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# Why are registered nurses retiring later?

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# Anticipated RN Retirements

- The Baby Boom generation of RNs is expected to retire soon
  - Oldest Baby Boom RNs reached 65 years in 2010
  - The Baby Boom retirements will remove a large share of RNs from the US workforce
- But... retirements do not seem to be hitting
  - Recession impact
  - General trend toward delayed retirements
    - Auerbach, Buerhaus, Staiger 2014

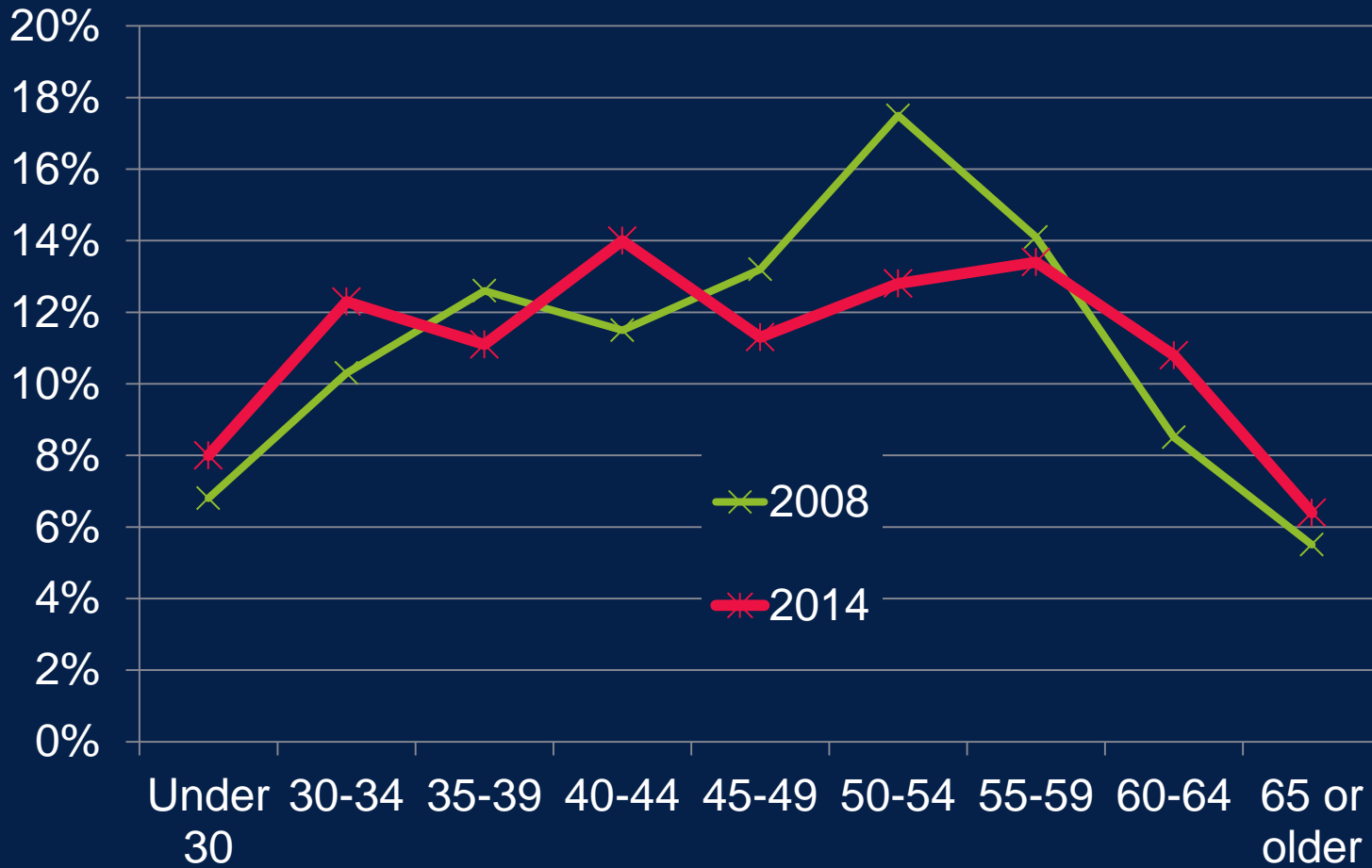
# Auerbach, Buerhaus, & Staiger findings

- 1969–90: for a group of RNs working at age fifty:
  - 47 percent were still working at age 62
  - 9 percent were working at age 69
- 1991–2012:
  - 74 percent were still working at age 62
  - 24 percent were working at age 69
- Extended nursing careers by 2.5 years after age fifty
- Many RNs tend to shift out of hospital settings as they age

# This study...

- Examines predictors of retirement of RNs
  - Not being employed
  - Planning to retire within 5 years
- Data: California Board of Registered Nursing biennial RNs surveys
  - 2008, 2014
- Methods:
  - Descriptive statistics
  - Probit regressions

# Ages of working RNs



# California's Licensed RNs: 55 years and older

	2008	2014		2008	2014
<b>Age group</b>			<b>Race/ethnicity</b>		
55-58 years	36.2%	32.6%	Black	4.0%	4.5%
59-61 years	20.6%	21.7%	White	72.0%	70.2%
62-64 years	16.3%	15.5%	Other/Mixed	2.8%	3.4%
65-67 years	10.7%	12.1%	Filipino	11.1%	14.4%
68-72 years	10.5%	10.6%	Other Asian/PI	6.2%	4.7%
73 years+	5.8%	7.5%	Hispanic	4.0%	2.8%
<b>Gender</b>			<b>Marital status</b>		
Female	90.7%	92.0%	Single	5.5%	8.5%
Male	9.3%	8.0%	Married/Partner	63.5%	65.8%
			Sep/Wid/Div	31.0%	25.7%

# California's License RNs: 55 years and older

	2008	2014		2008	2014
<b>Kids at home</b>			Care for adult	23.6%	27.0%
No Kids	75.7%	67.2%	<b>Highest RN ed</b>		
1 @home	17.7%	21.4%	Diploma	19.7%	9.3%
2 @Home	4.9%	6.9%	Associate	32.5%	29.6%
3 @home	1.2%	4.1%	Bachelor's	33.0%	38.6%
4+ @home	0.5%	0.4%	Master's	14.4%	18.8%
			Doctorate	0.4%	3.7%
Has kids <13 only	0.8%	2.5%	International Ed	19.1%	
Has kids >13 only	22.3%	87.7%			
Has kids 13+/-	1.2%	9.8%			

# California's Licensed RNs: 55 years and older

	2008	2014		2008	2014
<b>Work setting</b>			<b>Job satisfaction</b>		
Hospital	45.1%	58.2%	Very dissatisfied	2.0%	1.0%
SNF/rehab	7.1%	6.5%	Dissatisfied	6.3%	4.8%
Mental health	3.1%	3.9%	Neutral	7.7%	7.5%
Ambulatory	13.2%	11.0%	Satisfied	42.8%	49.8%
Public Health	4.4%	2.3%	Very satisfied	41.3%	36.9%
Case managem.	4.4%	2.4%	<b>Satisfaction with profession</b>		
Home health	4.4%	4.9%	Very dissatisfied	2.9%	2.9%
Other	18.4%	10.8%	Dissatisfied	10.4%	5.6%
Has retirement benefit	87.3%	86.2%	Neutral	14.7%	8.6%
			Satisfied	48.7%	38.5%
			Very satisfied	23.5%	44.5%



# Cross-tabs: Employment in nursing (Bold if significantly different)

	2008	2014		2008	2014
Overall rate	74.7%	72.6%	<b>Race/ethnicity**</b>		
<b>Age group</b>			Black	<b>72.8%</b>	<b>67.1%</b>
55-58 years	<b>87.5%</b>	<b>87.4%</b>	White	<b>70.5%</b>	<b>70.6%</b>
59-61 years	<b>82.2%</b>	<b>85.1%</b>	Other/Mixed	<b>89.5%</b>	<b>71.9%</b>
62-64 years	<b>71.4%</b>	<b>71.7%</b>	Filipino	<b>88.6%</b>	<b>83.4%</b>
65-67 years	<b>71.1%</b>	<b>60.0%</b>	Other Asian/PI	<b>86.8%</b>	<b>70.4%</b>
68-72 years	<b>45.9%</b>	<b>34.0%</b>	Hispanic	<b>83.2%</b>	<b>76.5%</b>
73 years+	<b>36.9%</b>	<b>48.6%</b>	<b>Marital status</b>		
<b>Gender</b>			Single	<b>76.2%</b>	75.2%
Female	74.4%	72.4%	Married/Partner	<b>73.6%</b>	71.0%
Male	78.5%	76.7%	Sep/Divorced	<b>82.4%</b>	76.6%
			Widowed	<b>65.7%</b>	

# Cross-tabs: Employment in nursing (Bold if significantly different)

	2008	2014		2008	2014
<b>Kids at home</b>			Care for adult	78.4%	71.7%
No Kids	<b>70.5%</b>	<b>67.2%</b>	<b>Highest RN ed</b>		
1 @home	<b>87.1%</b>	<b>82.1%</b>	Diploma	<b>68.3%</b>	62.5%
2 @Home	<b>91.1%</b>	<b>80.5%</b>	Associate	<b>79.3%</b>	73.1%
3 @home	<b>97.7%</b>	<b>90.1%</b>	Bachelor's	<b>73.3%</b>	77.1%
4+ @home	<b>67.5%</b>	<b>100.0%</b>	Master's	<b>78.3%</b>	67.7%
			Doctorate	<b>100.0%</b>	71.9%
Has kids <13 only	93.0%	69.9%	International Ed	<b>81.2%</b>	79.2%
Has kids >13 only	<b>88.2%</b>	75.5%			
Has kids 13+/-	82.5%	83.6%			

# Cross-tabs: Employment in nursing (Bold if significantly different)

	2008	2014		2008	2014
<b>Non-nursing household income</b>			<b>Satisfaction with profession</b>		
\$0	<b>100.0%</b>	<b>100.0%</b>	Very dissatisfied	<b>74.8%</b>	65.6%
\$1-30K	<b>81.8%</b>	<b>85.6%</b>	Dissatisfied	<b>58.7%</b>	55.2%
\$31-45K	<b>72.2%</b>	<b>70.0%</b>	Neutral	<b>71.4%</b>	65.0%
\$46-60K	<b>71.8%</b>	<b>74.0%</b>	Satisfied	<b>79.1%</b>	74.2%
\$61-75K	<b>69.6%</b>	<b>64.6%</b>	Very satisfied	<b>81.1%</b>	75.4%
\$76-100K	<b>63.1%</b>	<b>66.8%</b>	<b>County unemployment rate</b>		
\$101K+	<b>48.9%</b>	<b>41.1%</b>	Bottom quartile	71.8%	72.0%
			2 <sup>nd</sup> quartile	76.3%	69.5%
			3 <sup>rd</sup> quartile	75.5%	68.1%
			Top quartile	76.9%	69.6%

# Probit of employment

## Probability derivatives (bold if $p < 0.05$ )

	2008	2014		2008	2014
59-61 years	-0.041	-0.036	HHI \$31-75K	<b>-0.375</b>	-0.400
62-64 years	<b>-0.131</b>	<b>-0.158</b>	HHI \$76K+	<b>-0.575</b>	-0.611
65-67 years	<b>-0.214</b>	<b>-0.310</b>	Kid <13	0.082	0.099
68-72 years	<b>-0.438</b>	<b>-0.342</b>	Adult care	-0.017	-0.011
73 years +	<b>-0.538</b>	<b>-0.502</b>	MSN/PhD	0.005	<b>0.046</b>
Non-White	0.045	-0.022	IEN	-0.037	-0.026
Married	<b>0.164</b>	<b>0.219</b>	Unemp rate	0.016	<b>-0.014</b>
			Num obs	1,549	1,837
			Pseudo R2	0.2698	0.2850

# Intentions of Employed RNs

	Within 2 years (2014)		Within 5 years (2014)		Within 5 years (2008)	
	Plan to reduce hours	Plan to retire	Plan to reduce hours	Plan to retire	Plan to reduce hours	Plan to retire
All RNs	10.9%	15.5%	15.4%	41.8%	17.9%	40.4%
55-58	8.1%	2.5%	15.6%	20.5%	23.0%	15.8%
59-61	11.8%	9.7%	14.6%	45.3%	17.4%	40.5%
62-64	13.7%	22.4%	16.4%	56.1%	15.5%	59.8%
65-67	12.8%	34.4%	16.9%	53.6%	16.8%	60.6%
68-72	17.4%	31.5%	16.6%	49.2%	7.8%	71.5%
73+	6.0%	24.5%	10.1%	69.5%	6.2%	68.7%

# Probit of planning to retire in 5 years

## Probability derivatives (bold if $p < 0.05$ )

	2008	2014		2008	2014
59-61 years	<b>0.297</b>	<b>0.269</b>	Adult care	0.067	-0.048
62-64 years	<b>0.502</b>	<b>0.398</b>	MSN/PhD	0.034	-0.013
65-67 years	<b>0.524</b>	<b>0.413</b>	IEN	-0.093	0.053
68-72 years	<b>0.597</b>	<b>0.351</b>	Hospital	0.038	0.013
73 years +	<b>0.544</b>	<b>0.330</b>	Staff nurse	-0.042	-0.010
Non-White	-0.002	0.049	Retirement ben.	0.060	0.003
Married	0.053	<b>0.166</b>	Unemp rate	-0.002	0.002
HHI \$31-75K	<i>0.081</i>	-0.056			
HHI \$76K+	<b>0.167</b>	-0.031	Num obs	925	1,092
Kid <13	-0.070	-0.049	Pseudo R2	0.1786	0.0956

# Changing characteristics of older RNs

- Between 2008 and 2014, California's older RNs...
  - Became more likely to have kids over 18 years at home
  - Became more likely to have a bachelor's or graduate degree
  - Became more likely to work in hospitals
  - Became more satisfied with the profession

# Retirement patterns

- Employment declines with age
  - Employment rates of RNs ages 65+ dropped 2008-2014
  - Employment of all racial/ethnic groups dropped, except Whites
- Employment increases with presence of kids
- Employment drops with non-nursing household income
- Intentions...
  - A higher share of RNs 55-61 years old plans to retire in the next 5 years now than in 2008
  - A lower share of RNs 65-72 years old plans to retire in the next 5 years



# Controlling for other variables...

- Employment probability:
  - Drops with age
  - Rises with marriage
  - Dropped with household income in 2008 but NOT in 2014
  - Rises with a graduate degree in 2014
- Planned retirement within 5 years:
  - Higher if married in 2014
  - Was higher with household income in 2008, but NOT 2014
  - Models have low predictive value