

Health Workforce Everywhere: Understanding the Breadth and Depth of the Health Workforce

Center for Health Policy
Fairbanks School for Public Health Indiana University
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Agenda

- Intro to myself and UW centers
- Where health workforce research has been
- What we are learning
- Where we need to go

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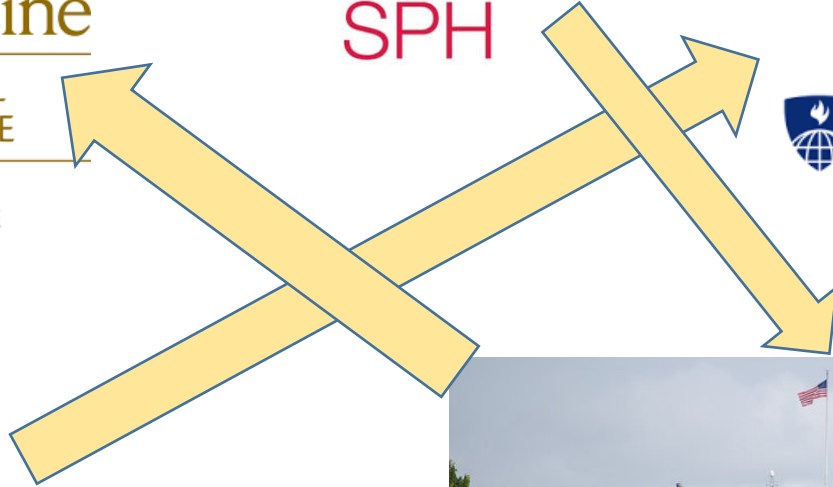
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UW Center for Health Workforce Studies (CHWS)

- Established in 1998 in Department of Family Medicine, UW
- Multidisciplinary team of researchers
- Primarily funded by contracts and grants from state, federal, and private organizations
- Houses 2 of 9 Center grants funded by the Health Resources and Services Administration (HRSA) to address 1) the allied health workforce and 2) health equity and health workforce diversity
- **Mission**: To elevate the importance of workers in the delivery of health care in policy discussions, which we accomplish by:
 - Conducting health workforce research to inform health workforce planning and policy
 - Providing consultation to local, state, regional and national policy makers on health workforce issues
 - Developing and refining analytical methods for measuring health workforce supply and demand

UW Primary Care Innovation Lab (PCI-Lab)

- Established in 2015 in Department of Family Medicine, UW
- Multidisciplinary team of researchers
- Primarily funded by contracts and grants from federal agencies and private-public partnerships
- **Mission**: To accelerate design, implementation, and productive use of technology that has potential to improve primary care practice and patient health, which we accomplish by:
 - Engaging companies with cutting-edge technologies
 - Produce evidence at every step of product development
 - Disseminate evidence to stakeholders

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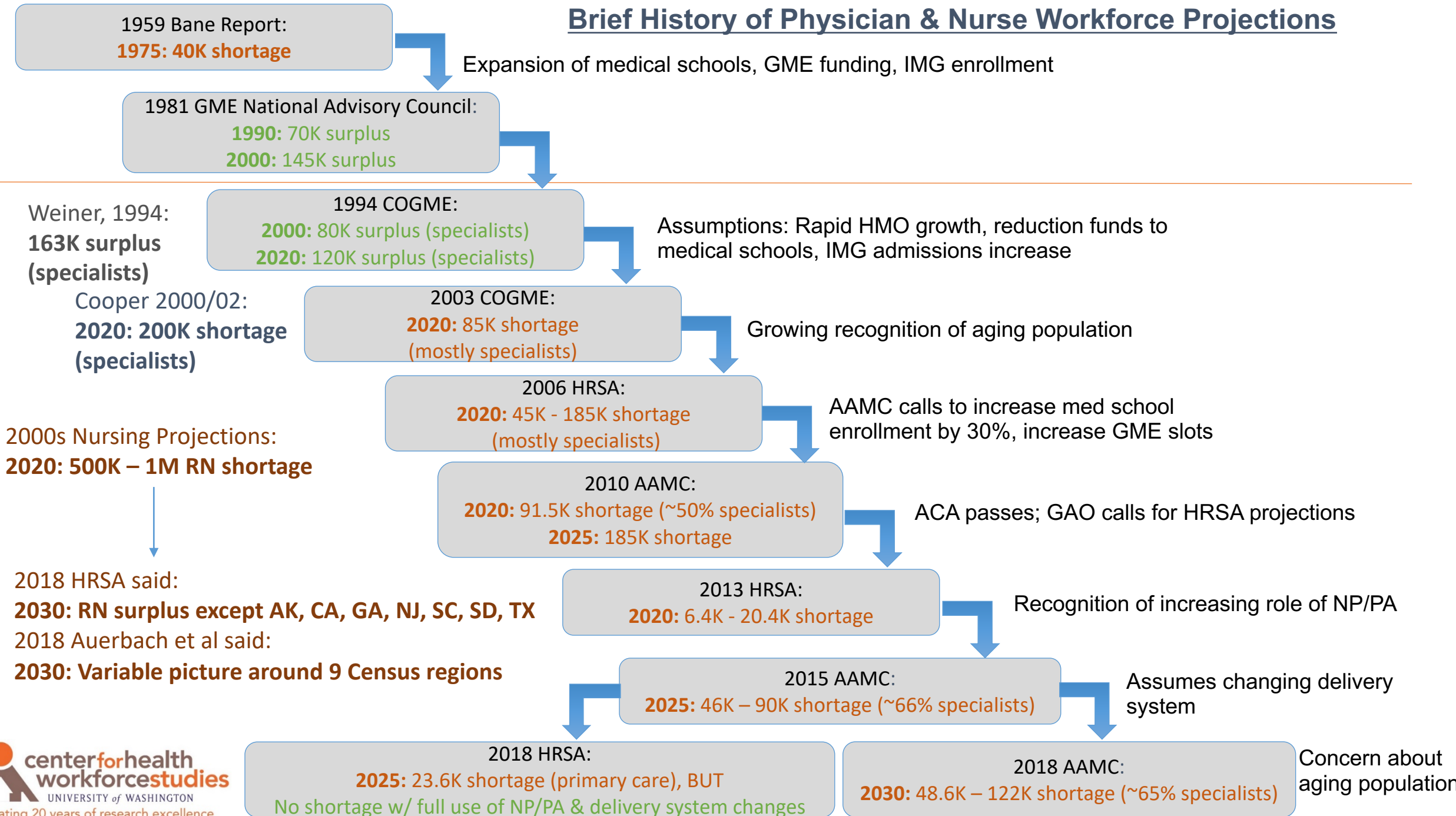
Focus of workforce discussions over last 20 years ...

- Debates about physician surplus → shortage
 - Debate about investment in GME \$
 - Debate about IMG impact on supply
 - Concern about maldistribution in rural areas & move away from primary care
- Greater investments in nursing education
 - 2010 IOM Future of Nursing report calling for 80% of RNs to have Bachelor's degree
- More states moving towards NP/PA independent scope of practice
 - Growing evidence of equal care quality and safety to physicians
 - NPs/PAs more likely to work in rural areas and in primary care

Do we have a shortage? If so, where?

- Debatable whether we have a national physician or nursing shortage

Brief History of Physician & Nurse Workforce Projections



Do we have a shortage? If so, where?

- Debatable whether we have a national physician or nursing shortage
- Where shortages may exist:
 - In rural and underserved communities
 - For primary care and long-term care settings
 - With skills and training in behavioral health
 - Shortage of “low-skilled” workers

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More recent health workforce discussions...

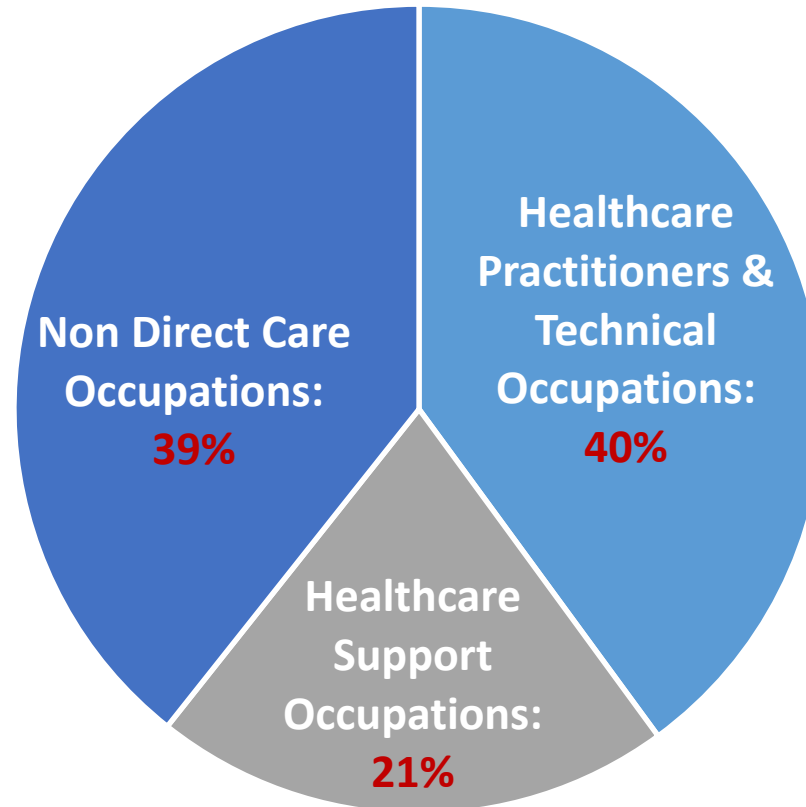
- Moving away from “nose counting” to predict supply
 - Recognition of geographic variability
 - Monitoring and evaluating new and novel ways in which health care workers are being used
- Recognition of the wider “team” or “other” healthcare workers
 - New occupations as other occupations experience “degree creep”
 - Unclear career pathways
 - Other health professions beginning to invest in collecting more data



Occupations within Healthcare Industry, 2017 (n=16,523,690)

Examples:

Home/Personal Care Aides
Community Health Workers
Social Workers
Administrative/Financial/
Management
Grounds/Maintenance
Food Preparation



Examples:

Physicians

Dentists

Pharmacists

Therapists

Physician Assistants

Nurses

- APRN

- RN

- LPN/LVN

Examples:

Nursing Assistants

Home Health Aides

OT/PT Assistants

Medical Assistants

Pharmacy Aides

Dental Assistants

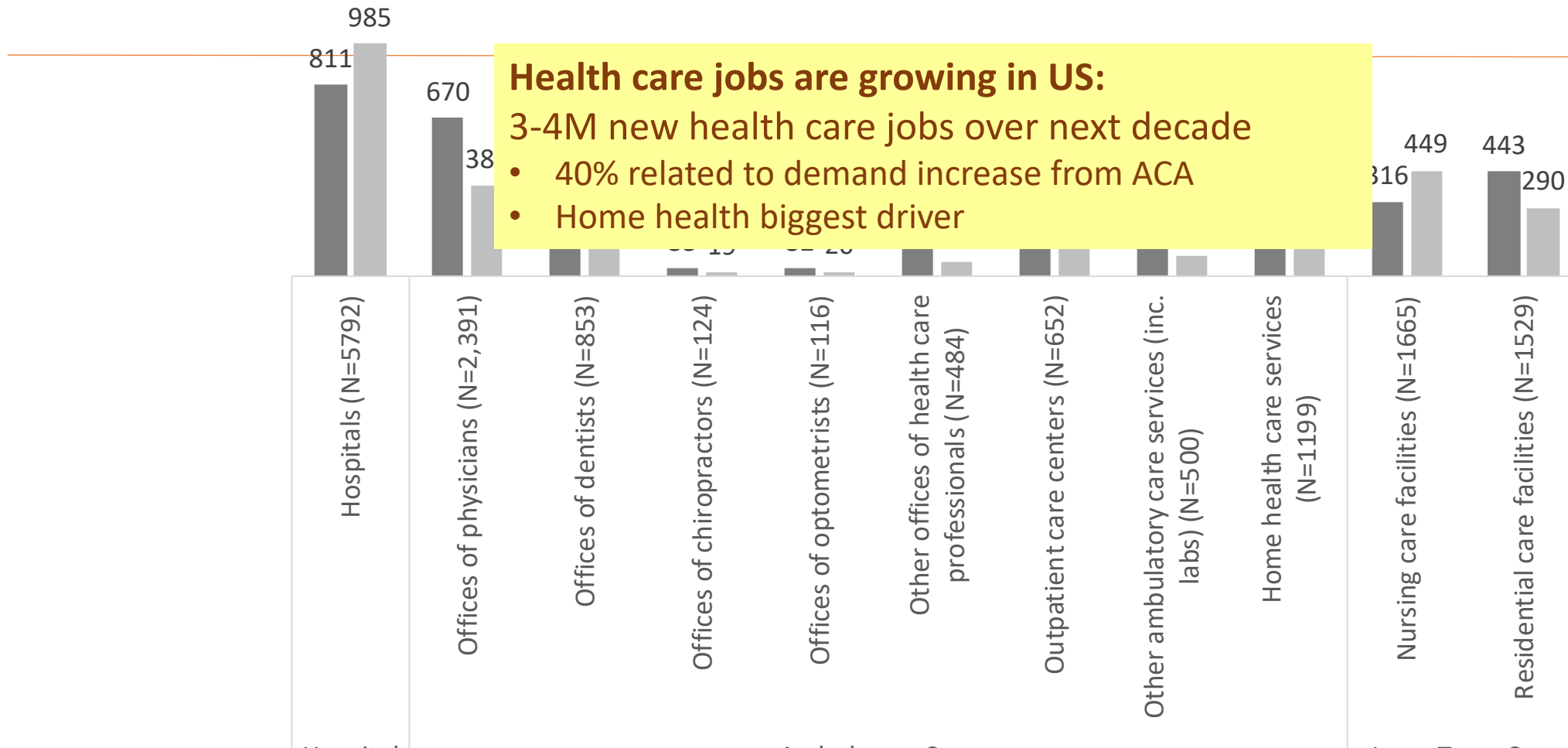
Occupations Projected with Highest Percent Change of Employment, 2016-2026

OCCUPATION	GROWTH RATE, 2016-26	2017 MEDIAN PAY
Solar photovoltaic installers	105%	\$39,490 per year
Wind turbine service technicians	96%	\$53,880 per year
Home health aides	47%	\$23,210 per year
Mathematicians	20%	\$103,010 per year

Healthcare jobs dominate list of fastest growing occupations, and most require less than a Bachelor's degree to enter.

Physical therapist aides	29%	\$25,730 per year
Bicycle repairers	29%	\$28,390 per year
Medical assistants	29%	\$32,480 per year
Genetic counselors	29%	\$77,480 per year
Occupational therapy assistants	29%	\$59,310 per year

Number of Additional Jobs between 2013 and 2022 (Reported in Thousands)



Recent Headlines

Health & Science

The disabled and the elderly are facing a big problem: Not enough aides

The Washington Post
Democracy Dies in Darkness

Forbes

7,265 views | Apr 18, 2018, 02:05pm

The Shortage Of Home Care Workers: Worse Than You Think

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Life & S

Mental health care appointments often come with a long wait. 3 ways to cope while help is delayed

Ten Most Common Prior Year Industry for Entrants and Current Year Industry for Leavers of the Health Care Industry Between 2003 and 2013

Entrants' Prior Year Industry (N=15,742,141)		Leavers' Current Year Industry (N=23,729,493)	
Not in the labor force or unemployed (excluding in school)	13.0%	Not in the labor force	34.7%
Leisure and hospitality	11.0	Unemployed	18.6
Retail trade (excluding pharmacies and drug stores)	8.8	Educational services	5.6
Educational services	8.4	Leisure and hospitality	4.6
In school	6.9	Professional, scientific and technical services	4.3
Professional, scientific and technical services	6.3	Retail trade (excluding pharmacies and drug stores)	4.0
Public Administration	6.0	Public Administration	3.9
Management, administrative and support, and other services	5.7	Management, administrative and support, and other services	3.8
Finance and Insurance	5.1	Social Assistance	3.2
Social Assistance	5.0	Finance and Insurance	2.9

Industry and Occupation Transitions, 2003-2013

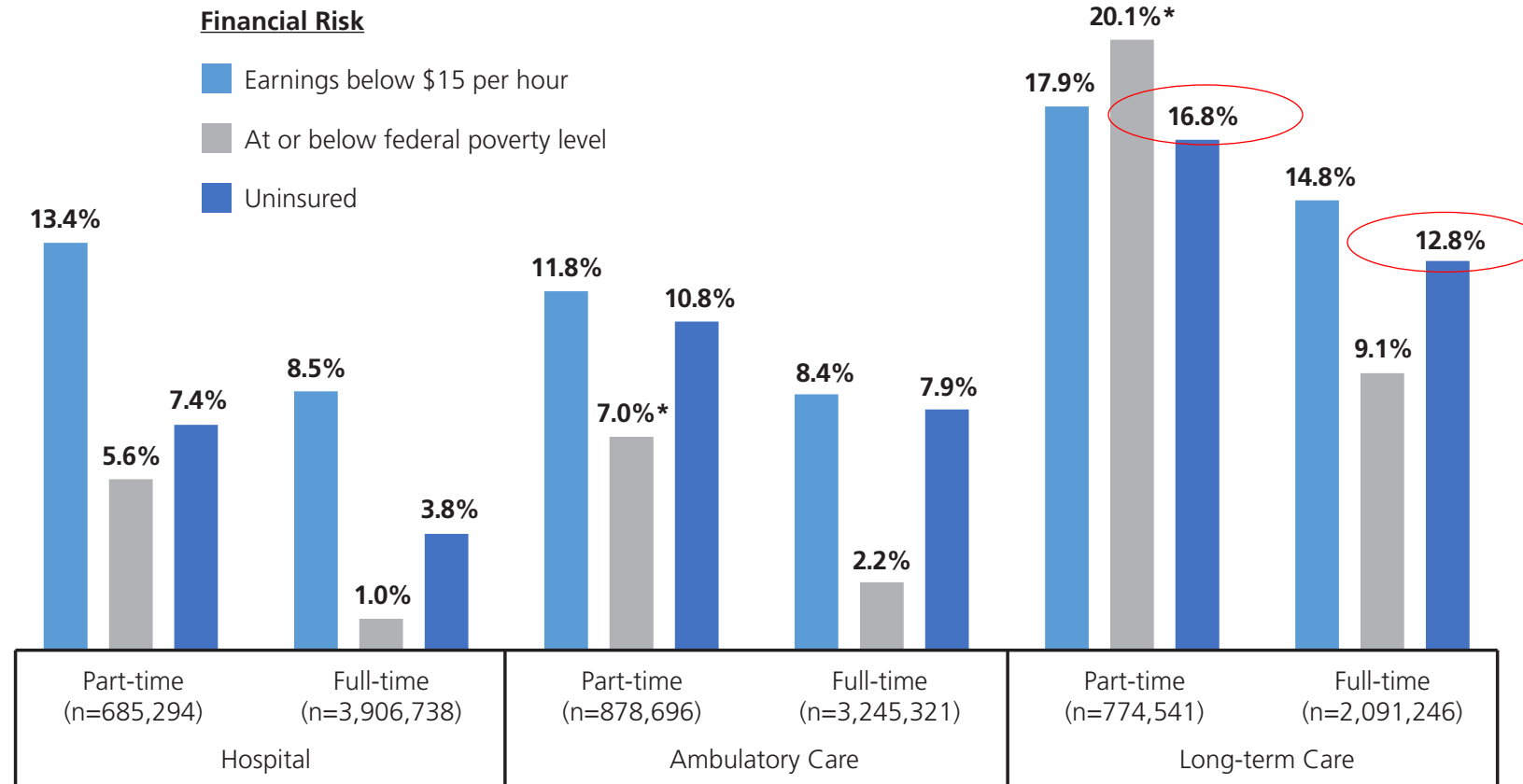
Industry	Entry from what industry?	Most common occupation of entrants	Exit to what industry?
Home Health Care Services	14% Hospitals 14% Nursing care facilities	42% Nursing, psych & home health aides 23% Personal care aides	33% Out of labor force 18% Unemployed
Nursing Care Facilities	18% Hospitals 12% Leisure & hospitality	37% Nursing, psych & home health aides 10% Registered nurses	27% Out of labor force 19% Unemployed
Residential Care Services	14% Leisure & hospitality 8% Out of labor force	21% Personal care aides 13% Food preparation	25% Out of labor force 16% Unemployed

SES Characteristics of Transition Groups, 2003-2013

Industry	% not a citizen	% rural residence	% disabled	% below poverty	% full-time	Wages from past year
Home Health Care Services						
Entrants	10%	20%	4%	18%	74%	\$19,666
Leavers	9%	20%	10%	22%	59%	\$15,289
Stayers	11%	19%	4%	14%	66%	\$19,799
Nursing Care Facilities						
Entrants	8%	24%	2%	16%	75%	\$20,677
Leavers	7%	25%	8%	16%	72%	\$17,409
Stayers	8%	26%	2%	8%	78%	\$22,527
Residential Care Services						
Entrants	6%	17%	4%	14%	74%	\$19,517
Leavers	7%	17%	8%	13%	73%	\$16,123
Stayers	6%	19%	3%	5%	79%	\$21,203

Source: Frogner BK and Spetz J (2015). "Entry and Exit of Workers in Long-Term Care," UCSF Health Workforce Research Center Report. Available at: <http://healthworkforce.ucsf.edu/publication/entry-and-exit-workers-long-term-care>

Figure 7: Percentage of Part- versus Full-Time Healthcare Workers at Financial Risk among Those Employed in Occupations Requiring Bachelor's Degree or Below by Work Setting



*Significant differences at $p \leq 0.001$ between part-time versus full-time by financial risk category conducted using unpaired two sample t-test

Note: Financial risk defined as individuals earning below \$15 per hour, being at or below the poverty level, or being uninsured

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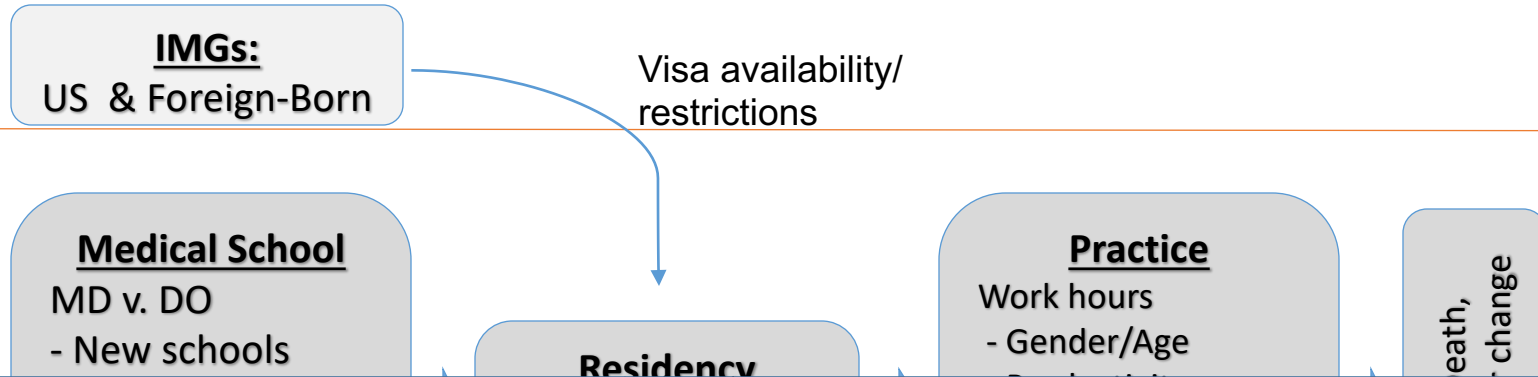
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Ripe areas for future health workforce research

- What health workforce is needed for complex and transforming health system?
 - More complex modeling and growing availability of data
 - Integrating workforce and coordinating across settings
 - New roles/occupations emerging
- How do we align reimbursement to support the health workforce we need
 - Increasing use of home health → How to translate to good career for workers?
 - Incentivizing high value care through “high value” providers
- “Future of work”
 - Gig economy
 - Automation of jobs



Projection Modeling - Physicians



This data are largely non-existent for many other professions
→ Keep working toward better projection models

New Delivery Models:
Health IT, telemedicine, other
providers, team-based care

Demand Side: Population health (gender, age, disease), economic status (income, insurance coverage), geographic distribution

Job Search Engines to Monitor Health Workforce Trends

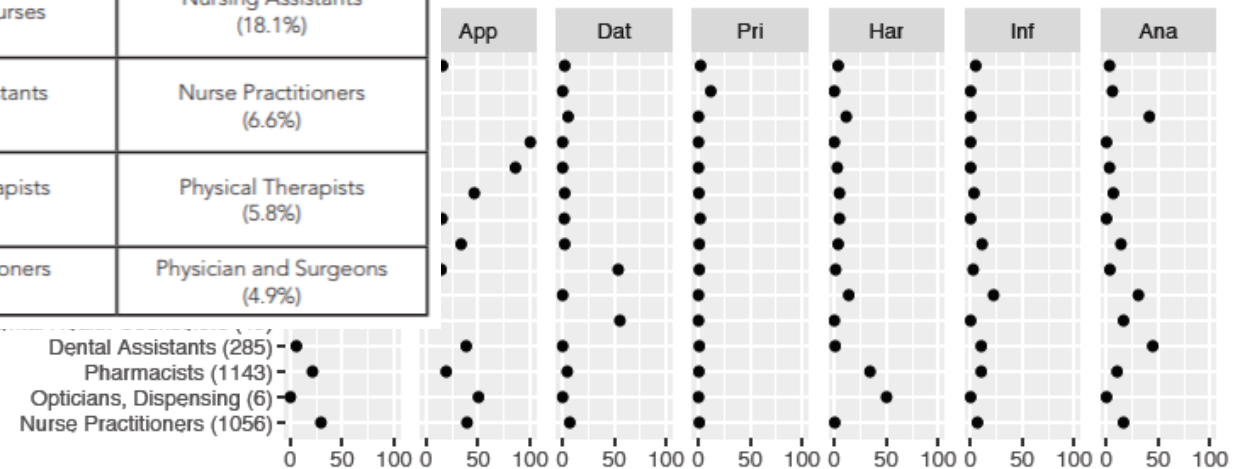
- Burning Glass Technologies, Monster, Payscale, Linkup, LinkedIn

TABLE 10:

Top Five Healthcare Occupations with Job Ads Referencing an Emerging Role in 2015

Care Coordination	Disease Management	Navigation	Patient Education	Peer Role
n=114,463	n=14,754	n=1,392	n=10,407	n=965
Registered Nurses (65.8%)	Registered Nurses (62.5%)	Registered Nurses (78.6%)	Registered Nurses (43.6%)	Registered Nurses (47.8%)
Licensed Practical/Vocational Nurses (15.5%)	Physician and Surgeons (6.0%)	Healthcare Social Workers (5.6%)	Licensed Practical/Vocational Nurses (8.4%)	Nursing Assistants (18.1%)
Healthcare Social Workers (4.4%)	Nurse Practitioners (5.1%)	Licensed Practical/Vocational Nurses (4.3%)	Medical Assistants (8.2%)	Nurse Practitioners (6.6%)
Nurse Practitioners (2.1%)	Licensed Practical/Vocational Nurses (5.0%)	Physician and Surgeons (2.4%)	Physical Therapists (6.9%)	Physical Therapists (5.8%)
Physical Therapists (2.1%)	Medical Assistants (4.7%)	Nurse Practitioners (2.3%)	Nurse Practitioners (5.5%)	Physician and Surgeons (4.9%)

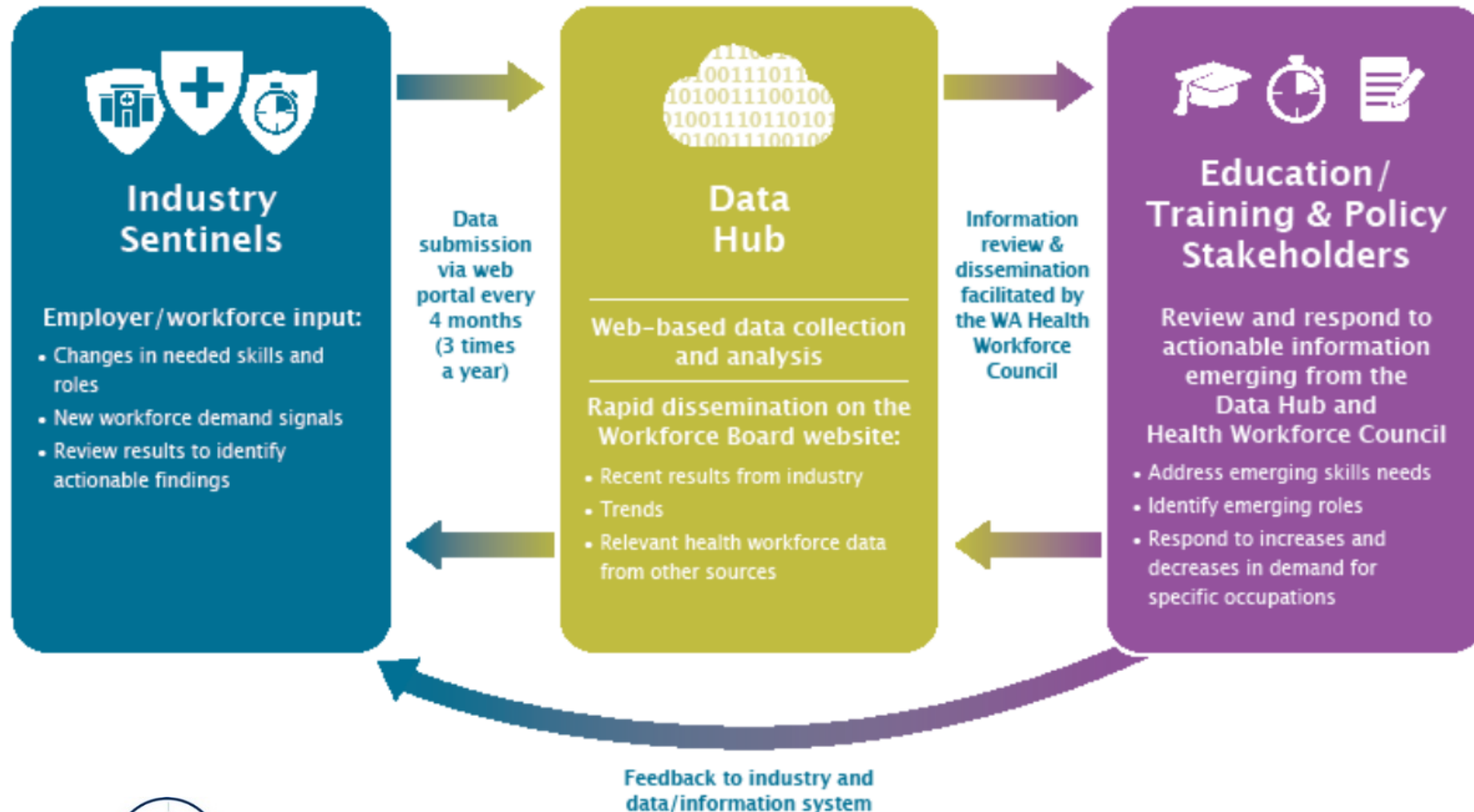
Percentage of Records Falling Within Each HIT Domain*, (at least 1 HIT Skill, Top 15 Occupations Shown)



*Hea = health IT (general). App = application support. Dat = database management. Pri = privacy and security. Har = hardware and network support. Inf = informatics. Ana = Analytics



Washington's Health Workforce Sentinel Network



What Technologies Look Promising?

- Artificial Intelligence & predictive analytics to assist patient-provider communications
 - Chatbots to facilitate patient intake
 - Listening devices to scribe clinical notes
 - Diagnosis and treatment decision support tools
- Point of Care Technologies
 - Handheld ultrasounds
 - New diagnostic tests (including genetic testing) delivered at home or in provider office
- Remote patient monitoring
 - Telehealth
 - Sensor devices & internet of things
 - Mobile health apps

What Limits Technological Disruption?

- **Challenges**

- Limited input from providers in development of health tech
- Technology often negatively impacts productivity upon adoption
- Unclear reimbursement strategy to support integration of tech

- **Potential Solutions**

- Develop stronger evidence before introducing technology into clinical workflow to better identify what support (financially and personnel) are needed¹⁰
- Provide forums for providers to engage with tech companies at early stages of development
- Identify training needs to not only prepare workers for current technologies but to help develop next generation of technologies

Summary of Health Workforce Concerns

- Identify ways to recruit new workers to healthcare, retain existing workers, increase productivity and improve distribution of workers to meet increasing healthcare demand from aging demographic and health insurance expansion
- Train new and existing workers to keep up with the changing needs of a population experiencing high disease burden (e.g., opioid use disorder and other behavioral health problems)
- Monitor and evaluate evolving roles and emerging occupations often operating within restricted budgets and scope of practice to meet the needs of new delivery and payment models
- Deploy and connect workers in the community as care shifts away from hospital to keep elderly in their home

Take Away Thoughts

- Build workforce that matches patients' needs
 - Focus less on headcounts
- Take a wider view of who works in healthcare
 - Focus less on siloed occupations and more on the team
- Clarify and plan for career pathways in healthcare
 - Including support for training and other social assistance
- Engage healthcare workers in development of future technologies

If you want to read more about our work:

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More readings...

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- Gattman NE, McCarty RL, Balassa A, Skillman SM. Washington State Behavioral Health Workforce Assessment. Washington Workforce Training and Education Coordinating Board, Dec 2017. Available at: http://depts.washington.edu/fammed/chws/wp-content/uploads/sites/5/2018/01/wa_bh_workforce_fr_dec_2017.pdf

Thank you!

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Changing Healthcare Landscape

- **Call to Action:** Improve the healthcare system with “Quadruple Aim”
 - 1) Improve patient experience of care; 2) Improve population health; 3) Reduce per capita cost of care; 4) **Improve provider work life**
- **Actions:**
 - Expansion of health insurance coverage through age eligibility of dependents, Medicaid (e.g., Apple Health) & Marketplaces (e.g., WA Health Benefit Exchange)
 - Connect providers through new models of delivery (e.g., Accountable Care Organizations, Patient-Centered Medical Home Models, integration of care)
 - Drive toward value-based care (e.g., bundled payment, MIPS, APM)
 - Increase monitoring and engagement of patients through technologies (e.g., electronic health records, telehealth, mobile health, sensors)

Issue #1: Defining Need is Difficult

- **Challenges**

- Projections of need focus on provider-to-patient ratios, which does not equate to access or quality
- Limited discussion around available providers to fill the gap (e.g., Health Professional Shortage Areas designation focused only on few professions)
- Insufficient data: 2+ year lags, poor geographic detail, limited availability for non-licensed professionals, and lack of information related to roles

- **Approaches**

- Consider all members of the “care team” including patient at the center
- Seek multiple perspectives, sources, and approaches to assess need
- Use rapid and novel data collection methods such as WA Sentinel Network

Issue #2: Recruitment & Developing Pipeline

- **Challenges**

- Access to providers significantly varies by patient geography (e.g., rural) and insurance type (e.g., Medicaid and uninsured)
- While healthcare jobs have been a “job engine” for the economy and are among the fastest growing, healthcare will likely face increasing competition for low-skilled workers from hospitality, retail, and other service sectors ³

- **Approaches**

- Introduce students to wide range of healthcare careers early (K-12) through mentorship and experiential learning
- Recruit students from rural and underserved communities
- Provide training opportunities in rural and underserved communities
- Expand healthcare apprenticeships especially in primary care and long-term care

Issue #3: Retention

- **Challenges**

- High turnover especially in long-term care in part due to disability and tough work environment ³
- Unclear career pathways especially for low-skilled workers ⁴
- Low pay in part due to limited leverage to negotiate higher reimbursement rate

- **Approaches**

- Clarify benefits/advantages of working in healthcare
- Develop career advancement opportunities with clear pathways and training support ⁵
- Provide security net (e.g., insurance, food support, transportation) especially for part-time workers and “gig” workers ⁶