


Modeling the Health Workforce and Characteristics of a High Performing Health Care System

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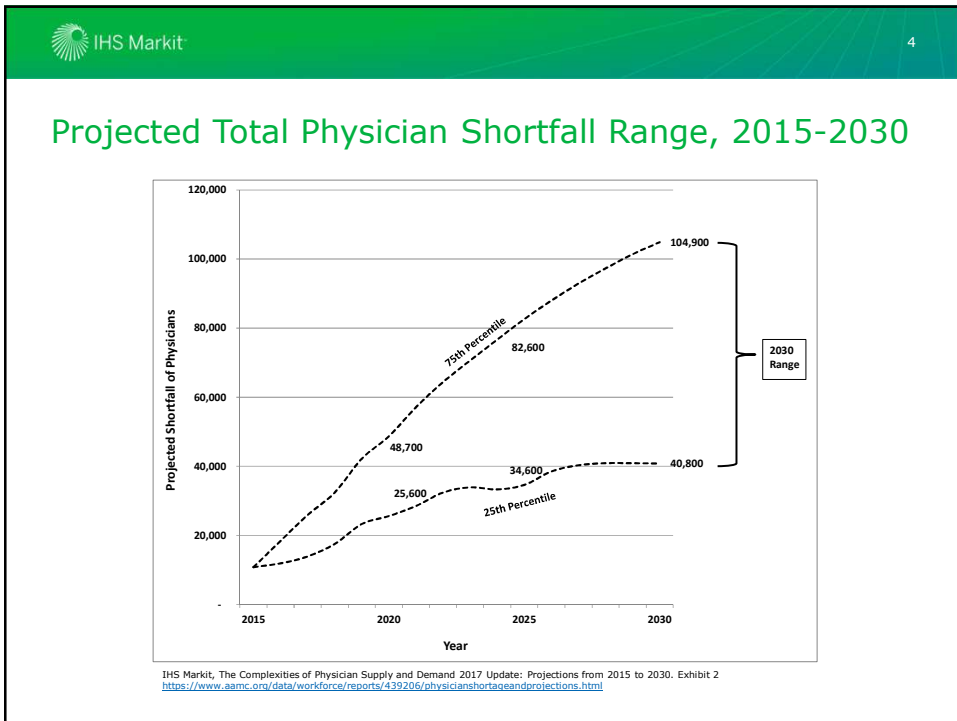
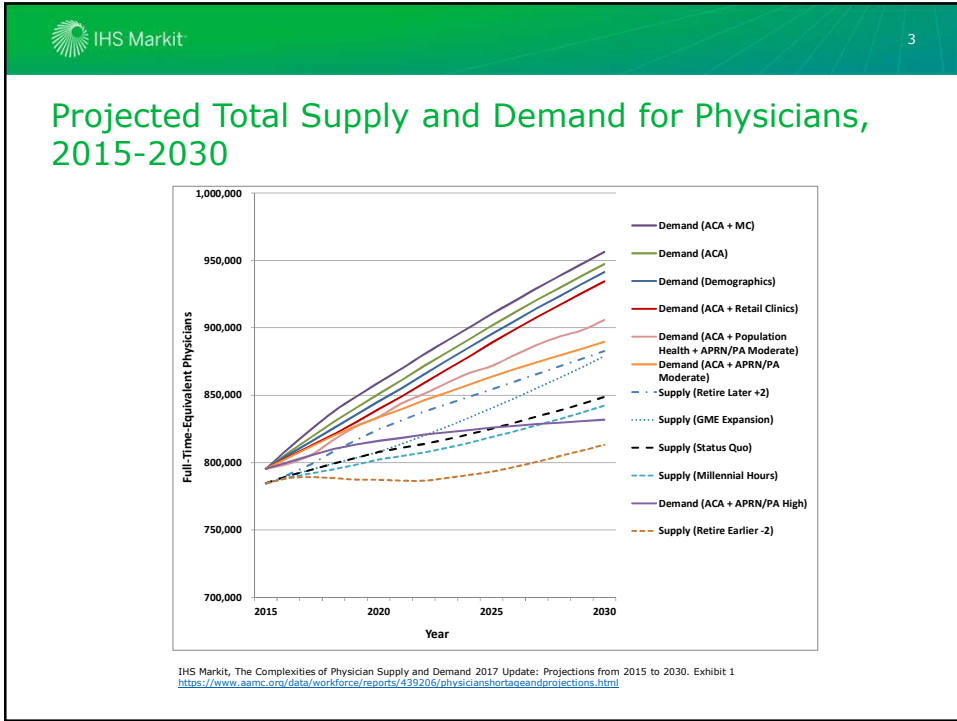


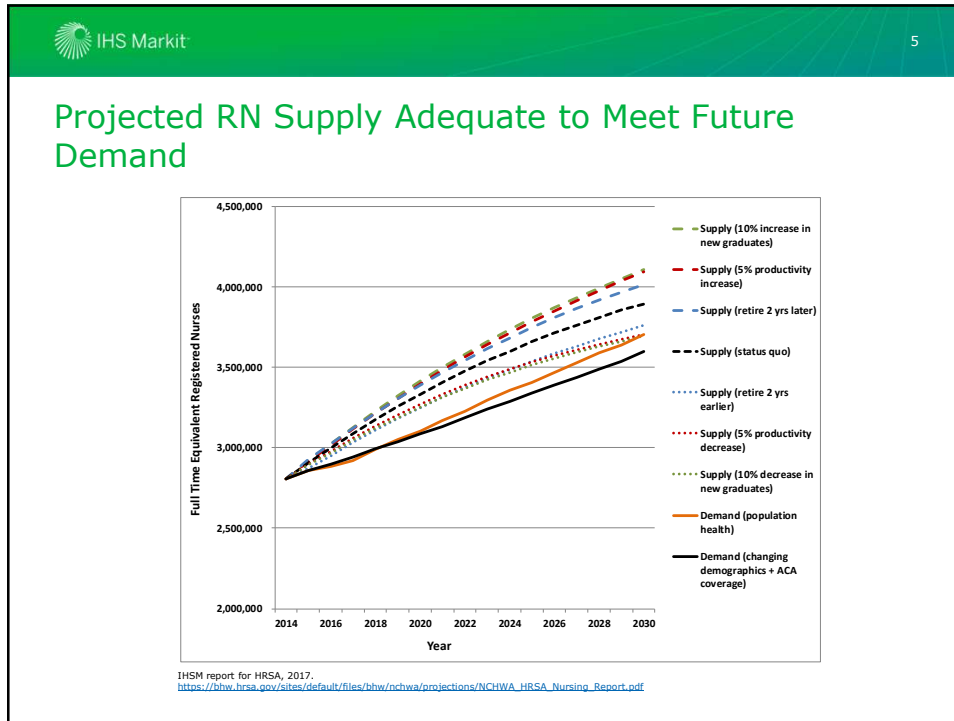
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Modeling Workforce Supply and Demand

- Purpose: To inform strategies to train the right number and mix of health workers
- Supply modeling
 - > Current supply + providers entering workforce – retirement = future supply
- Demand modeling
 - > Model characteristics of current and future population (demographics, disease prevalence, lifestyle choices, insurance coverage)
 - Care delivery patterns can influence future disease prevalence and mortality
 - > Model health care use patterns
 - > Model health workforce staffing patterns

} patterns evolve over time





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- Objectives of a High Performing Health Care (HPHC) System**
- Organizing care to provide a **continuum of care** across care delivery settings and **coordinating multidisciplinary care**
 - Using information technology and evidence-based strategies to identify and **manage high risk populations**
 - Achieving **population health** goals
 - Improving **efficiency** of care delivery—including reducing unnecessary or duplicative diagnostics and treatments
 - Measuring and **improving quality** of care
- Sample sources:
- Ahluwalia et al. What Defines a High-Performing Health Care Delivery System: A Systematic Review. *Jt Comm J Qual Patient Saf* 2017;43(9):450-459.
 - The Commonwealth Fund:
 - Cathy Schoen. *The Path to a High Performance U.S. Health System: A 2020 Vision and the Policies to Pave the Way*. 2009
 - Stephen C. Schoenbaum. *Organizing the U.S. Health Care Delivery System for High Performance*. 2008.

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Modeled Select Characteristics of a High Performing Health Care System

- Achieving select **clinical outcomes** (modeled outcomes)
 - > Reduced excess body weight (5% weight loss among obese & overweight)
 - > Improved blood pressure (achievements from published literature)
 - > Improved cholesterol levels (achievements from published literature)
 - > Improved blood glucose levels (achievements from published literature)
 - > Smoking cessation (25% reduction, though high rate of recidivism)
- Changing **care use and delivery patterns**
 - > Reduced hospitalization/re-hospitalization/length of stay
 - > Reduced emergency department visits (redirected to community-based setting)
 - > Improved integration of behavioral health into primary care
 - > Shifting care from higher cost to lower cost providers

Published interventions used advanced practice providers, nurses, and other workers (e.g., home health providers, pharmacists) to implement intervention

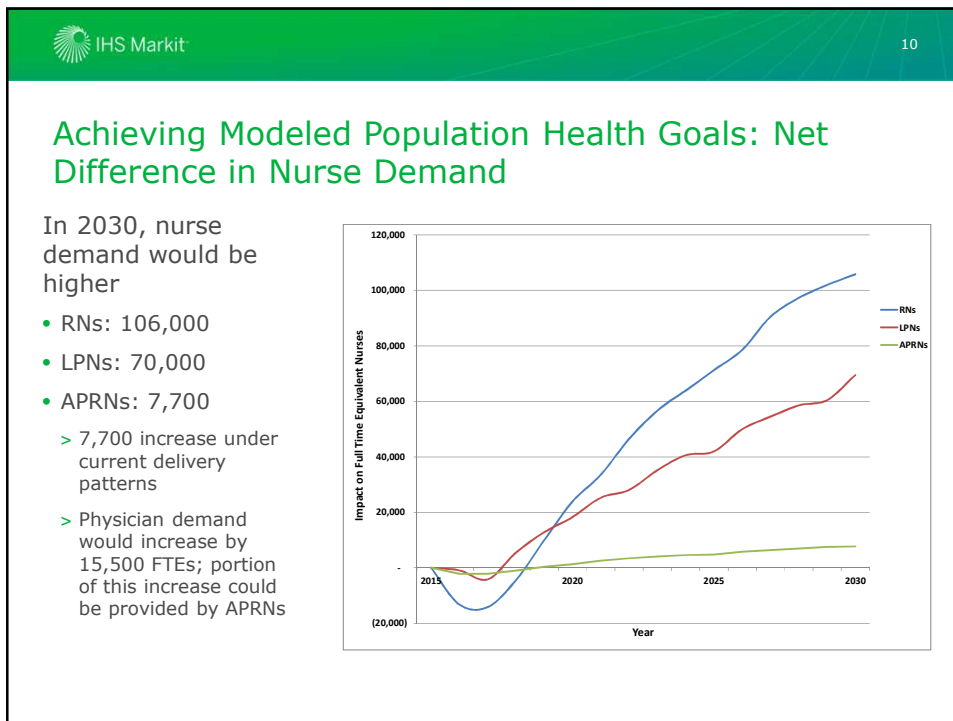
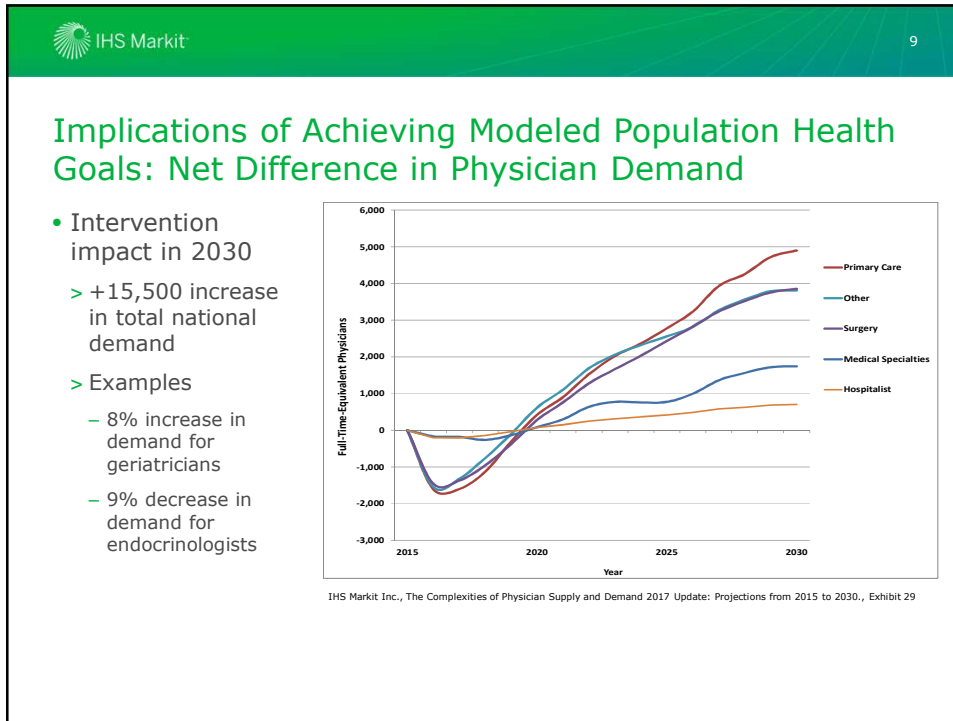
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Achieving Modeled Population Health Goals = Additional 6.3 M People Living in 2030

- Higher utilization of care associated with 6.3 million additional people vs slightly lower utilization from improved health
 - > Over 6 million additional hospital inpatient days
 - > 1.7 million additional emergency visits
 - > Increase is primarily among population age 65+

Year	Census Bureau Projections	Achieving Population Health Goals
2015	247.9	247.9
2030	283.1	289.4

IHS Markit, The Complexities of Physician Supply and Demand 2017 Update: Projections from 2015 to 2030., Exhibit 28
<https://www.aamc.org/data/workforce/reports/439206/physicianshortageandprojections.html>



Conclusions

- Improved health outcomes does not necessarily mean lower demand for health workers
 - > Per capita demand for health care services might fall
 - > Reduced mortality means people live longer; larger population of older people could increase demand for some types of services
 - Short term reduction in national demand for care
 - Long term increase, with shift in disease prevalence and type of care
- Growing body of literature demonstrates that some care can be diverted from
 - > Higher cost settings to lower cost settings
 - > Higher cost providers to lower cost providers
- Delivery system reform could reduce demand for some health occupations, but for many health occupations will increase demand for services