Vaccines for a Resilient Immunization System – A Perspective

Imraan Munshi
Global Communications Lead, MSD

25 September 2019
Forward Looking Statement

This presentation of Merck & Co., Inc., Kenilworth, N.J., USA (the “company”) includes “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of the company’s management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company’s ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company’s patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

The company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the company’s 2018 Annual Report on Form 10-K and the company’s other filings with the Securities and Exchange Commission (SEC) available at the SEC’s Internet site (www.sec.gov).
Three Vaccination Journeys

Anders

Rose

Grace
COMBATTING MISINFORMATION
THE POWER OF SOCIAL MEDIA
Amazon removes books promoting autism cures and vaccine misinformation”  
(NBC News)

“Facebook vows to quash anti-vaccine misinformation”  
(NPR)

“[Instagram] will stop recommending content that includes vaccine misinformation on the app’s Explorer page [and stop] displaying vaccination misinformation in hashtag search results”  
(Wired)

Books and movies with misinformation on Amazon as of September 2019

“Vaccine information flourishes on Facebook and Instagram weeks after promised crackdown”  
(CNN Business)

“It Took Me 10 Seconds for Instagram to Push Me Into An Anti-Vaxx Rabbit Hole”  
(Motherboard)
Tactics Used by Positive and Negative Influencers

- **Pro-Vaccination Advocates**
  - Engaging Both Social and Institutional Media
  - Facts
    - Scientific Authority
  - “Calling Out” Myths or Disinformation
  - Tactics And Themes To Raise Vaccine Confidence

- **Anti-Vaccination Influencers**
  - Loss of Freedom of Choice
  - Alleged AEs
    - Institutional Distrust
  - Contrived Studies
  - Tactics And Themes to Lower Vaccine Confidence
  - Emotional Posts

*Note: Size of arrow indicates relative commonality of use of the specific tactic by influencers*
**KEY COGNITIVE BIASES IMPACTING VACCINE HESITANCY**

<table>
<thead>
<tr>
<th><strong>AVAILABILITY BIAS</strong></th>
<th><strong>OPTIMISM BIAS</strong></th>
<th><strong>SOCIAL NORMS</strong></th>
<th><strong>FRAMING LOSS VS. GAIN</strong></th>
<th><strong>OMISSION BIAS</strong></th>
<th><strong>CONFIRMATION BIAS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The more we can picture it, the more important it is.</td>
<td>We think we can beat the odds.</td>
<td>We routinely conform to the prevailing social behavior.</td>
<td>We value avoiding a loss more than winning a gain.</td>
<td>We prefer to take no action rather than risk being the cause.</td>
<td>We only accept research or facts that support our view.</td>
</tr>
</tbody>
</table>
BUILDING RESILIENT IMMUNIZATION SYSTEMS

Individuals & Communities

Policymakers & Government Authorities

HCPs & Health Systems

Private Sector
Disease Re-emergence: Measles on the Rise

New measles surveillance data for 2019
New measles surveillance data is now available on the WHO website. This preliminary data is based on country reports submitted to WHO at ...
Apr 15, 2019

Four European countries lose measles-free status as anti-vax movement drives outbreaks

Philippines has third highest measles rate — WHO
Sheila Crisostomo (The Philippine Star) - August 27, 2019 - 12:00am

Measles Is Spiking Around The Globe. How Worried Should We Be?
March 12, 2019 - 10:50 AM ET
Building Resilient HPV Vaccination Programs

• Generating data about burden of disease and safety and efficacy of vaccines

• Increasing manufacturing capacity

• Multi-sector engagement to anticipate and manage unique vaccine hesitancy challenges

• Supporting capacity building efforts and strengthening program implementation
Building Resilience during a Global Health Emergency

- Unwavering support to help address the Ebola outbreak in Democratic Republic of the Congo

- Commitment to initiate additional production and increase the stockpile of V920 investigational vaccine

- More than 245,000 doses have been donated to date
VACCINES FOR TOMORROW
BUILDING RESILIENT IMMUNIZATION SYSTEMS
Thank You