

Nursing Shortages – Is There a Crisis?

**Barriers to Meeting Increasing
Demand for Nurses, and Why
Education May be a Barrier**

Council on Health Care Economics and Policy

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Agenda

1. Estimates of future shortages of RNs
2. Should we be concerned?
3. What can be done to decrease demand and increase supply?
4. Parting thoughts

1. Estimates of a Future Shortage

- Over the next 15 years, the demand for nurses is expected to grow substantially
- Over the same period, large numbers of aging baby boom nurses will retire, leading to a reduction in the supply of nurses, resulting in ...
- A shortage of RNs developing over the next decade, eventually reaching a projected shortfall of 340,000 RNs by 2020

Forecasts of Shortage by 2020

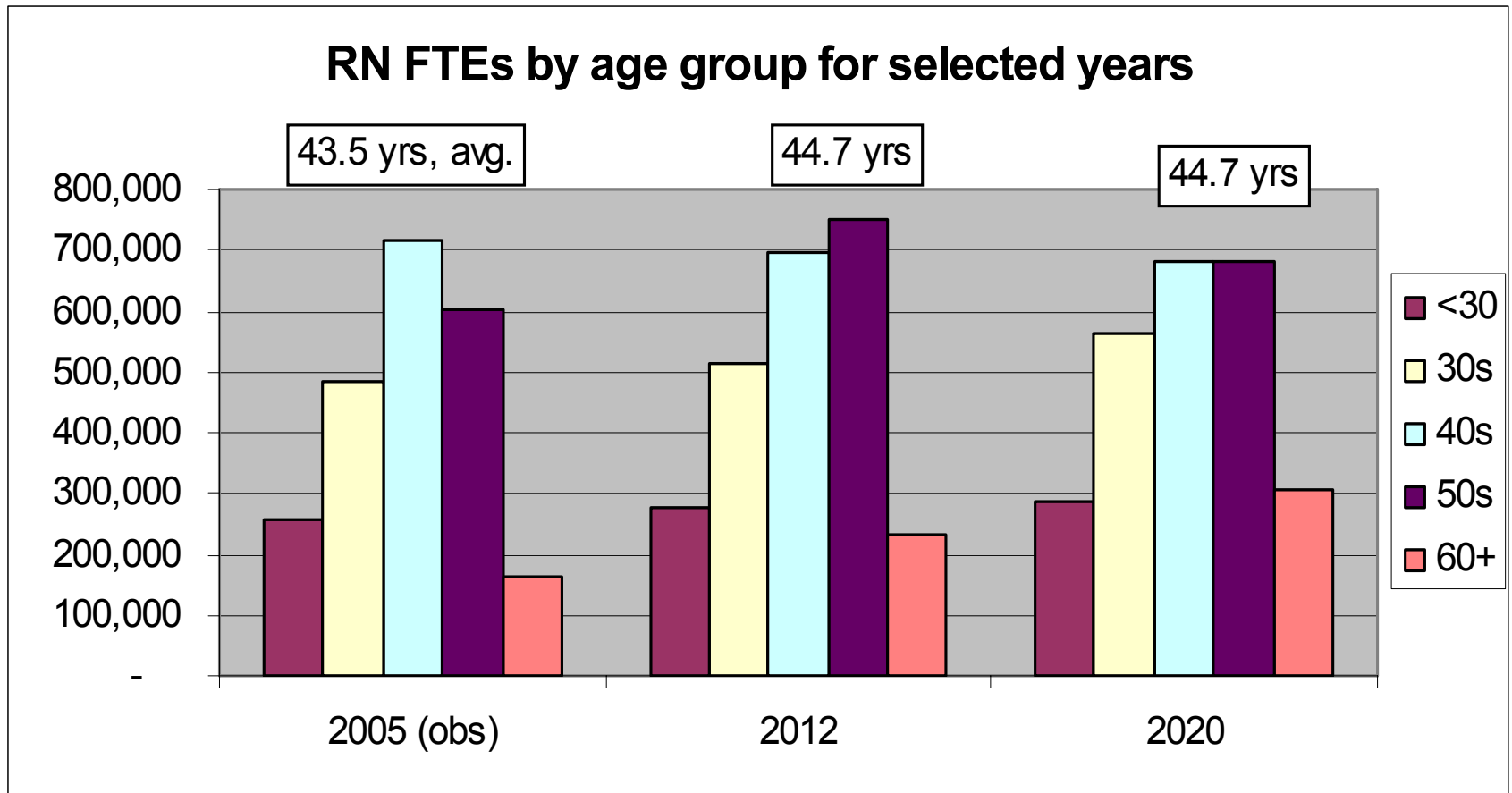
Forecasts	Total RNs in 2012 (millions)	Total RNs in 2020 (millions)	Deficit in 2020 using latest HRSA demand projections
B/S/A ¹ (2000)	2.20	2.05	400,000
HRSA (2002)	2.08	2.00	808,400
B/S/A ² (2002)			760,000
A/B/S ³ (2007)	2.45	2.47	340,000

¹ Buerhaus, Staiger, Auerbach, Implications of a rapidly aging registered nurse workforce. *The Journal of the American Medical Association* 2000; 283 (22): 2948-2954 (Based on HRSA's then available 1996 demand estimates)

² Based on 2002 HRSA's revised 2002 demand estimates

³ Auerbach, Buerhaus, Staiger, Better Late than never: Workforce supply implication of later entry into nursing. *Health Affairs*, January/February 2007; 26(1); 178-185.

Forecasts of the Future Age of the RN Workforce



Source: Auerbach, Buerhaus, Staiger, Better Late than never: Workforce supply implication of later entry into nursing. *Health Affairs*, January/February 2007; 26(1); 178-185

2. Should we be concerned?

- Because RNs are an input factor in the production of medical and health care, shortages of RNs in the institutional markets will lead to:

Increase in RN wages → Increase in the price of care produced in hospitals, physicians offices, home care, nursing homes, schools, etc. → Decreased output (lower access, delays, postponements, increased time costs) → Decrease in quality and safety of care

Should we be concerned?

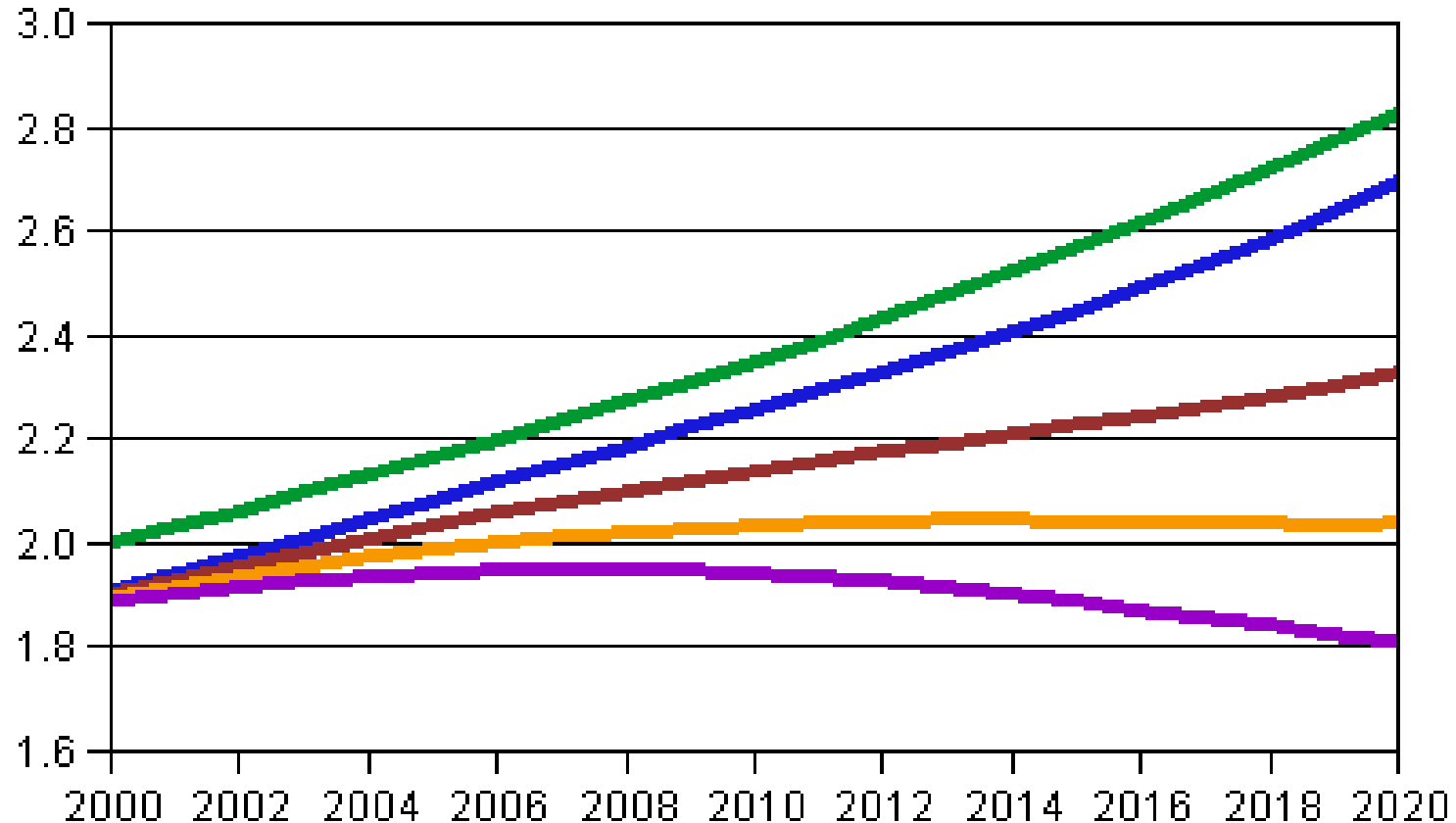
- A much older workforce will be less able to cope with the pressures of shortages than a younger workforce
- Inefficiency in the nursing education market is limiting production of nurses to replace retiring nurses, let alone respond to rising demand

Is there Any Evidence to
Suggest These Concerns
Should Be Taken Seriously?

Recent Real Wage Changes and Current Shortage of RNs in Hospitals

Year	Hospital Real Wages	Hospital Employment Growth
2002	5.0	84,715
2003	1.8	98,764
2004	- 0.5	- 6,366
2005	0.1	- 51,202
2006	0.3	18,797
2002-2006		144,708

Estimates of future real wage growth on future supply



Decreased Quality and Safety

- Growing number of studies show low RN staffing associated with higher risk of inpatient complications, including mortality
- Recent (2004 & 2005) national surveys of RNs, MDs, and chief hospital and nurs execs indicate current shortage has harmed:
 - Care delivery processes
 - Hospital capacity
 - Nurses' ability to provide care
 - Six aims (IOM) for improving quality of health care systems (see *Health Affairs*, May/June, 2007)

Recent Employment Growth by RN Age

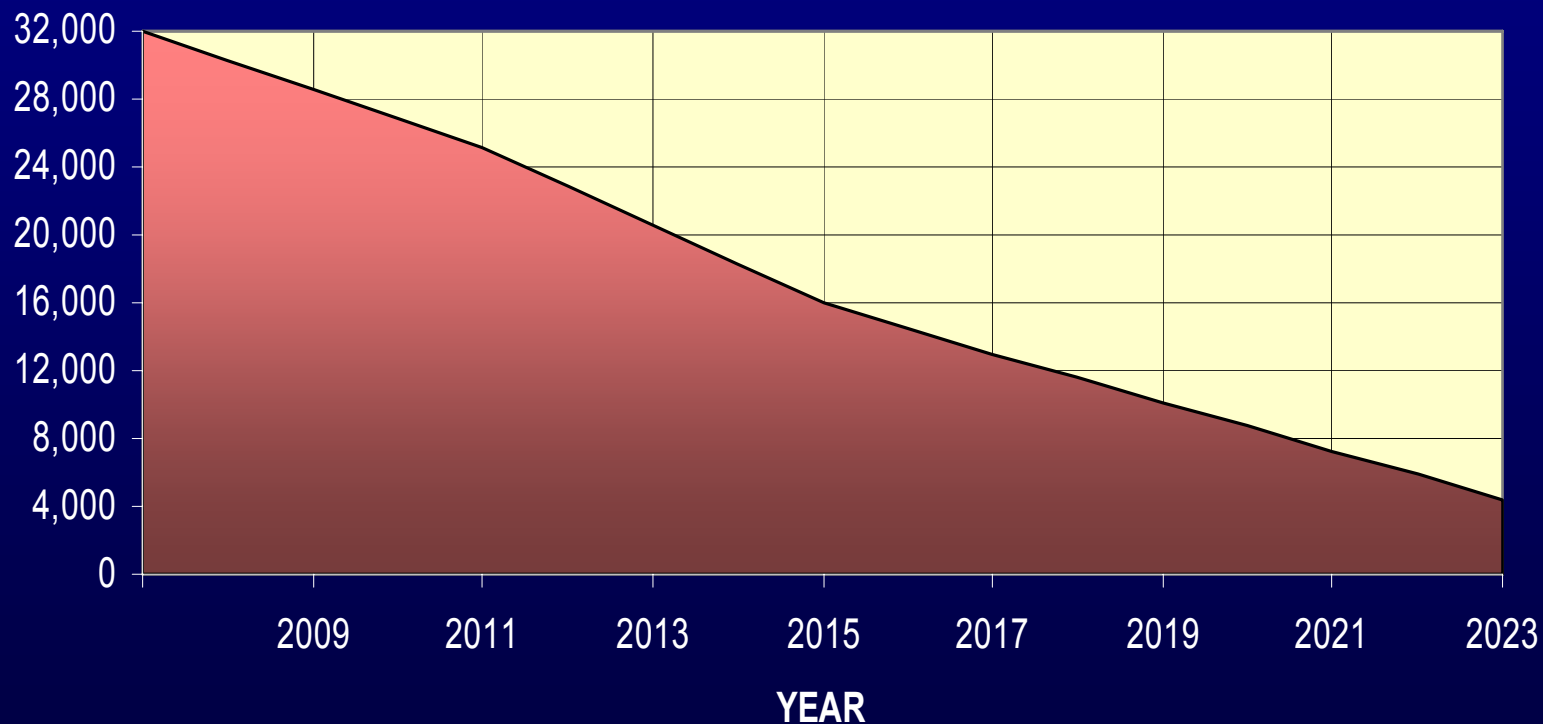
	RN Age		
Year	21-34 yrs	35-49 yrs	50-64 yrs
2002	- 21,170	43,152	63,911
2003	87,131	- 32,271	65,839
2004	- 45,034	21,294	23,212
2005	- 31,277	- 87,284	91,312
2006	46,172	16,970	12,888
2002-2006	35,822	- 40,139	257,161

Inefficiency in Nursing Education Market

- Inadequate production of RNs due to decreased capacity in nursing education programs
- Attributed to shortages of:
 - Faculty (rising age, low relative earnings)
 - Classroom space
 - Clinical education arrangements
- Has resulted in turning away thousands (30,000 +) of qualified applicants over the past several years who could help to replace older and soon to be retiring RNs

Anticipated Nurse Faculty Retirements: 2008-2023

■ Number of Today's Nurse Faculty Expected to Remain ■ Anticipated Retirements



National League for Nursing • (800) 669-1656 • research@nl.n.org

NLN-Carnegie National Survey of Nurse Educators.

Format adapted from *Charting Nursing's Future*, Robert Wood Johnson Foundation, April 2007, p.1

3. What Can be Done to Decrease Demand and Increase Supply of Nurses?

Decrease Demand for RNs

- Unless there are major changes in morbidity patterns and a decrease in chronic illness, hard to envision a material decrease in future demand for health care and hence the derived demand for nurses
- Some technology substitution possible
 - Limited by the fact that people want human beings to care for them, particularly nurses

Decrease Demand for RNs

- Should be able to use available RNs more efficiently by:
 - Improving physical and ergonomic design of clinical environments, focusing on retaining older RNs
 - Improving the management of patient flow to nursing units to avoid peaks and valleys in demand, thereby reducing stress on nurses

Increasing the Supply of RNs (non-wage strategies)

- Target sources of supply
- Remove barriers

Sources of Supply

- “Twenty Somethings” and people in their early thirties were responsible for the A/B/S revised (upward) forecasts of future supply – their contribution may not be over
- Other sources
 - Foreign-born RNs
 - Men
 - Minorities
 - Licensed practical nurses

Changes in Total RN Employment by U.S. and Foreign-Born Status

Year	U.S.	Foreign-Born
2002	44,045	41,849
2003	94,503	24,190
2004	- 9,824	9,275
2005	- 5,897	-21,353
2006	36,616	39,075
2002-2006	159,443	93,036

Continuing to Rely on Foreign-Born RNs: Caution

- World wide shortage of nurses
 - US will experience increasing competition for nurses
 - Additional pressure to raise wages to attract to US institutional markets
- Unaddressed questions about quality
- Uncertainty over what Congress and world health organizations will do to regulate immigration of RNs to US

Other Sources of Supply

RNs	% of RN work force	Participation rate	Ave hrs worked per week	Wage elasticity estimate
White females	91%	83%	36.0	inelastic
Men	9%	88%	40.1	Ambiguous
Minorities	Appx 18%	88%	38.9	?

Licensed Practical Nurses

- Approximately 1 million LP/LVNs in US
- If modify legal barriers restricting practice, along with education upgrade, could:
 - Increase LPN marginal productivity and improve ability to be partial RN substitutes
 - Shift out the supply of nursing personnel
 - Help increase RNs' wage elasticity of supply

Barriers to Increase Supply

- Capacity constraints in nursing education programs
- Lingering social and nursing educational barriers facing men and minorities in nursing
- Organized nursing will oppose removing regulatory barriers that restrict LPN scope of practice

4. Parting Thoughts

- Can let the market adjust demand and supply over time
 - Downside: more of the increase in expenditures would go toward wages relative to output
- Use public dollars to increase L-R supply of nurses
 - Upside: more of the increase in expenditures would go toward increasing output relative to wages

Parting Thoughts

- If subsidize nursing education, need to objectively determine:
 - Prevalence and severity of reduced capacity, reasons for capacity constraints, public & private policies to expand capacity, and costs of alternative policies
 - How to remove barriers for men and minorities to become RNs
 - Costs and benefits of expanding LPN production
 - What data are needed, and how we might develop some overall plan for the nation's health workforce

Finally

- If a decision is made to subsidize nursing education programs to increase their capacity, then link size of subsidy to the development of curriculum in quality, safety, human factors, etc. so we improve quality of output as well as expand quantity
 - Increase size of subsidy to nursing programs that integrate quality and safety curriculum with physicians, pharmacists, health administrators, and allied health providers
- Don't forget to focus on retaining older RNs