Nurses and Unionization

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Motivation for the Union study

- Increasing rate of unionization among health care workers
- Nearly 21% of hospital-employed RNs were in unions in 2006
  - Unionization rate is 5 percentage points higher than for other US workers
- Debates within nursing about appropriateness and value of unions
- Aggressive bargaining for contracts
- Efforts to change state and national policies
- Conflicts and competition between unions
Context: Unions in the labor market

- Nationwide, industry-wide decline in private sector membership since 1950s
  - Increase in public sector membership (40% by 1986)
- Healthcare unions grew rapidly in 1970s
  - NLRB rules were extended to nonprofit sector, states passed laws that favored unions in public sector
- Healthcare union growth slowed in 1980s
  - NLRB began to determine bargaining units: 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
  - Economic meaning of this is still unclear
- “Shortage” = late 1980s through ~1992
- “Surplus” = ~1993 - ~1997
- “Shortage” = ~1998 – 2008
- Now = ????
  - Health reform????
- Wage growth comes about 2-3 years after “shortages” are identified
Economic theory: What do unions do?

- Seek to divert employers’ net revenues (profits) to workers
  - Wages
  - Benefits
  - Working conditions

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

More theory...

• Unions prefer to organize in productive firms
  – More profits to divert to workers

• Unions might improve worker productivity
  – Satisfaction, working condition improvements

• Health workers are motivated to unionize when working conditions deteriorate

• Unions can have greater impact among industries and workers where entry is limited
  – Strikes are a bigger threat

• Theoretical ambiguity:
  – How does unionization differ for the not-for-profit sector?
  – What does productivity mean in hospitals?

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

How do unions affect hospital RN wages?

• Research from 1970s and 1980s find union wage premia for RNs

• Some evidence that non-union wages are affected by union wages
  – Union power vs. union threat

References:
Research questions for today

• Are unions associated with higher RN wages?
• Is there evidence that the threat of unionization increases wages?
• What factors predict hospital unionization?
Data

• **Wages**
  – 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

• **Predictors of unionization**
  – American Hospital Association Surveys
  – Primary data on union presence
    • MA, RI, NY, NJ, MD, WV, MI, IA, AZ, NV, WA, CA
Hospital RN unionization grew more after 1995

Unionization = ~18%

~21%
### Characteristics of hospital RNs

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Non-Union</th>
<th>Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly earnings</td>
<td>$25.87 (0.10)</td>
<td>$29.55 (0.24)</td>
</tr>
<tr>
<td>Immigrant</td>
<td>11.8%</td>
<td>22.4%</td>
</tr>
<tr>
<td>Urban residence</td>
<td>82.5%</td>
<td>88.8%</td>
</tr>
<tr>
<td>White</td>
<td>79.6%</td>
<td>67.5%</td>
</tr>
<tr>
<td>Assoc. Degree</td>
<td>37.1%</td>
<td>33.6%</td>
</tr>
<tr>
<td>Bachelor’s Deg.</td>
<td>48.3%</td>
<td>51.1%</td>
</tr>
<tr>
<td>Age</td>
<td>41.6 (0.1)</td>
<td>43.0 (0.2)</td>
</tr>
</tbody>
</table>

Pooled data, 1997-2006
How to estimate the wage premium

\[ Y_{ist} = X_{ist} \beta + \alpha_s + \delta_t + U_{ist} \xi_t + \epsilon_{ist} \]

- \( Y_{ist} \) is log real hourly wage
- \( X_{ist} \beta \) are human capital & demographic variables
  - Education (not necessarily nursing)
  - Potential experience (age - 6 - years of ed)
  - Citizenship, immigration (1994 onward only)
  - Race/ethnicity, gender
- \( \alpha_s \) are 18 regional dummies (9 census x urban/rural)
- \( \delta_t \) are time dummies
- \( U_{ist} \xi_t \) is an indicator for union presence, with time-varying coefficient
  - The coefficient is the yearly union wage premium
Estimated union wage premia over time

No region dummies

With region dummies

Premium jumps after 1995
Wages for hospital RNs over time

Median Real Wage

- Union wage
- Non-union wage

Shortage period
Surplus period
NLRB rule eases unionization

Union threat and power

- **Union power**: if higher density gives unions more power, they can use power to increase wage gap
  - More likely when supply is constrained

- **Union threat**: If higher density makes employers fearful, non-union employers may raise wages to match… the wage gap will be smaller
  - More likely if unionization is easy
Union density vs. wage premium 2000-2006 (state-level)

Correlation = 0.27
Union density vs. wage premium 2000-2006 (by region)

Correlation = 0.64
Change in union real wage, pre-1994 vs. post-1997

Correlation between density and wage change for union RNs = support for union power hypothesis
Change in non-union real wage, pre-1994 vs. post-1997

Correlation between density and wage change for non-union RNs = support for union threat hypothesis
Predictors of unionization

• **Unionization is not random**
  – Productive firms more likely to be unionized
  – Unionization more likely after reduction in working conditions
  – Hourly wage workers more likely to unionize
  – Union threat – regional effects

• **Approaches to analysis**
  – Always unionized vs. never (simple)
  – Hospitals that change vs. never (simple)
  – Discrete hazard type model
## Predictors of Unionization, 1996 cross-section (linear probability)

<table>
<thead>
<tr>
<th></th>
<th>Always union vs. never union</th>
<th>Changed vs. never union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public hosp</td>
<td>0.277*</td>
<td>0.116*</td>
</tr>
<tr>
<td>For-profit</td>
<td>-0.083</td>
<td>0.085</td>
</tr>
<tr>
<td>Teaching hosp</td>
<td>0.058</td>
<td>-0.103</td>
</tr>
<tr>
<td>System hosp</td>
<td>0.020</td>
<td>0.058*</td>
</tr>
<tr>
<td>Log(admissions)</td>
<td>0.092*</td>
<td>0.042*</td>
</tr>
<tr>
<td>log(HHI)</td>
<td>-0.008</td>
<td>-0.046*</td>
</tr>
<tr>
<td>log(per-cap income)</td>
<td>0.126</td>
<td>-0.081</td>
</tr>
<tr>
<td>% state unionized</td>
<td>0.023*</td>
<td>0.009*</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.283*</td>
<td>0.261</td>
</tr>
<tr>
<td>N</td>
<td>853</td>
<td>633</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.154</td>
<td>0.057</td>
</tr>
</tbody>
</table>

Models control for Census regions. Robust standard errors.
### Predictors of Unionization, panel data (discrete linear hazard model)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public hosp</td>
<td>0.006</td>
<td>Change in % unionized (HSA)</td>
<td>0.228*</td>
</tr>
<tr>
<td>For-profit</td>
<td>0.007</td>
<td>Lagged union stock (HSA)</td>
<td>0.019</td>
</tr>
<tr>
<td>Teaching hosp</td>
<td>-0.009</td>
<td>Lag(RN HPPD)</td>
<td>-0.0001*</td>
</tr>
<tr>
<td>System hosp</td>
<td>0.004</td>
<td>lag(% Medicaid)</td>
<td>0.034</td>
</tr>
<tr>
<td>Log(admissions)</td>
<td>0.007*</td>
<td>Constant</td>
<td>-0.006</td>
</tr>
<tr>
<td>log(HHI)</td>
<td>-0.001</td>
<td>N</td>
<td>5068</td>
</tr>
<tr>
<td>log(per-cap income)</td>
<td>-0.006</td>
<td>R-squared</td>
<td>0.036</td>
</tr>
</tbody>
</table>

Standard errors clustered by hospital. Dummy variables for years and census regions included in the regression.
Why does this matter?

• Wage costs for nursing are high
  – About 1/6 hospital costs for RNs
  – Potentially significant impact on health care costs?

• Wages impact RN satisfaction, job-seeking
  – Satisfaction itself has a bigger effect on job-seeking than wages
  – More satisfied nurses might provide better quality

• Wages affect hospital choices of inputs
  – Substitution of labor
  – Substitution of capital

Next steps....
Do unions affect wages, staffing, and patient outcomes?
Questions? Discussion?