Digital Health Tools & Primary Care in Communities

National Center for Primary Care, Morehouse School of Medicine

Dominic H. Mack MD, MBA
Professor, Family Medicine
Director NCPC, NCRN
Morehouse School of Medicine
“Strengthening the primary care system through education, research and training to improve health outcomes while advancing health equity”

Divisions
- Health IT
- Health Policy
- Research
- Substance Use Disorder Prevention & Treatment

Projects/Programs
- HI-BRIDGE Solutions
- Southeast Addiction Technology Transfer Center
- Southeast Regional Clinicians Network
- HBCU Global Health Consortium
- National COVID-19 Resiliency Network
State of Primary Care & Technology
May 2021

Policy Research Perspectives

Recent Changes in Physician Practice Arrangements: Private Practice Dropped to Less Than 50 Percent of Physicians in 2020

By Carol K. Kane, PhD
US Hospital Beds 1975 – 2019 (American Hospital Association)

- 2009 – Meaningful Use – 951,045 hospital beds
- 2016 – 96% EHR Adoption – 894,574 hospital beds
- 2019 – State of HIE/Interoperability – 919,559 HBs
Exhibit 4: Distribution of physicians by practice type: specialty-level estimates (2020)

- **Anesthesiology**: 55.2% Single specialty group, 19.1% Multi-specialty group, 6.0% Solo, 9.0% Direct hospital employee/contractor, 10.7% Other.
- **Radiology**: 52.8% Single specialty group, 22.2% Multi-specialty group, 4.4% Solo, 11.4% Direct hospital employee/contractor, 9.1% Other.
- **Obstetrics/gynecology**: 49.8% Single specialty group, 24.6% Multi-specialty group, 17.0% Solo, 5.1% Direct hospital employee/contractor, 3.4% Other.
- **Pediatrics**: 49.1% Single specialty group, 23.4% Multi-specialty group, 8.1% Solo, 0.8% Direct hospital employee/contractor, 8.6% Other.
- **Surgical subspecialties**: 47.8% Single specialty group, 21.8% Multi-specialty group, 16.7% Solo, 7.2% Direct hospital employee/contractor, 6.5% Other.
- **Other**: 43.7% Single specialty group, 25.2% Multi-specialty group, 13.3% Solo, 8.9% Direct hospital employee/contractor, 8.9% Other.
- **Internal medicine subspecialties**: 42.0% Single specialty group, 29.6% Multi-specialty group, 10.1% Solo, 10.9% Direct hospital employee/contractor, 7.5% Other.
- **Psychiatry**: 40.4% Single specialty group, 16.1% Multi-specialty group, 25.6% Solo, 7.4% Direct hospital employee/contractor, 10.5% Other.
- **Emergency medicine**: 39.9% Single specialty group, 19.6% Multi-specialty group, 3.8% Solo, 23.8% Direct hospital employee/contractor, 13.0% Other.
- **Family medicine**: 39.4% Single specialty group, 31.9% Multi-specialty group, 18.4% Solo, 1.6% Direct hospital employee/contractor, 8.6% Other.
- **General surgery**: 37.8% Single specialty group, 30.8% Multi-specialty group, 16.4% Solo, 9.7% Direct hospital employee/contractor, 5.3% Other.
- **General internal medicine**: 27.0% Single specialty group, 33.9% Multi-specialty group, 21.0% Solo, 12.5% Direct hospital employee/contractor, 5.6% Other.

Source: Author’s analysis of AMA 2020 Physician Practice Benchmark Survey
### Exhibit 5. Distribution of physicians by practice size (number of physicians in practice)  

<table>
<thead>
<tr>
<th>Practice size</th>
<th>2012</th>
<th>2014</th>
<th>2016</th>
<th>2018</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 5 physicians</td>
<td>40.0%</td>
<td>40.9%</td>
<td>37.9%</td>
<td>35.7%</td>
<td>33.6%</td>
</tr>
<tr>
<td>5 to 10</td>
<td>21.4%</td>
<td>19.8%</td>
<td>19.9%</td>
<td>20.8%</td>
<td>20.0%</td>
</tr>
<tr>
<td>11 to 24</td>
<td>13.4%</td>
<td>12.1%</td>
<td>13.3%</td>
<td>12.7%</td>
<td>11.5%</td>
</tr>
<tr>
<td>25 to 49</td>
<td>7.1%</td>
<td>6.3%</td>
<td>7.4%</td>
<td>7.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td>50+ physicians</td>
<td>12.2%</td>
<td>13.5%</td>
<td>13.8%</td>
<td>14.7%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Direct hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>employer/contractor</td>
<td>5.8%</td>
<td>7.4%</td>
<td>7.7%</td>
<td>8.5%</td>
<td>9.7%</td>
</tr>
</tbody>
</table>

Source: Author’s analysis of AMA Physician Practice Benchmark Surveys.
### Exhibit 6. Age differences in practice size and practice ownership (2020)

<table>
<thead>
<tr>
<th></th>
<th>Under 40</th>
<th>40 to 54</th>
<th>55+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 or fewer physicians</td>
<td>40.9%</td>
<td>49.7%</td>
<td>61.4%</td>
</tr>
<tr>
<td>11-49 physicians</td>
<td>21.0%</td>
<td>21.1%</td>
<td>17.4%</td>
</tr>
<tr>
<td>50+ physicians or direct hospital employee/contractor</td>
<td>38.1%</td>
<td>29.2%</td>
<td>21.2%</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>589</td>
<td>1375</td>
<td>1389</td>
</tr>
<tr>
<td><strong>Practice ownership</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholly owned by physicians (private practice)</td>
<td>33.8%</td>
<td>48.0%</td>
<td>55.4%</td>
</tr>
<tr>
<td>Not wholly owned by physicians</td>
<td>66.2%</td>
<td>52.0%</td>
<td>44.6%</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>620</td>
<td>1438</td>
<td>1442</td>
</tr>
</tbody>
</table>

Source: Author’s analysis of AMA 2020 Physician Practice Benchmark Survey
Community Approach & Evaluation
Digital health tools have tremendous potential to aid in the elimination of health disparities, but only if they are in the hands of the frontline clinicians serving underserved communities.
Advancing Equity Through Primary Care and Digital Health Tools

Digital Health Tools Study

Approach

Clinician Surveys
Focus Groups
Key Informant Interviews

Clinician/Practice Utilization

Publicity & Visibility
Policy Briefs
White Paper Series
Publications
Social Media
Partnerships
Advertisements
Conference Presentations

State-by-State Policy Analysis
Environmental Scan
Leadership Roundtables

Secondary Data Analysis
Statewide Health Status
Technology Utilization

Population Health

Policy
Advancing Equity Through Primary Care and Digital Health Tools

State of Practice

- Tennessee: 15%
- North Carolina: 28%
- Georgia: 36%
- Kentucky: 16%
- Other: 4%
- Unknown: <1%

n = 1,107

Specialty

- Family Medicine: 495
  - Internal Medicine: 235
  - Pediatrics: 122
  - Ob/Gyn: 103
  - Geriatrics: 91
  - Other: 45
  - Mental/Behavioral Health: 88
Participation in Quality Reporting Programs

- Quality Payment Program (QPP/MACRA): 37%
- Inpatient Quality Reporting (IQR): 35%
- Chronic Care Management (CCM): 45%
- Medicare Electronic Health Record Incentive Program (Meaningful Use/Promoting Interoperability): 37%
- Medicaid Electronic Health Record Incentive Program (Meaningful Use/Promoting Interoperability): 35%
- Patient Centered Medical Home (PCMH): 37%
- Accountable Care Organization: 24%
- Other: 3%
- None: 10%
Advancing Equity Through Primary Care and Digital Health Tools

Question: Which of the following digital health tools have you used or plan to use in your practice?

- Telemedicine (65%)
- Electronic health record (65%)
- Patient portal (50%)
- Health information exchange (45%)
- Prescription drug monitoring program (40%)
- Remote monitoring/home monitoring (30%)
- Wearable devices (20%)

AMA Digital Health Tool Survey (2019)
- Telemedicine (28%)
- Remote monitoring (22%)
- Patient Portal (58%)
Advancing Equity Through Primary Care and Digital Health Tools

Question: Have you used digital health tools because of the COVID-19 pandemic?

90% YES

n = 936

Question: If you are providing telehealth services during the COVID-19 pandemic, was this your first use of telehealth in your practice?

54% YES

n = 632
Reported Levels of Satisfaction

66% Satisfied or Very Satisfied with their telemedicine experience

73% Satisfied or Very Satisfied with their electronic health record experience
FOCUS GROUPS
Advancing Equity Through Primary Care and Digital Health Tools

"We're doing a lot of phone visits...because of...where we live, bandwidth and internet connectivity, there's been some painful appointments both via video and on phone. But when it works, it works very well. Patients are very receptive to it. It eliminates a barrier to access services, especially a transportation barrier, which is very heavy in our community. So I think patients are really loving that."
"It's very frustrating to not be able to access records within my own system. And I don't feel like anyone listens when I bring that up or maybe they do and it's just not possible. I don't know."
[T]he other big issue...is really that digital divide in those that have the availability and the capability to utilize different networks, cellular services, having both video and audio capabilities. I think that's been one of the biggest barriers that we've seen in our rural community.
Key Takeaways - DHT Experience

• Findings demonstrate significant increase in adoption
• Primary care clinicians were generally satisfied with their DHT experiences
• To overcome workflow challenges, frontline clinicians should be engaged in decision making

Health Equity Implications
• COVID-19 policy changes improved access to telehealth for disproportionately impacted Value-based payment models rely on use of DHTs, but evidence of disparity reduction is limited
• The digital divide continues among consumers and clinicians in rural and underserved communities
Equitable Digital Health Solutions
Health Information Exchange vs Interoperability

Health Information Exchange

The ability of 2 or more systems to exchange health information

Health Information Interoperability

The ability of those systems to use the Information that has been exchanged
Community Level Contextual Data

- Housing
- Environmental quality
- Employment
- Food Availability
- Social connectedness
- Neighborhood Safety
- Community Health risk
Health Information Technology Division

SUPPORTS GEORGIA PROVIDERS & HOSPITALS

56 Hospitals
Over 4,000 Clinicians

EMR Implementation Resource & Support

Outreach, Education & Training

Cloud-based Technical Solutions

Practice Management

EHR Optimization Resource & Support
- MACRA / QPP / MIPS and Medicaid Promoting Interoperability
- EHR vendor selection / optimization
- CMS, PECOS, and MAPIR registration and attestation

Outreach, Education & Training
- Boots on the ground technical assistance
- Distance Learning / Web-based training
- Barrier mitigation / Security risk analysis

HIT Infrastructure
- Service Area HIE with State HIE (interoperability)
- Lab results and medication history review
- HIE outreach and education

Practice Management
- Workflow Assessment/GAP Analysis
- PCMH, ACOs, Clinical workflow redesign
- Focus on improving clinical outcomes

Research
- EHR adoption, Vendor utilization, Population Health

Advancing Equity Through Primary Care and Digital Health Tools
Vulnerable Communities
NCRN Dissemination Platform

- Identify and Engage
- Develop National Partnership
- Document and Disseminate Strategies/Findings
- Multi-Media/Cultural/Linguistic Outreach to Diverse Communities
- Link Communities to Healthcare and Social Services
- Monitoring Evaluation and Quality Improvement

NCRN Technology Platform

CHWs

MOREHOUSE SCHOOL OF MEDICINE
NCRN
NCRN Technology Platform

MOREHOUSE SCHOOL OF MEDICINE
msmhealthequity

MSM.edu 
#MSMHealthEquity
NEW COVID-19 RESOURCES

Mobile App

GET IT ON Google Play

Available on the App Store

STAY UP-TO-DATE WITH NEW RESOURCES ABOUT COVID-19

MOREHOUSE SCHOOL OF MEDICINE

msmhealthequity

MSM.edu MSMHealthEquity
Location-Based Resource Navigator
Leverage the data streams and lessons learned via implementation of the NCRN to generate evidence to mitigate the impact of COVID-19 on vulnerable communities.

- Special Populations and Topics
- Drivers of Equity and Impact
- Implementation, Programmatic and Engagement Models
- Collaborate with Key Partners: Expertise and Lived Wisdom
- Data harmonization across individual, health care infrastructure, and ecologic data streams
- Partner Across NCRN Cores and with Outside Partners to
PETAL: Overcoming Barriers with a Strategic Approach to Rural and Urban Disproportionately Impacted Communities

Interoperability Challenges for Underserved
- HIE silos
- Corporate Responsibility
- Affordability of DHT
- Small Practice Support
ZIP CODE/COMMUNITY → CULTURE → RISK → TESTING → CARE
Thank YOU!