Health Workforce Trends and Challenges in the Carolinas and the United States

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Cecil G. Sheps Center for Health Services Research, UNC-CH

Rural Hospital Conference of the Carolinas,
November 9, 2017
Who we are and what we do
North Carolina Health Professions Data System (HPDS)

**Mission:** to provide timely, objective data and analysis to inform health workforce policy in North Carolina and the United States

- Based at Cecil G. Sheps Center for Health Services Research at UNC-CH, but mission is statewide
- A collaboration between the Sheps Center, NC AHEC and the health professions licensing boards
- System is independent of government and health care professionals
North Carolina Health Professions Data System (HPDS)

• 37 years of continuous, complete licensure (not survey) data on 19 health professions from 11 boards

• Data are provided voluntarily by the boards—there is no legislation that requires this, there is no appropriation

• Data housed at Sheps but remain property of licensing board, permission sought for each “new” use

System would not exist without data and support of licensure boards
South Carolina has a Health Professions Data System too
This Presentation:

- Current workforce trends in the US & Carolinas
- Nurse Education
- Obstetric care in rural NC
- Medical School and Residency
- Big picture health system change:
  What does it mean for the workforce?
Current Health Workforce Trends
In 2009, health care jobs surpassed manufacturing jobs

Total Employment in Manufacturing and Health Care and Social Assistance Employment in NC, 2000-2016

Produced By: Program on Health Workforce Research & Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
Two of every three health care jobs is in allied health or nursing.

Health Care Jobs in North Carolina, 2016

- Allied Health 36%
- RNs 24%
- Aides and Attendants 25%
- Physicians 5%
- APRNs 2%
- LPNs 4%
- Other Doctoral Trained* 4%

n=406,490 Health Care Jobs

*Note: Other Doctoral Trained includes chiropractors, dentists, optometrists, pharmacists, & podiatrists.


Nursing and allied health jobs have grown rapidly

Percent Growth Since 2000, Health Care Fields vs. All Occupations, North Carolina, 2000-2016

South Carolina’s OTA workforce grew 52% in 5 years

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Therapy Assistants</td>
<td>52.3%</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>45.9%</td>
</tr>
<tr>
<td>Nurse Practitioners</td>
<td>33.5%</td>
</tr>
<tr>
<td>Physical Therapist Assistants</td>
<td>24.7%</td>
</tr>
<tr>
<td>Pediatricians</td>
<td>22.4%</td>
</tr>
<tr>
<td>Specialist Physicians</td>
<td>19.9%</td>
</tr>
<tr>
<td>Internal Medicine Physicians</td>
<td>19.6%</td>
</tr>
</tbody>
</table>

Over the past 15 years, NC has seen fast growth in the NP and PA workforce

Cumulative rate of growth per 10,000 population since 2000:
Physicians, Nurse Practitioners and Physician Assistants in North Carolina

Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board and North Carolina Board of Nursing, 2000 to 2015.
Figures include all active, instate, non-federal, non-resident-in-training physicians, and all active, instate PAs and NPs licensed as of October 31 of the respective year.
Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
NP and PA workforce is growing quickly in SC, too

Percentage change in the size of selected occupations in the healthcare workforce in South Carolina 2010 - 2015

- Occupational Therapy Assistants: 52.3%
- Physician Assistants: 45.9%
- Nurse Practitioners: 33.5%
- Physical Therapist Assistants: 24.7%
- Pediatricians: 22.4%
- Specialist Physicians: 19.9%
- Internal Medicine Physicians: 19.6%

Increased workforce supply... but what’s this I hear about “physician shortage?”
News of physician shortages grabs headlines

The New York Times

Doctor shortage, increased demand could crash health care system

By Jen Christensen, CNN
updated 5:37 PM EDT, Wed October 2, 2013

Some doctors worry patients who can’t get in to see primary care physicians will clog up hospital emergency rooms.

The Washington Post

In the U.S., Put more on Exhausted Physicians

Success of health reform hinges on hiring 30,000 primary care doctors by 2015
Gasp!

THE AMERICAN DOCTOR SHORTAGE

IT'S COMING. IT MATTERS. IT'S TIME TO ACT.

SEE THE FUTURE

Source: http://www.thedoctorshortage.com/pages/shortage
Experts disagree about whether the United States will face a shortage

- AAMC projects shortfalls of between 12,500 and 31,000 primary care physicians and 46,100 and 90,400 total physicians by 2025\(^1\)

- Federal government (HRSA) forecasts shortage of 6,400 primary care physicians in 2020\(^2\) with increased use of NPs and PAs

- We released model in July 2014 that suggests overall supply will be adequate, more pressing issue is maldistribution

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\(^1\) AAMC, https://www.aamc.org/download/426242/data/ihsreportdownload.pdf?cm_mmc=AAMC-_ScientificAffairs-_PDF-_ihsreport

Fears of physician shortages create headlines but we see steady increase in supply in NC...

Physicians per 10,000 population, North Carolina and United States, 1980 - 2013

...and in South Carolina

Our FutureDocs model highlights that we are a nation of “haves” and “have-nots”
The real issue is maldistribution

Physicians per 10,000 population by Persistent Health Professional Shortage Area (PHPSA) Status, North Carolina, 1980 - 2015

SC is losing primary care physicians in rural areas

<table>
<thead>
<tr>
<th>Type of Area</th>
<th>Primary Care Physicians per 100,000 Population</th>
<th>Growth %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan</td>
<td>94.5</td>
<td>103.1</td>
</tr>
<tr>
<td>Micropolitan</td>
<td>80.1</td>
<td>91.0</td>
</tr>
<tr>
<td>Non-Metro (Rural)</td>
<td>50.5</td>
<td>46.0</td>
</tr>
</tbody>
</table>

The questions we need to be asking:
Where are there shortages?
How does this affect care delivery?
20 counties have comparatively few primary care physicians; 3 counties have none

Physicians with a Primary Area of Practice of Primary Care per 10,000 Population in 2016

Rate per 10,000 population
(# of counties)

- 0 (3)
- less than 3.5 (20)
- 3.5 to 7.0 (51)
- 7.0 to 14 (25)
- 14 to 21 (1)

NC = 7.0 per 10,000

N = 7,060

Notes: Data include active, licensed physicians in practice in North Carolina as of October 31 of each year who are not residents-in-training and are not employed by the Federal government. Physician data are derived from the North Carolina Board of Medicine. County estimates are based on primary practice location. Population census data and estimates are downloaded from the North Carolina Office of State Budget and Management via NC LINC and are based on US Census data. Source: North Carolina Health Professions Data System, Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Created October 05, 2017 at https://hpsis.sirsdemo.unc.edu/.
Relative to population, physicians aren’t evenly distributed
Are NPs and PAs the answer?
Maybe not. There is a widening gap between NP supply in rural and urban counties.
And like physicians, NPs and PAs are also specializing...

Percent of Nurse Practitioners and Physician Assistants Reporting a Primary Care Specialty, 1997-2011*, North Carolina

Notes: Data for primary specialty include active, in-state NPs indicating a primary specialty of family practice, general practice, internal medicine, Ob/Gyn, or pediatrics, who were licensed in NC as of October 31 of the respective year. Data for physician extender type include active-instate NPs indicating a physician extender type of family nurse practitioner, adult nurse practitioner, ob/gyn nurse or pediatric nurse practitioner who were licensed as of October 31 of the respective year. Source: North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the NC Medical Board. Chart prepared on 12/07/2012.
Lots of discussion about primary care but 26 NC counties have no general surgeon
And 9 SC counties have no general surgeon

Concentration of General Surgery Physicians Per 10,000 Population

Counties in SC range from a low of 0 to a high of 3.2 General Surgery Physicians per 10,000 county residents

- 2.0 to 3.2 (1)
- 1.0 to 1.99 (6)
- 0.60 to 1.99 (9)
- 0.25 to 0.59 (19)
- 0.1 to 0.24 (2)
- 0 (9)

Note: The ( ) shows the total number of counties with this range
One reason is increasing specialization in surgery: Pediatric surgical FTEs double between 2013 and 2030 in US.
Speaking of specialization, general internal medicine will experience a 15% decline.
Family Medicine FTEs forecast to be steady but per capita supply will decline.

**Family Medicine**

**Physician FTEs, 2013-2030**

- Baseline 2013: 71,860
- Projected 2030: 73,980

**Physician FTEs per 10,000 Population, 2013-2030**

- Baseline 2013: 2.3
- Projected 2030: 2.0
Why doesn’t anyone want to become a psychiatrist?

Physicians and Psychiatrists per 10,000 Population, North Carolina, 1995-2013
Nursing Education
There is a national push to move to a BSN+ trained nursing workforce. What does this mean for rural areas?

Percent of SC RN’s with a Bachelor’s Degree or Higher, 2008-2014

In NC, ADN nurses nearly twice as likely to work in rural counties

North Carolina Nursing Workforce by Rural Status and Highest Degree, 2012

- Urban (n=67,643)
  - Bacc or Higher: 88%
  - ADN: 77%

- Rural (n=13,930)
  - Bacc or Higher: 12%
  - ADN: 23%

Note: Data include RNs who were actively practicing in North Carolina as of October 31, 2012. Source: North Carolina Health Professions Data System, with data derived from the NC Board of Nursing, 2012. Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.

Rural source: US Census Bureau and Office of Management and Budget, March 2013. "Core Based Statistical Area" (CBSA) is the OMB’s collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.
In NC, ADN nurses twice as likely to work in most economically distressed (Tier 1) counties

North Carolina Nursing Workforce by Economic Tier and Highest Degree, 2012

- Tier 3 (Least Distress) (n=51,082): 70% Bacc or Higher, 53% ADN
- Tier 2 (Moderate Distress) (n=21,028): 22% Bacc or Higher, 31% ADN
- Tier 1 (Most Distress) (n=9,463): 8% Bacc or Higher, 17% ADN


Note: Data include RNs who were actively practicing in North Carolina as of October 31, 2012. Source: North Carolina Health Professions Data System, with data derived from the NC Board of Nursing, 2012. Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, UNC-CH.
ADNs are better distributed across state while baccalaureate+ nurses cluster around hospitals

Distribution of ADNs and Baccalaureate or Higher RNs Actively Practicing in North Carolina in 2012

Note: Dots are scattered randomly within ZIP code areas. Data include RNs who were actively practicing in North Carolina who have an ADN as their highest degree or who have a BSN or higher as their highest degree. Data exclude 377 RNs with inadequate zip codes for mapping purposes.


Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Rural source: US Census Bureau and Office of Management and Budget, March 2013. "Core Based Statistical Area" (CBSA) is the OMB’s collective term for Metropolitan and Micropolitan Statistical areas. Here, nonmetropolitan counties include micropolitan and counties outside of CBSAs.
Do mobility nurses behave more like ADNs or baccalaureate+ nurses? It depends

After seeking additional education, mobility nurses behave:

More like BSN+ nurses in terms of specialty and setting

- Less likely to practice in home care, hospice, long-term care and geriatrics

More like ADN nurses in terms of geographic dispersion.

Compared to BSN entry nurses:

- Twice as likely to practice in rural
- Three times more likely to practice in NC’s Tier 1 counties
A rural health access issue: Obstetric Care in NC
Closures of obstetric delivery units in rural NC have made state and national headlines.

Rural Maternity Wards Are Closing, And Women’s Lives Are On The Line

In the mountains of western North Carolina, pregnant women don’t know if they will deliver.

By Catherine Pearson and Frank Taylor | 09/25/2017 05:45 am ET | Updated Sep 25, 2017

Blue Ridge Regional Hospital delivered hospitals forced to close their birth units.

Rural Hospitals Are Dying and Pregnant Women Are Paying the Price

Heavily reliant on Medicaid dollars, small hospitals shut down maternity wards just to stay afloat.

By LISA RAB | October 03, 2017

BUNN, N.C.—Three years ago, Lucia Parker gave birth to her first child surrounded by people she loved. Her mother, sister, and husband were by her side at Blue Ridge Regional Hospital, and the nurses attending her were family friends. Each of them took turns massaging her back. They lifted her out of a
Lack of rural obstetric services is a national problem

“It is an issue facing rural communities nationwide: From 2004 to 2014, 9 percent of all rural counties lost access to hospital obstetric services, and more than half of all rural counties in this country are now without a single local hospital where women can get prenatal care and deliver babies.”

Maternity ward closures in NC have increased drive times for deliveries

The number of physicians providing deliveries since 2000 has been flat.

Total in 2016 = 933
0.5% increase since 2000

Note: Data include active, instate, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide obstetric deliveries. Sources: North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.
Fewer Family Medicine physicians deliver babies now

Note: Data include active, instate, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31 of each year who reported that they provide obstetric deliveries. Specialties are based on self-reported Primary Area of Practice. Sources: North Carolina Health Professions Data System, with data from the North Carolina Medical Board..
Data include active licensed certified nurse midwives in practice in North Carolina as of October 31 of each year. Certified nurse midwife data are derived from the North Carolina Board of Nursing. Population census data and estimates are downloaded from the North Carolina Office of State Budget and Management via NC LINC and are based on US Census data. Source: North Carolina Health Professions Data System Program on Health Workforce Research and Policy Cecil G. Sheps Center for Health Services Research University of North Carolina at Chapel Hill.
In 2011 only 4% of NC family medicine physicians provided obstetric deliveries, clustered in western and central counties.

Family Medicine Physicians Who Provide Routine Obstetric Deliveries per 10,000 Childbearing Age* Females, North Carolina, 2011

Note: *Childbearing age: 15-44 years. Data include active, instate, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported a primary area of practice of “Family Medicine.” Sources: North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.
How do we get more physicians to practice in rural areas?
Most of North Carolina’s physicians completed medical school outside NC

Active Licensed North Carolina Physicians by Medical School Location, 1990-2016

Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board, 1990 to 2016; Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians.
International Medical Graduates are a higher percentage of the workforce in economically distressed counties.

NC Physician Workforce by 2016 NC Economic Tier of Practice County and Medical School Location.

- **Tier 3** Least Distressed (n=16,908):
  - North Carolina: 23%
  - USA (Not NC): 64%
  - Foreign Country: 13%

- **Tier 2** (n=3,353):
  - North Carolina: 23%
  - USA (Not NC): 56%
  - Foreign Country: 21%

- **Tier 1** Most Distressed (n=1,606):
  - North Carolina: 24%
  - USA (Not NC): 54%
  - Foreign Country: 22%
Of NC educated physicians, largest proportion went to UNC-CH but ECU is on the rise

Active Licensed NC Educated Physicians by Medical School Location, 1990-2016

Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board, 1990 to 2016; Figures include all licensed, active, instate, non-federal, non-resident-in-training physicians.
More public medical school grads practice in state

Percent of Graduates from Classes of 1990-2015 in Active Practice in 2016 NC Physician Workforce

- ECU: 47.9%
- UNC: 35.4%
- WF: 28.4%
- DUKE: 15.7%
Only 45 NC counties represented in 3 UNC-CH medical school classes, average class drawn from just 27 counties

Matriculants by North Carolina High School County
UNC-CH Medical School Classes 2010, 2011 and 2012

Matriculants by NC High School County
(# of Counties)

- 25 to 54 (4)
- 5 to 24 (6)
- 3 to 4 (10)
- 2 (9)
- 1 (16)
- No Matriculants (55)

N = 331

Source: OME, UNC-CH SOM.
Produced By: Program on Health Workforce Research & Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
Which means you go to UNC-CH medical school if you live near an interstate

Matriculants by North Carolina High School County
UNC-CH Medical School Classes 2010, 2011 and 2012

Matriculants by NC High School County
(# of Counties)

- Nonmetropolitan County* (54)
- Approximate Interstate Routes

Source: OME, UNC-CH SOM.
Produced By: Program on Health Workforce Research & Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
Only 14 matriculants attended high school in a Tier 1 (most economically distressed) county

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier</td>
<td>2010 #</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
</tr>
</tbody>
</table>

Note: Used 2011 definitions. Tier 1 is most distressed.

Source: OME, UNC-CH SOM.
Produced By: Program on Health Workforce Research & Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
Only 7% of incoming classes from rural counties

Students who attended a North Carolina High School by Rural/Urban Status

<table>
<thead>
<tr>
<th>Status</th>
<th>#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>307</td>
<td>93%</td>
</tr>
<tr>
<td>Rural</td>
<td>23</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>330</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: 35 students missing high school state.

Rural counties represented in 2010, 2011 and 2012 classes

<table>
<thead>
<tr>
<th>County</th>
<th># matriculants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery</td>
<td>1</td>
</tr>
<tr>
<td>Beaufort</td>
<td>2</td>
</tr>
<tr>
<td>Caswell</td>
<td>1</td>
</tr>
<tr>
<td>Cleveland</td>
<td>2</td>
</tr>
<tr>
<td>Harnett</td>
<td>1</td>
</tr>
<tr>
<td>Lenoir</td>
<td>3</td>
</tr>
<tr>
<td>Moore</td>
<td>3</td>
</tr>
<tr>
<td>Rutherford</td>
<td>1</td>
</tr>
<tr>
<td>Sampson</td>
<td>2</td>
</tr>
<tr>
<td>Stanly</td>
<td>2</td>
</tr>
<tr>
<td>Tyrrell</td>
<td>1</td>
</tr>
<tr>
<td>Watauga</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: OME, UNC-CH SOM.
Produced By: Program on Health Workforce Research & Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
UNC medical school expanding rural training opportunities

Programs and Opportunities

The UNC School of Medicine is committed to educating, training, and placing physicians across North Carolina to address health care disparities. To learn more about all programs and engagement opportunities for rural and underserved medicine through The UNC School of Medicine, please explore the following programs.

- Kenan Primary Care Medical Scholars
- FIRST Program
- NC Rural Promise Scholarship
- Rural Inter-Professional Health Initiative
- Primary Care & Population Health Scholars Program
- Community Engagement Projects
Graduate Medical Education
Residents trained in community based settings more likely to practice in rural counties

### Urban versus rural location for community-based vs. non-community-based residents

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>Not Community-Based</td>
<td>6,363</td>
<td>711</td>
</tr>
<tr>
<td>Community-Based</td>
<td>68</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>6,431</td>
<td>725</td>
</tr>
</tbody>
</table>

Note: 2 residents missing information. Pearson chi2(1)=4.3902, Pf=0.036

Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the NC Medical Board, 2012.
Completing an AHEC residency increases in-state retention

50% (n=1,420) of physicians who complete an NC AHEC residency stay in North Carolina to practice

compared to

38% (n=5,879) of physicians who complete a non-AHEC residency stay in North Carolina to practice

Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the American Medical Association Masterfile, 2013. "Active" includes federal, as well as non-patient care activities such as teaching, research, administration, etc.
Retention rates are even higher for residents who complete primary care AHEC residencies.

Primary Care Physicians Practicing in NC who Completed an NC Residency, AHEC vs. Non-AHEC Residency, 2013

Source: NC Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, with data derived from the American Medical Association Masterfile, 2013. "Active" includes federal, as well as non-patient care activities such as teaching, research, administration, etc.
Retention much higher for physicians completing both UME and GME instate

As of 2014:

- 39% NC medical graduates remain in state
- 42% NC residency graduates remain in state
- 67% of Physicians completing BOTH NC Med School & Residency remain in state

Source: AAMC 2015 State Data Book, with data derived from the 2014 AMA Physician Masterfile.
Many points where can intervene to promote distribution of workforce to meet NC’s population health needs

- **Colleges & Universities**: Recruit students from rural and underserved communities
- **Health Professional School**: Support programs like UNC’s Kenan Primary Care Medical Scholars Program
- **Residency Training**: Actively target training funds to needed specialties and geographies; Support community-based residency training
- **Initial Practice Location**: Fund practice support programs through AHEC, Office of Rural Health and Community Care, Community Practitioner Program
- **Ongoing Practice**: Support recruitment and loan repayment programs
Big picture health system change: *What does it mean for the workforce?*
Looking to the future...

- Cost pressures are driving change *with* or *without* health reform
- New models of care aim to lower costs, enhance quality, improve population health and lower provider burnout
Some Predictions

- Health care jobs will continue to grow rapidly
  - Supply will grow but workforce will still be maldistributed
- Changing care delivery and payment models are/will:
  - Shift care and workforce from inpatient to community settings
  - Generate new professions and roles
- Career ladders are needed
Care coordination within health care system is big and getting bigger

- Increased incentives to keep patients out of hospital
  - Fines that penalize hospitals for readmissions

- In January 2015, Medicare began paying $42/month for managing care for patients with two or more chronic conditions

- Health care teams include nurses, pharmacists, social workers, dieticians and others

- Most of what we see that is termed “care coordination” is happening within the health care system

- Nurses and social workers often take on roles as care coordinators, case managers and transition specialists
Social workers play increasingly important boundary spanning roles

Social workers serving three functions on integrated behavioral health/physical health teams:

- **Behavioral health specialists**: provide interventions for patients with mental health, substance abuse and other behavioral health disorders

- **Care Managers**: coordinate care of patients with chronic conditions, monitor care plans, assess treatment progress and consult with primary care physicians

- **Referral role**: connect patients to community resources including housing, transportation, food, etc.

Boundary spanning roles are growing quickly

“Boundary spanning” roles reflect shift from visit-based to population-based strategies

Two examples:

<table>
<thead>
<tr>
<th>Panel Managers</th>
<th>Health Coaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assume responsibility for patients between visits. Use EHRs and patient</td>
<td>Improve patient knowledge about disease or medication and promote healthy</td>
</tr>
<tr>
<td>registries to identify and contact patients with unmet care needs. Often</td>
<td>behaviors. May be medical assistants, nurses, health educators, social</td>
</tr>
<tr>
<td>medical assistants but can be nurses or other staff</td>
<td>workers, community health workers, pharmacists or other staff</td>
</tr>
</tbody>
</table>

"Boundary spanning" roles reflect shift from visit-based to population-based strategies.
Look within community to help address population health needs

Two more examples:

<table>
<thead>
<tr>
<th>Community Paramedics</th>
<th>Community Health Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile paramedics for non-emergency home visits. Medical evaluations, behavioral health crisis intervention, health coaching, patient education. Goal to reduce unnecessary ED use.</td>
<td>Formal or informal role. Trusted community member who provides outreach, education, informal counseling, social support, etc. Point of contact for people unfamiliar/distrustful of those outside of their community</td>
</tr>
</tbody>
</table>
And new health care teams are emerging: Community Aging in Place—Advancing Better Living for Elders (CAPABLE) Teams

- An Occupational Therapist, a Registered Nurse, and a handyman form team allowing seniors to age in homes
- Provide assistive devices and make home modifications to enable participants to navigate their homes more easily and safely
- After completing five-month program, 75 percent of participants (n=281 adults age 65+) had improved their performance of ADLs
- Symptoms of depression and ability to perform instrumental ADLs such as shopping and managing medications also improved
- Health systems are testing CAPABLE on a larger scale

http://nursing.jhu.edu/faculty_research/research/projects/capable/

It’s complicated

• New roles may be filled by existing staff or new hires

• Some roles have similar functions but different titles—care managers and case managers

• Other roles have different functions but same name—patient navigators

• Depending on setting and patient population, roles are often filled by different types of providers—medical assistants, social workers, nurses, etc.
Questions?

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North Carolina Health Professions Data System
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http://www.healthworkforce.unc.edu