The impact of hospital unions on nurse wages in the United States

Joanne Spetz, Ph.D.
University of California, San Francisco

Michael Ash, Ph.D.
University of Massachusetts at Amherst

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Union influence in health care is growing

- Nearly 21% of RNs were in unions in 2006
  - Unionization rate is 5 percentage points than for other US workers
- Increasing rate of unionization among health care workers
- Aggressive bargaining for contracts
- Efforts to change state and national policies
- Conflicts and competition between unions
What do unions do?

- Seek to divert employers’ net revenues (profits) to workers
  - Wages
  - Benefits
  - Working conditions
- Control employer behavior
  - Hiring
  - Firing
  - Layoffs
What do unions do?

- Maintain their position
  - Create solidarity among workers
  - Wages, benefits, working conditions
  - Public relations, public service, legal actions, advocacy
  - Reduced wage dispersion, increased sense of “fairness”
Cross-industry research finds...

- Unions are associated with higher wages and benefits
- Public sector unions have smaller wage premium
  - Is health care in the US public or private sector?
- Wage premium for unionization has declined over past 2 decades
  - Decline is smaller in health industry
A brief US history lesson

- Nationwide, industry-wide decline in private sector membership since 1950s
  - Increase in public sector membership (40% were unionized by 1986)
- Healthcare unions grew rapidly in 1970s
  - NLRB rules were extended to nonprofit sector
  - States passed laws that favored unions in public sector in 1970s and 1980s
Union growth in health care

- Healthcare union growth slowed in 1980s
  - NLRB began to determine bargaining units on a case-by-case basis
    - All hospital professionals were usually put in a single bargaining unit
- Resurgence of growth in early 1990s
  - New NLRB rules in 1989 that allow 8 separate groups of hospital employees to have units
  - Managed care growth & declines in working conditions spurred union growth
Putting this in context with RN shortages

- Cycles of shortage and surplus in nursing
  - Economic meaning of this is still unclear
- “Shortage” = late 1980s through ~1992
- “Surplus” = ~1993 - ~1997
- “Shortage” = ~1998 – present
- Wage growth comes about 2-3 years after “shortages” are identified
Hospital RN unions grew more after 1995

Unionization = ~18%

~21%
How do unions affect hospital RN wages?

- Research from 1970s and 1980s find union wage premia for RNs
- Some evidence that non-union RN wages are affected by union wages

- This study: Do unions affect the structure of wages?
Data and methods

- RNs identified by their self-reported occupation
- Hospital nurses identified by employment setting
- Number of observations: average=326/yr unionized, 1472/yr non-union RNs
  - No fewer than 233 union or 1133 non-union RNs
Data and methods

- Restricted sample to RNs who worked at least 20 hours per week
- Hourly wage computed
  - Usual weekly earnings divided by usual weekly hours
  - All wages adjusted for inflation to 2006 dollars
  - Deleted outliers (< minimum wage, >$100/hr)
- Education is self-reported, based on degrees received
## Characteristics of hospital RNs, CPS, 2000-2006

<table>
<thead>
<tr>
<th></th>
<th>Non-Union</th>
<th>Union</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hourly earnings</strong></td>
<td>$25.87 (0.10)</td>
<td>$29.55 (0.24)</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>91.8%</td>
<td>90.6%</td>
</tr>
<tr>
<td><strong>Immigrant</strong></td>
<td>11.8%</td>
<td>22.4%</td>
</tr>
<tr>
<td><strong>Urban residence</strong></td>
<td>82.5%</td>
<td>88.8%</td>
</tr>
<tr>
<td><strong>White</strong></td>
<td>79.6%</td>
<td>67.5%</td>
</tr>
<tr>
<td><strong>Assoc. Degree</strong></td>
<td>37.1%</td>
<td>33.6%</td>
</tr>
<tr>
<td><strong>Bachelor’s Deg.</strong></td>
<td>48.3%</td>
<td>51.1%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>41.6 (0.1)</td>
<td>43.0 (0.2)</td>
</tr>
</tbody>
</table>
A brief aside: Union wage premia over time, 1983-2006

Premium jumps after 1995

No region dummies

With region dummies
Wages for hospital RNs over time

- **Union wage**
- **Non-union wage**

**Median Real Wage**

- **Shortage period**
- **Surplus period**
- **NLRB rule eases unionization**
- **Shortage period**


$20

$30

$28

$26

$24

$22

$20
Estimating the effect of unions on wage dispersion, part 1

- Ordinary least squares estimates of wages
  - Dependent variable: log (hourly wages)
  - Explanatory variables:
    - Education
    - Potential experience (age - 6 - years of ed)
    - Citizenship, immigration (1994 onward only)
    - Race/ethnicity, gender
    - 18 regional dummies (9 census x urban/rural)
    - Time dummies
- Separate equations for union & non-union
Estimating the effect of unions on wage dispersion, part 2

- Examine residual wages from OLS regressions
  - Compare residuals for unionized RNs to non-union RNs
## Results, part 1 (OLS regression)

<table>
<thead>
<tr>
<th></th>
<th>Non-Union</th>
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</thead>
<tbody>
<tr>
<td>Female</td>
<td>-0.056**</td>
<td>-0.106**</td>
</tr>
<tr>
<td>Immigrant</td>
<td>-0.018</td>
<td>0.029</td>
</tr>
<tr>
<td>Black</td>
<td>-0.111**</td>
<td>-0.050</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.089**</td>
<td>-0.069</td>
</tr>
<tr>
<td>Other race</td>
<td>-0.013</td>
<td>-0.024</td>
</tr>
</tbody>
</table>

Gender gap is larger for union nurses
Immigrant wage gap insignificant for union & non-union
Race wage gaps disappear among unionized RNs
## Results, part 1 (OLS regression)

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<thead>
<tr>
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<th>Non-Union</th>
<th>Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>-0.111**</td>
<td>-0.030</td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>0.129**</td>
<td>0.117**</td>
</tr>
<tr>
<td>Master’s</td>
<td>0.207**</td>
<td>0.222**</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0.088**</td>
<td>0.070</td>
</tr>
<tr>
<td>Experience</td>
<td>0.018**</td>
<td>0.016**</td>
</tr>
<tr>
<td>Experience-sq</td>
<td>-0.00029**</td>
<td>-0.00028**</td>
</tr>
</tbody>
</table>

Diploma wage gap vanishes, other education gaps don’t change. Experience gap?
Wage-experience profile
Results, part 1 (OLS regression)

- R-squared for non-union: 0.109
- R-squared for union: 0.131
- There is less unexplained variation among unionized RNs
Results, part 2 (residual In wages)
Conclusions

- Unions may rationalize wage-setting,
  - This leads to fewer unexplained differences in pay
- Modest effects on the wage structure:
  - No race-wage gaps among unionized RNs
  - No penalty for diploma among union RNs
  - Lower premium for experience among union RNs
  - Higher R-squared for union RNs - more transparently structured pay?