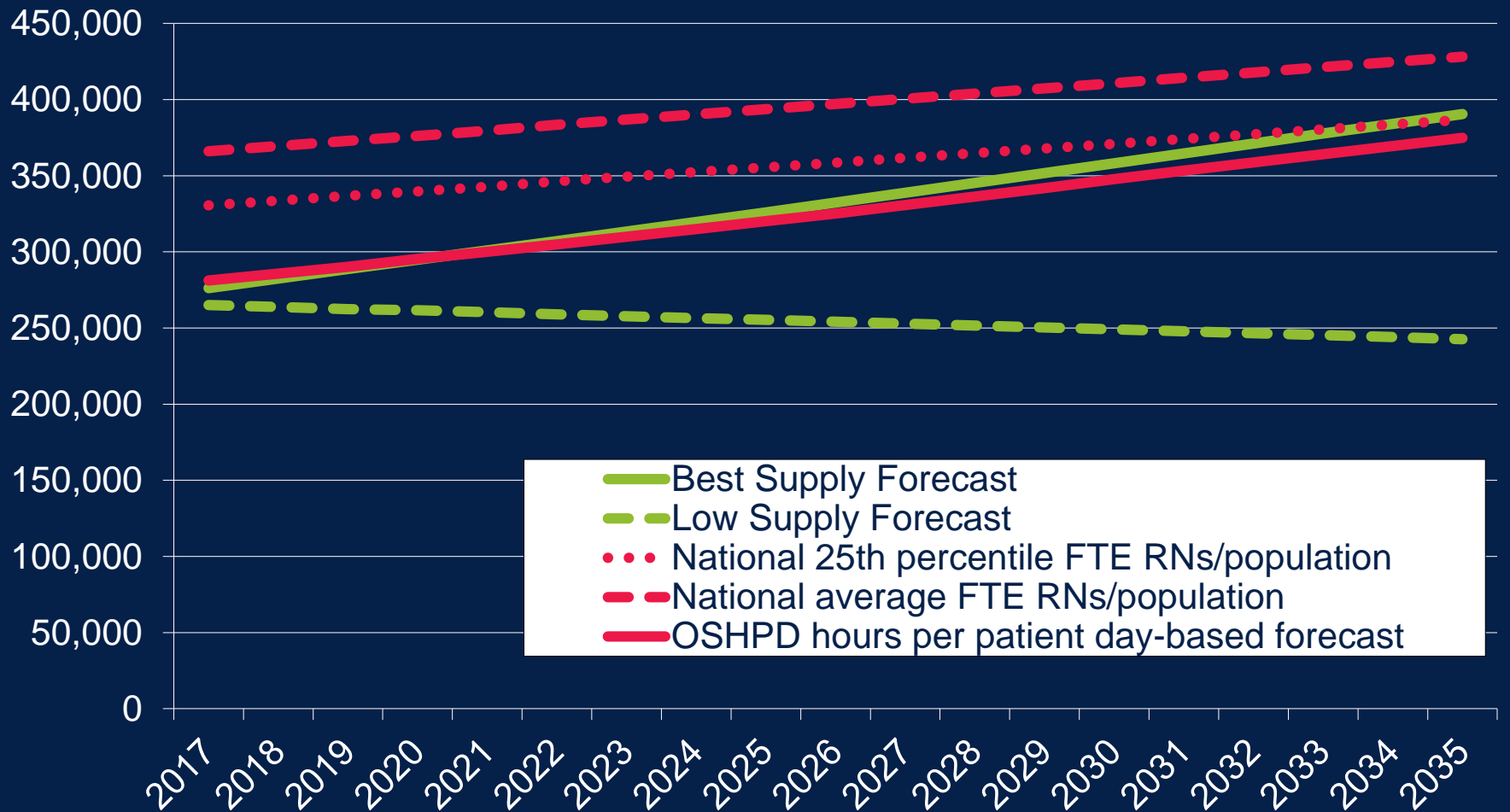
Regional differences are important
Supply & demand forecasts for Southern Border

Legend:
- Baseline Supply Forecast
- Low Supply Forecast
- Demand: National 25th percentile FTE RNs/pop
- Demand: National average FTE RNs/pop
- Demand: OSHPD hours per patient day-based forecast

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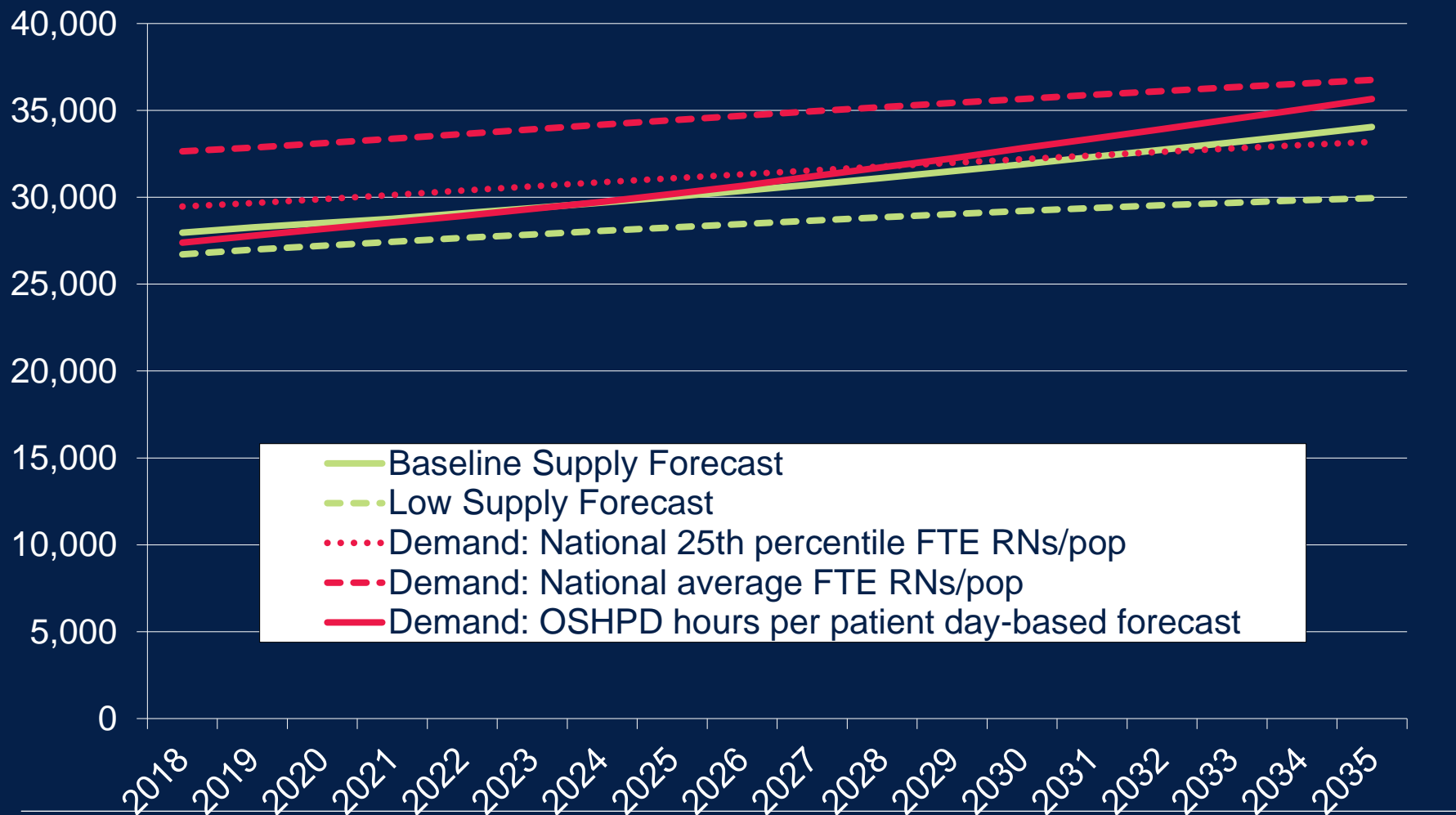
Statewide graduations are expected to hold steady

	New enrollment	Projected enrollment from 1 yr	Projected enrollment from 2 yrs	Graduations
2014-2015	13,318	12,162	13,347	11,119
2015-2016	13,152	13,110	12,177	11,191
2016-2017		13,862	13,236	10,761
2017-2018			14,219	10,627
2018-2019				11,200
2019-2020				11,489

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Border region graduations are steady

	New enrollment	Projected enrollment from 1 yr	Projected enrollment from 2 yrs	Graduations
2015-2016	1,354	1,350	1,322	1,250
2016-2017	1,394	1,405	1,345	1,136
2017-2018		1,406	1,405	1,210
2018-2019			1,406	1,246
2019-2020				1,257
2020-2021				1,257

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Inflows and outflows for the Border region

- Inflows = ~2,150 now

  - Graduations: ~1,200 per year

  - Migration into the region: 478 per year 2016-2018

  - Endorsements from other states: 475 in 2017

- Outflows = ~2,351 now

  - Migration out of the region: 1,139 per year 2016-2018

    – Concentrated among younger nurses

  - Lapsed licenses: 1,212 per year 2016-2018

- Conclusion: Almost perfectly balanced labor market!!

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How do we move forward?

San Diego has a very well-balanced labor market

Population growth projected & education is keeping up

Employers indicate there are too many new graduates – but the region needs them & they want to stay

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