“Medical Affairs: Introduction & Overview”

Graduate School Workshop
Center for Advanced Biotechnology & Medicine
Piscataway, New Jersey
November 20, 2017

Paul F. Weber, MD, RPh, MBA
Associate Dean- Continuing Medical Education
Director, Health Systems Science Curriculum Thread
Workshop Outline

• *Medical Affairs (MA): An Overview*

• *World Café Exercise—Immediate Review of MA*

• *Case Simulation--Product Launch*

• *Group Presentations*
Context

For the First time in history:

- *Six* generations living together in the world

- *Four* generations together in the workplace (to mirror Academia)!
Medical Affairs: Internal Partners
Medical Affairs: Functions

- Medical Director (Global)
- Medical Director (Domestic)
- Scientific Communications
- Post-marketing Clinical Research
- Health Economics & Outcomes Research
- Innovation & Digital Health
- Medical Information
- Knowledge Specialist
- Medical/Scientific Liaison
- Scientific Education (CE & CME)
Medical Affairs Personnel & Credentials

- *Most commonly* with Scientific Backgrounds

- Increasingly with Business, Public Health, & Health Policy Backgrounds

- Masters Degrees

- Doctoral Degrees (PhD, PharmD, MD)

- New Board Certification in Medical Affairs
World Café Exercise

Sharing perspectives & understanding of the roles of Medical Affairs
Medical Affairs Defined

A dynamic and rapidly growing area of the Pharmaceutical and Device Industries that focuses on research, knowledge, and education and provides primary scientific and medical support for a company’s marketed products and development pipeline
Public Health Impact of Vaccines

PRE-VACCINE ERA ESTIMATED ANNUAL MORBIDITY IN THE U.S.

DECREASE

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>% Decrease</th>
<th>Pre-vaccine</th>
<th>Most Recent Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>100%</td>
<td>21,053</td>
<td>0</td>
</tr>
<tr>
<td>H. Influenza</td>
<td>99%</td>
<td>20,000</td>
<td>243</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>91%</td>
<td>117,333</td>
<td>11,049</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>83%</td>
<td>66,232</td>
<td>11,269</td>
</tr>
<tr>
<td>Measles</td>
<td>99%</td>
<td>530,217</td>
<td>111</td>
</tr>
<tr>
<td>Mumps</td>
<td>99%</td>
<td>142,344</td>
<td>61</td>
</tr>
<tr>
<td>Pertussis</td>
<td>93%</td>
<td>200,752</td>
<td>982</td>
</tr>
<tr>
<td>Pneumococcal Disease</td>
<td>74%</td>
<td>14,069</td>
<td>13,506</td>
</tr>
<tr>
<td>Polio</td>
<td>100%</td>
<td>16,216</td>
<td>4,167</td>
</tr>
<tr>
<td>Rubella</td>
<td>99%</td>
<td>47,745</td>
<td>4</td>
</tr>
<tr>
<td>Congenital Rubella</td>
<td>99%</td>
<td>152</td>
<td>1</td>
</tr>
<tr>
<td>Smallpox</td>
<td>100%</td>
<td>29,005</td>
<td>0</td>
</tr>
<tr>
<td>Tetanus</td>
<td>98%</td>
<td>580</td>
<td>14</td>
</tr>
<tr>
<td>Varicella</td>
<td>89%</td>
<td>4,085,120</td>
<td>449,363</td>
</tr>
</tbody>
</table>
One Health Initiative

http://www.onehealthinitiative.com/about.php
One Health Definition

• Worldwide strategy for expanding interdisciplinary collaborations & communications in all aspects of health care for:
  – *Humans*
  – *Animals*
  – *The environment*

• The synergism achieved will advance health care for the 21st century *and beyond*

• With proper implementation, it will help protect and save untold millions of lives in our present and future generations
Planetary Health
Planetary Health Initiative

• A new multi-disciplinary global effort

• Aims to identify solutions to health risks posed by our poor stewardship of our planet

• Seeks to influence both international & national approaches to health through:
  – Advocacy
  – Partnership
  – Awareness raising

• Plans to create *policy change* that better balances human advancement with environmental & biodiversity sustainability
Digital Health ("EMT")

- **eHealth**
  - *Electronic Records (EHRs/EMRs)*
  - *Patient Portals*
  - *Research applications/eCROs*

- **mHealth**
  - *Apps*
  - *Sensors*
  - *Wearables*
  - *Point of Care Devices*

- **tHealth**
  - *Telehealth (Project ECHO)*
  - *VA*
  - *UPMC (Anywhere Care)*
reSET© App

- *First FDA approved clinical app* (August 2017)

- Used in Addiction Medicine

- A tool that augments medications and therapy to extend patient sobriety

- Launched by Pear Therapeutics
Wearables

Google Glasses (& soon Snapchat Spectacles)
SOCIAL MEDIA & MEDICINE
Trends

- *Snapchat* will be the newest customer communication channel of interest and growth for Pharma

- For *Truvada* marketing, Gilead is planning to use Snapchat, Tumblr, & dating sites

- *Twitter* and *LinkedIn* are being utilized most frequently at major congresses for immediate dissemination of landmark data and press conferences

- *Mobile* is the most rapidly growing digital platform (*but print is still valuable!*
Trends (cont’d)

Technology & Social Media will be utilized more prominently for solutions (health equity & translator services):

- Augmented Reality & Virtual Reality
- Artificial Intelligence
- Video
- *Audio enabled*
- Internet of Things
- Point of Care
- 5G
- WiGig
- Tileable Screens
- Blockchain
"May there never develop in me the notion that my education is complete but give me the strength and leisure and zeal continually to enlarge my knowledge."

- Maimonides -