A Conversation on Future Health Care Providers in Michigan: Meeting the Needs of Michigan’s Health Plans

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Why should health plans pay attention to the supply of health care providers?

▲ Health care provider supply necessary (though not sufficient) to support:
  ▪ Access to care for members
  ▪ Quality of care to members
  ▪ Affordability

▲ Long lead times to alleviate shortages:
  ▪ Physicians: 11+ years of post-secondary education
  ▪ Advanced practice nurses, physician assistants: 7+ years
  ▪ Pharmacists: 6 to 8 years
## Current supply of selected health care providers in Michigan

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Licensed as of 7/2/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>32,528</td>
</tr>
<tr>
<td>Physician Assistants (PAs)</td>
<td>4,421</td>
</tr>
<tr>
<td>Nurse Practitioners (NPs)</td>
<td>5,277</td>
</tr>
<tr>
<td>Certified Registered Nurse Anesthetists (CRNAs)</td>
<td>2,556</td>
</tr>
<tr>
<td>Certified Nurse Midwives (CNMs)</td>
<td>332</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>13,733</td>
</tr>
<tr>
<td>Dentists</td>
<td>7,627</td>
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<tr>
<td>RNs</td>
<td>140,083</td>
</tr>
<tr>
<td>EMTs</td>
<td>12,835</td>
</tr>
</tbody>
</table>

**NOTE:** These figures really represent the potential provider supply -- not all licensed providers are participating in the workforce or practicing in Michigan.

*Source: Michigan Department of Licensing and Regulatory Affairs, June 2014 active license counts report.*
How can we measure the adequacy of the provider supply?

▲ Population-to-provider ratios (but – wide variation with little correlation to health outcomes)

▲ Federal Health Professional Shortage Area (HPSA) and Medically Underserved Area (MUA) designations

▲ Medicare access surveys

▲ Labor market indicators, where measured, e.g.:
  ▪ Proportion of practices accepting new patients
  ▪ Average wait times for appointments
  ▪ Evidence of upward pressure on provider wages
  ▪ Vacancy rates and length of time to fill vacancies
  ▪ Provider recruiting firm data on number and nature of vacancies, fill rates, signing bonuses, salary trends

▲ Alignment with patient culture and language another dimension of adequacy of provider supply
Primary care health professional shortage areas

Defined as fewer than 1 primary care physician per 3,500 people

Source: Health Resources and Services Administration
Mental health professional shortage areas

Defined as fewer than 1 psychiatrist per 30,000 people

Source: Health Resources and Services Administration
Other evidence on adequacy of Michigan physician supply

▲ Physician practice capacity reported as of 2012:
  ▪ 12% not accepting new patients
  ▪ 46% accepting a few new patients
  ▪ 42% have lots of capacity for new patients
  ▪ These proportions have been fairly consistent since 2006

  Source: MDCH Survey of Physicians, Survey Findings 2012

▲ Survey of Michigan physicians prior to ACA concluded:
  “primary care physicians in Michigan overwhelmingly anticipate having capacity to serve more patients with all forms of health coverage, including Medicaid.”

  Source: Center for Healthcare Research and Transformation statewide study, Primary Care Capacity and Health Reform: Is Michigan Ready? (January 2013)
Adequacy of the future provider supply: Considerations

▲ Growth and aging of Michigan population.
▲ Impact of expanded coverage through the ACA Marketplace and Healthy Michigan program.
▲ Aging and impending retirements in the provider population, especially physicians and nurses.
▲ Potential pent up retirements due to providers delaying retirement since the recession.
▲ Declines in hours worked, potentially accelerated by trend toward hospital acquisition of physician practices.
▲ Changing demands for providers in Michigan (State Innovation Model and other initiatives – patient centered medical homes, team-based care, reductions in readmissions).
One tool: Projection models of supply and demand

- Health Resources and Services Administration National Center for Health Workforce Analysis models (physicians, nurses, PAs, pharmacists, dentists, etc)
- Association of American Medical Colleges models (physicians)
- Professional Association and Specialty Society models and studies (e.g., American Academy of Family Practitioners Robert Graham Center)
- Bureau of Labor Statistics Occupational Outlook projections (over 60 health care provider and health support occupations)
- State-specific models
All models forecast a significant shortage of physicians in the coming decades, both primary care and specialists, based on:

- Population growth
- Population aging
- Projected influx of new entrants from training pipeline
- Estimated physician deaths and retirements over time, by age/sex
- Increase in demand due to ACA expanded insurance coverage
- **Current patterns of care delivery**

However, models that include other provider types and allow for changes in the provider mix used in care delivery find that the increase in PAs and APNs, for example, has the potential to offset physician shortages, if fully leveraged.
Graduates from U.S. NP Programs have doubled in a decade

Data Source: HRSA compilation of data from the AACN Annual Survey (in collaboration with the National Organization of Nurse Practitioner Faculties for collection of nurse practitioner data). Note: Counts include master’s and post-master’s degree NP and NP/clinical nurse specialist graduates as well as bachelor’s-to-doctorate of nursing practice graduates.
Annual certifications of U.S. PAs have grown by 50% in a decade

Changing composition of the U.S. clinician workforce

**2010**
- Physicians: 75%
- Physician Assistants: 12%
- Nurse Practitioners: 8%
- CRNAs: 4%
- Certified Nurse Midwives: 1%

1.1 PAs for every 10 physicians
1.6 NPs for every 10 physicians

**2025**
- Physicians: 66%
- Physician Assistants: 19%
- Nurse Practitioners: 11%
- CRNAs: 3%
- Certified Nurse Midwives: 1%

1.7 PAs for every 10 physicians
2.8 NPs for every 10 physicians

*Source: Unpublished Altarum U.S. clinician supply projections*

Current ballpark Michigan ratios:
- 1.4 PAs for every 10 physicians
- 1.6 NPs for every 10 physicians
Evidence from Michigan-specific projection models

▲ Center for Health Workforce Studies 2006 study projecting physician supply and demand to 2020. [Note: study was pre-recession, pre-ACA, and pre-2010 Census]. Baseline scenario: 7% shortage in primary care (941 physicians) and 15% shortage of specialists (3,503 physicians) by 2020.

▲ Robert Graham Center 2013 state-level projections of primary care physician demand. Baseline scenario: increase in demand of 862 primary care physicians by 2030, a 12% increase over 2010. Factors: population growth (16%), aging (67%) and ACA expanded coverage (16%).
More Michigan-specific estimates of future provider demand

This portion of an infographic by the Michigan Health Council shows projected increases in demand for various types of health care providers in Michigan. Given training pipelines, expected retention, and projected retirements, will supply keep up?

By 2020, Michigan will need to increase the number of practicing health care professionals by more than 15%.

While we often read about physician and nursing shortages, we will need 14% more occupational therapists, 16% more physical therapists, and 25% more home health aides.

Michigan needs to educate and retain thousands more health care professionals at all levels.
Michigan population is growing slowly, but aging. In a decade, one in five people will be 65 or older. By 2030, under 65 population will decline by 9% but 65 and older will grow by over 50%.

Source: Based on projections developed for the Michigan Department of Transportation by Dr. Donald R. Grimes and Dr. George A. Fulton of the Institute for Research on Labor, Employment, and the Economy, University of Michigan, March 2012. Original projections modified by the Michigan Department of Technology, Management, and Budget to be fully consistent with population counts from the 2010 Census and reflect actual statewide survival patterns between the 2000 and the 2010 Census for the population age 65 and over.
Impact of ACA: higher than expected enrollment in MI

▲ ACA Marketplace plans started coverage January 2014
  ▪ Total eligible for Marketplace 725,000
  ▪ Expert predictions for MI first year enrollments ranged from 129,000 to 187,000
  ▪ Actual enrollment data as of April 19, 2014:
    • Identified by Marketplace as Medicaid/CHIP eligible: 67,217
    • Selected a Marketplace Plan: 272,539

Source: Kaiser Family Foundation State Marketplace Statistics

▲ Healthy Michigan Plan (Medicaid expansion) started April 2014
  ▪ Total eligible for Healthy Michigan: 477,000
  ▪ First year enrollment goal: 322,000
  ▪ Enrollment as of July 14, 2014 (first 3.5 months): 326,167

Source: Michigan Department of Community Health (MDCH)
Impact of ACA: overall impact and expectations

- Initial national experience not yet pointing to widespread provider shortages
- National health care employment just starting to pick up in second quarter of 2014 (Bureau of Labor Statistics)
- In Michigan, higher than expected enrollment, but hundreds of thousands may yet be added in coming months and years.
- Prior to ACA, Michigan had a higher-than-average % of adults with a “usual source of care” (81% versus 74%). Still, 54% of the uninsured in Michigan did not have a usual source of care.
  
  Source: 2012 Behavioral Risk Factor Surveillance System

- Even for those enrolled, likely lags in seeking care, obtaining an appointment, being diagnosed, scheduling treatment, etc.=> full effect on demand for providers not yet felt.
The aging provider workforce in Michigan

▲ Over half, 52.9%, of active physicians in Michigan are age 55 or older
▲ About half of Michigan APNs are age 55 or older:
  ▪ 50% of NPs
  ▪ 44.5% of CRNAs
  ▪ 52.1% of CNMs

Summary: Concerns about Michigan health care providers

▲ Shortages of primary care and mental health providers have been designated in particular areas throughout the state, but the major concern overall is for the future.

▲ No dramatic ACA impact yet, but may be lag in use of services, and over half of eligible population not yet enrolled in Marketplace plan or Healthy Michigan.

▲ Michigan population projected to grow slightly, but growth is concentrated in older populations with higher health care needs.

▲ Increased provider retirements will likely coincide with increase in elderly, high-need population in Michigan. Aging providers may have physical limitations that affect their choice of practice setting. This will also impact supply of faculty to train new providers.

▲ Likely shortages of physicians under current delivery patterns.

▲ Likely increase in demand for non-physician clinicians and non-clinician staff under new models of delivery.
Potential strategies to address provider shortages

1) Increase training capacity in U.S. and in Michigan
2) Shorten length of training path
3) Increase workforce participation of trained providers
4) Increase provider time spent in patient care
5) Incentivize providers to practice where needed

6) Fully leverage all staff to the “top of their training”
7) Support use of new provider types
8) Support use of new delivery settings or modes of care
9) Leverage providers through innovative use of technology
10) Support increased patient self care
Strategy (1): Increase training capacity – physicians

- U.S. undergraduate medical education on track to grow by 30% over 2006 levels (16,000/year to 21,000/year)
- Graduate medical education (GME) growing more slowly. Congress capped Medicare reimbursement at 1997 number of slots.
- MI higher than average medical school and residency enrollment:
  - 43 medical students/100,000 people (MI ranks 12th)
  - 50 residents/100,000 people (MI ranks 3rd)
- MI retention of physicians about average (44% of medical school grads and 44% of residents trained in MI stay here). 50% of active Michigan physicians grew up here.
- Does the nation have enough GME slots? Does Michigan? How should we pay for GME?
- ACA: Teaching health centers for community-based primary care
  - Detroit Wayne County Health Authority and MSU, rotations through clinics in Detroit
  - Hamilton Community Health Network in Flint
Strategy (2): Shorten length of training path

▲ Reducing length of medical school to 3 years:
- Usually involves elimination of electives, attendance at summer classes, and the provisional guarantee of a residency.
- Currently offered at only a handful of the nation's 141 medical schools (e.g., NYU, Texas Tech, Columbia).
- May be best suited to physicians who are clear about their specialty path (e.g., primary care) and can handle the intensity.

▲ “Assistant physicians”
- Missouri response to severe shortages: medical school graduates may practice medicine in underserved areas as an “assistant physician,” with some limitations.
- Must be supervised in person for 30 days, then can then treat patients and prescribe most medications, under collaborative agreement with licensed physician.

▲ But – some trends toward increasing training requirements:
- PharmD
- Doctorate in Nursing for advanced practice
Strategy (3): Increase workforce participation

▲ Difficult for health plan to influence
▲ Impacted by overall economic conditions
▲ Working conditions can also influence participation rates
▲ Ease of obtaining licensure may impact participation of providers newly entering the state
Strategy (4): Increase provider time spent in patient care

▲ Delivery process improvement
  ▪ Lean/Six Sigma
  ▪ EMRs
  ▪ Other productivity enhancements
  ▪ Reimbursement mechanisms with greater provider flexibility (e.g., bundled or capitated payments) may allow for more investment in practice process improvement

▲ Reduce administrative burden
  ▪ Improve ease of eligibility checking and billing processes
  ▪ Coordinate quality measure reporting requirements
Strategy (5): Incentivize practice in locations most needed

- Visa policies for internationally trained providers

- National Health Service Corps (NHSC):
  - Places physicians, NPs, and PAs in underserved areas
  - Up to $50,000 in educational loan repayment to practice at least 2 years in Health Professional Shortage Area
  - Funding for NHSC increased under ACA

- Other incentive programs:
  - Loan forgiveness programs
  - Reimbursement rate adjustments for rural practice
**Strategy (6): Fully leverage all staff**

▲ **Advantages:**
- Maximizes productivity of current and projected provider supply; some argue that many types of providers are underutilized.
- Decreases overall training time and expense required to maintain adequate provider workforce.
- Reduces health care delivery costs.
- May better match skills and training to tasks.

▲ **Potential barriers:**
- State scope of practice laws and policies
- Inter-professional resistance
- Patient resistance
Leveraging clinician supply

▲ Physician supply can be leveraged through greater use of other clinician types (PAs, APNs).
▲ Clinicians (physician, PA, APN) can be leveraged through greater use of:
  ▪ Licensed non-clinicians (RNs, LPNs, pharmacists, psychologists, therapists)
  ▪ Non-licensed personnel (medical assistants, office staff, navigators, health coaches, community lay workers)
▲ Studies have found that up to 24% of a primary care physician’s time could be saved by delegating to other team members.

*(Bodenheimer and Smith, “Primary Care: Proposed Solutions To The Physician Shortage Without Training More Physicians,” Health Affairs, 32, no.11 (2013):1881-1886)*

“It’s helpful to remember that once upon a time FBI agents had law degrees; flight attendants were required to be registered nurses; and computer programmers left college with electrical engineering degrees.”

Role of NPs and PAs in Michigan

▲ NPs and PAs practice under the supervision or delegation of a physician.
▲ NPs are not called out specifically in state practice acts, only RNs.
▲ PAs may create private corporations if at least one physician is co-owner.
▲ Michigan Senate Bill 2 addressing NPs remains in play this summer.
▲ NPs are recognized as providers by most insurers in Michigan. Medicare and Medicaid require written “collaboration agreement” with a physician.
▲ PAs generally bill under the physician’s ID (except for Medicare), and may be reimbursed at lower rates.
Michigan NP “restricted practice” environment

2014 Nurse Practitioner State Practice Environment

Source: American Association of Nurse Practitioners
Strategy (7): Support use of new provider types (1 of 2)

▲ Community health worker (CHW)/promotora
- Lay worker liaison between community and health care/social services
- Greater cultural competency
- Improve access, compliance

▲ Dental therapist
- “Mid-level” oral health professional -- between dentist and hygienist
- Successfully deployed and evaluated in Minnesota, Alaska.

▲ Grand-aide
- Layperson who receives training as an aide; may have prior medical training
- “Temperament of a good grandparent”
- Supervised by nurse or physician
- Telephone, home visits with technology
- Preventive care, transitional care, chronic disease management
Strategy (7): Support use of new provider types (2 of 2)

▲ Community paramedic
- Leverage training, accessibility, trust in paramedics beyond traditional emergency response and transport
- Continue to operate under physician supervision
- Community-specific programs in CO, MN, TX
- Potential services: transport or assist in accessing non-ED resources, partner with CHWs and primary care physicians in underserved areas, provide follow-up care to recent discharges.

▲ Primary care technician (PCT)
- The proposed model: PCT is to primary care physician as EMT is to emergency physician
- PCTs would operate remotely, in communities and underserved areas, linked by technology, “providing basic preventive, minor illness, and stable chronic disease care in rural and resource-deprived communities.”
A few references on new provider types

- Kizer et al, “Community Paramedicine: A Promising Model for Integrating Emergency and Primary Care” prepared for the California Healthcare Foundation, July 2013
- Kellerman et al, “Primary Care Technicians: A Solution To The Primary Care Workforce Gap” Health Affairs, November 2013 vol. 32 no. 11 1893-1898. Also see this blog.
- Garson, et al, “A New Corps Of Trained Grand-Aides Has The Potential To Extend Reach Of Primary Care Workforce And Save Money,” Health Affairs, May 2012 vol. 31 no. 5 1016-1021
- Minnesota Department of Health, “Early Impacts of Dental Therapists in Minnesota,” February 2014
Strategy (8): Support new delivery settings or modes

▲ Retail clinics
  ▪ CVS Caremark, Walgreens, Rite Aid
  ▪ Mostly staffed by NPs, support staff
  ▪ Convenient locations and hours
  ▪ Immunizations, common minor ailments

▲ Urgent Care Centers
  ▪ Independent clinics
  ▪ Affiliated with hospital/health system
  ▪ Evening and weekend hours
  ▪ Often have lab and radiology on-site
  ▪ Staffed by physicians, NPs, PAs, support staff

▲ Group or shared medical visits (e.g., diabetes management)
  ▪ Leverages providers
  ▪ Benefits of shared experiences, different learning environment
“Telemedicine” or “Telehealth”
- Phone and video visits between patients and their providers
- Communication via secure email and instant messaging
- Image-based “store and forward” analysis and diagnosis
- On-line services for minor ailments
  - e.g., Teledoc, NowClinics, MeMD
  - 24/7, staffed with physicians, NPs, PAs
  - Providers can prescribe non-controlled substances
  - Covered under some insurance plans
- Combination of retail clinic and telehealth
  - e.g., NowClinics at select RiteAid stores in Michigan

Evidence to date supports benefits in increased access; cost-effectiveness less clear.
Innovative use of technology: potential barriers

▲ Cross-state licensure issues
  ▪ Federation of State Medical Boards Interstate Medical Licensure Compact (current draft July 2014). Potentially ready for consideration by state legislators in 2015.

▲ Gaps in telecommunications infrastructure

▲ Reimbursement policies

▲ Data privacy/HIPAA concerns

▲ Patient trust and comfort level
  ▪ 2013 survey found 69% of respondents said they would be willing to communicate with their doctor or nurse using email, 49% would be willing to do so via an online chat for web portal, 45% would text message, and 40% would use a mobile health application.

Strategy (10): Support increased patient self care

- Home monitoring and diagnostics
- Online patient portals
- Online coaching or education
- Mobile telephone health applications
- Peer coaching
Takeaways

▲ The supply of health care providers affects access, quality, and cost, although there is much variation and it’s difficult to define the “right” supply.

▲ Long training periods and serious consequences of shortages increase the importance of monitoring and planning.

▲ Models can be useful for long term planning; surveys or other market indicators are more useful for monitoring current conditions.

▲ In Michigan, there are pockets of current shortages, but more concern about the future – aging physician and nurse populations retiring as Michigan population is aging and number insured is growing.

▲ 10 strategies for addressing provider shortages were highlighted here, including better leveraging all members of the care team, new provider types and settings, and technology in various forms.

▲ The legal, regulatory, training, and reimbursement infrastructure needed to support these innovations is still evolving, but can be supported by the decisions made by Michigan’s health plans.
Projected shortages of physicians and other highly trained providers could be viewed as an impending crisis, but they could also allow and accelerate the evolution of a more accessible, affordable, and effective health care delivery system – if we can innovate and adapt.