Lay Down Your Stethoscope & Pick Up Your Drone: Medical Education in 2025

Meghan Walsh MD MPH
Chief Academic Officer

11/7/2018
Learning objectives:

1.) Define the 3 major forces shaping the future of healthcare outlined in ACGME’s Sponsoring Institution 2025

2.) Identify gaps in our medical education curriculum as it relates to the changing healthcare landscape

3.) Strategize around robust, future oriented educational programming
No financial disclosures
Medical Education in the United States and Canada

A Report to the Carnegie Foundation for the Advancement of Teaching

by

Abraham Flexner

Forgotten Books
Future of GME
Changing Health Care Needs
Production of new physicians not keeping up with aging workforce and population

Minnesota, 2016  16,099  19% < 40 yo  26.7% > 60 yo
FIGURE 2-2  Trends in the proportion of underrepresented racial minorities (URMs) among medical school graduates and the U.S. general population

IMGs comprise a significant part of the nation’s physician workforce

24.5% of 2016 active physicians were International Medical Graduates (IMGs).¹

24.9% of 2015-2016 active residents were International Medical Graduates (IMGs).²

¹2017 State Physician Workforce Data Report, AAMC Workforce Studies.
²2016 AAMC Report on Residents, December 2016
MEDICAL CENTER HOSPITAL
500 - 600 W 4TH STREET
ODESSA, TEXAS

FOR Varney Roman

ADDRESS 1111 W Washington Ave

AGE

DATE 6/23/95

Zendil 20 mg  # 120 -
20 mg P.O. Q6H

Ferrous Sulfate 300 mg  # 100
300 mg P.O. TID C meals

Humulin N
30 units  SQ  (unlabeled)

- 11/7/2018

PRODUCT SELECTION PERMITTED

D.E.A. #

710 G17 2-99

Dispense as Written
Changes in Health Care Delivery
Here's How Amazon Could Disrupt Healthcare (Part 1)

Chunka Mui, CONTRIBUTOR

Berkshire Hathaway, Amazon and JPMorgan Chase are teaming up to create a
Evolution in the Role of the Physician
Numbers of new PAs and NPs still growing rapidly
Critical Thinking
Are you Working on Problem Solving Skills?

The Problem Solving Loop

1. Identify the problem.
2. Explore information and create ideas.
3. Select the best idea.
4. Build and test the idea.
5. Evaluate the results.

DISACCHARIDE
made up of two monosaccharides
54% of doctors say they are burned out.¹

88% of doctors are moderately to severely stressed.²

59% of doctors wouldn’t recommend a career in medicine to their children.³

Sensor Daily Overlay
Mar 19 - Mar 25, 2006
(7 days)

HbA1c: No Data

Pump: Paradigm 722
Sensor: In use

Sensor Data (mmol/L)

<table>
<thead>
<tr>
<th>Date</th>
<th>Sun Mar 19</th>
<th>Mon Mar 20</th>
<th>Tue Mar 21</th>
<th>Wed Mar 22</th>
<th>Thu Mar 23</th>
<th>Fri Mar 24</th>
<th>Sat Mar 25</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># Sensor Values</td>
<td>288</td>
<td>282</td>
<td>199</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>279</td>
<td>1,062</td>
<td></td>
</tr>
<tr>
<td>High SG (mmol/L)</td>
<td>14.9</td>
<td>14.1</td>
<td>12.0</td>
<td>N/A</td>
<td>N/A</td>
<td>15.5</td>
<td>14.1</td>
<td>15.9</td>
<td></td>
</tr>
<tr>
<td>Low SG (mmol/L)</td>
<td>4.8</td>
<td>5.7</td>
<td>3.7</td>
<td>N/A</td>
<td>N/A</td>
<td>14.1</td>
<td>4.3</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Average SG (mmol/L)</td>
<td>8.5</td>
<td>9.3</td>
<td>6.4</td>
<td>N/A</td>
<td>N/A</td>
<td>14.9</td>
<td>7.4</td>
<td>8.1</td>
<td></td>
</tr>
<tr>
<td>Standard Dev.</td>
<td>2.4</td>
<td>2.0</td>
<td>1.6</td>
<td>N/A</td>
<td>N/A</td>
<td>0.6</td>
<td>2.5</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>MAD %</td>
<td>13.0</td>
<td>14.9</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>34.6</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td># Valid Calibrations</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>17</td>
</tr>
</tbody>
</table>

Excursion Summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Sun Mar 19</th>
<th>Mon Mar 20</th>
<th>Tue Mar 21</th>
<th>Wed Mar 22</th>
<th>Thu Mar 23</th>
<th>Fri Mar 24</th>
<th>Sat Mar 25</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># Excursions</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td># High Excursions</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td># Hypo Excursions</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>AUC Above Limit</td>
<td>1.39</td>
<td>1.73</td>
<td>0.19</td>
<td>N/A</td>
<td>N/A</td>
<td>7.13</td>
<td>0.94</td>
<td>1.21</td>
<td></td>
</tr>
<tr>
<td>AUC Below Limit</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>N/A</td>
<td>N/A</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

Duration Distribution (hh:mm)

---

Hennepin Healthcare
Big Data in Healthcare

CDC-Reported AHD Mortality

Twitter-Predicted AHD Mortality

6/09 – 3/10
826 million tweets
146 million geo-located
Across 1300 counties
Eval for stress & hostility:
health, attractiveness,
job, curse words
+CDC, US Census data

Eichstaedt JC et al.,
Psychological Science,
2015;26:159
Twitter Topics Negatively Correlated With County-Level AHD Mortality

Skilled Occupations
- skills
- development
- management
- research
- business
- learning
- technology
- engineering
- education
- analysis

$\rho = -0.14$

Positive Experiences
- wonderful
- experienced
- judgment
- enjoyable
- journey
- pleasant
- share

$\rho = -0.14$

Optimism
- opportunity
- possibility
- talents
- endless
- ability
- explore

$\rho = -0.12$

Company
- company
- customer
- community
- service
- public
- announcement
- staff
- center
- enemy
- enemy

$\rho = -0.17$

Conference Board
- conference
- board
- meeting
- council
- students
- attend
- staff
- center
- members

$\rho = -0.17$

Food
- wonderful
- food
- delicious
- enjoyable
- excellent
- wine
- wine

$\rho = -0.15$

Healthcare
- health
- healthcare
- medicine
- care
- doctor
- nurse

$\rho = -0.15$

Dreams
- dreams
- perfection
- achieve
- goals
- set
- reach

$\rho = -0.13$

Strength
- power
- overcome
- courage
- struggle
- challenges
- obstacles
- greater

$\rho = -0.13$
Corporatization
Health Care Financing and Disparities
Hennepin Health: A Safety-Net Accountable Care Organization For The Expanded Medicaid Population

ABSTRACT Health care payment and delivery models that challenge providers to be accountable for outcomes have fueled interest in
GME Funding

- Medicaid: $3.9 billion\(^a\)
- Medicare: $9.7 billion\(^a\)
- U.S. Department of Veterans Affairs: $1.437 billion\(^a\)
- Health Resources and Services Administration: $0.464 billion\(^b\)
Graduate Medical Education
Education in Pediatrics Across the Continuum (EPAC)