Health Affairs Thanks:

For Their Generous Support Of The February 2016 Thematic Issue On Vaccines And Today’s Briefing
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Panel 1: The Value Of Vaccines
Return On Investment From Childhood Immunizations In Low-And Middle-Income Countries, 2011–20

Sachiko Ozawa, PhD
Samantha Clark, MHS
Allison Portnoy, MSPH
Simrun Grewal, MHS
Logan Brenzel, PhD
Damian Walker, PhD

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What Is ‘Return On Investment’ And Why Does It Matter?

• ‘Return on investment’ (ROI) quantifies the net benefits gained from every dollar invested on an aggregate level and presents the benefits of vaccination in monetary terms.

• Estimating the global return on investment associated with immunization can play an important role in advocating for increased financial commitments throughout the Decade of Vaccines (2011 – 2020).
Methods For Estimating ROI

- The analysis estimated the ROI using projected coverage rates for vaccines related to **10 antigens** through the Decade of Vaccines (2011 – 2020) across **94 low-and-middle-income countries** (LMICs), including 73 countries currently supported by Gavi.

- Two approaches were used:

<table>
<thead>
<tr>
<th>‘Cost of Illness’ Approach</th>
<th>‘Full-Income’ Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs</strong></td>
<td>Costs associated with supply chains, service delivery, and vaccines</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td><em>Averted</em> treatment costs, transportation costs, lost caretaker wages, and productivity losses</td>
</tr>
</tbody>
</table>
Findings – Estimated ROI For 10 Antigens Across The Decade Of Vaccines

<table>
<thead>
<tr>
<th>Low- and middle-income countries (n=94)</th>
<th>Uncertainty range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Investment (net benefits divided by costs)</td>
<td></td>
</tr>
<tr>
<td>‘Cost of illness’ approach</td>
<td>16</td>
</tr>
<tr>
<td>‘Full-income’ approach</td>
<td>44</td>
</tr>
</tbody>
</table>

- Net benefits of immunization based on the ‘cost of illness’ approach were 16 times the projected costs across low- and middle-income countries over the decade.
- Taking into account the broader economic and social benefits, the return on investment of immunization was 44 times larger than the projected costs.
Takeaways

• All antigens showed a return that was greater than 1, which points to net benefits that were greater than the costs.

• This analysis shows that vaccines are an excellent investment, which is in line with other studies in which immunization was listed amongst other development investments as having one of the ‘best values for money’.

• The return on investment depends heavily on the financial investments required to achieve projected coverage rates, which will require continued commitment from governments and donors.
When Not All That Counts Can Be Counted: Economic Evaluations and the Value of Vaccination

Jason L. Schwartz, PhD, MBE
Yale University

Adel Mahmoud, MD, PhD
Princeton University

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Current Interest In (Re-)articulating The Value Of Vaccination

• Vaccination efforts increasingly forced to compete against other priorities—health and non-health—for attention and investment, within countries and internationally

• Commonly held view: current approaches to measuring value of vaccination are inadequate, undervaluing vaccination programs compared to other programs or potential investments
Two Approaches To Broadening The ‘Value Of Vaccination’

1) Additional economic benefits
   • e.g., improved cognitive/educational outcomes, herd effects, productivity gains
   • D. Bloom, T. Bärnighausen, et al.

2) Social and ethical value of vaccination
   • e.g., equity and social justice, concern for vulnerable populations, promote trust
   • J. Luyten and P. Beutels, *Health Affairs*
Assumptions And Complications

• Other interventions and programs similarly susceptible to undervaluing by traditional methods, especially in prevention

• Vaccination programs often closely interconnected with health systems and complementary health initiatives

• Persistent, widely held view that quantification is essential to production of ‘objective’ evidence
Realizing The Value Of Vaccination: A Way Forward

- All evidence only as good as the deliberations and decision-making processes that lead to its translation into policy

- More attention and research necessary to better understand the work of policy-makers and expert advisors in these areas
  - Can identify specific needs of these groups and assist in development of best practices
  - Some insights already on national immunization advisory groups; broader examinations essential
Health Affairs Thanks:

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For Their Generous Support Of The February 2016 Thematic Issue On Vaccines And Today’s Briefing
Panel 2: Sustainable Financing Of Vaccines
Vaccine Assistance To Low- And Middle-Income Countries Increased To $3.6 Billion In 2014

Joseph L Dieleman, PhD
Annie Haakenstad, MA
Maxwell Birger, BS
Lavanya Singh, BA; et al.
Institute for Health Metrics and Evaluation, University of Washington
Accounting of development assistance for health (DAH)

- Includes financial and in-kind contributions
- Funds aimed to improve health in developing countries
- Tracked by channel of assistance to avoid double counting

FGH 2014 is the 6th report in the series
Development Assistance For Vaccines

Billions of 2014 US dollars
Tracking Development Assistance For Vaccines From Source, To Channel, To Recipient
Annualized Growth Rates In Development Assistance For Vaccines Received; 2000 – 2012

- East Asia & Pacific
- Europe & Central Asia
- Latin America & Caribbean
- Middle East & North Africa
- South Asia
- Sub-Saharan Africa
- Global Initiatives
Gavi’s Transition Policy: Moving From Development Assistance To Domestic Financing Of Immunization Programs

Judith Kallenberg
Head of Policy
Gavi, The Vaccine Alliance
Gavi, The Vaccine Alliance

- Mission: To save children’s lives and protect people’s health by increasing equitable use of vaccines in lower income countries
  - Bulk purchase of vaccines for developing countries
  - Introduction in national immunization programs
  - Continued vaccine supply to help governments immunize every newborn child
Gavi Supports 73 Countries, Reaching ~80 Million Children Per Year

Since 2000:
500,000,000 children immunized
7,000,000 future deaths averted
Countries Pay An Increasing Share Of Vaccine Costs As Their Economies Grow

- **Initial self-financing**
- **Preparatory transition**
- **Accelerated transition**
- **Fully self-financing**

**Country share of vaccine costs**

- 100% of vaccine cost

**Years**

**Increasing GNI per capita**

- US $0.20/dose (flat rate)
- Annual increase by 15%
- 5-year increase to full financing
- Access to Gavi price

**Fully self-financing**
There Are Inherent Risks With This Process

- Failure to transition successfully: insufficient vaccine supply, stock-outs, un-immunized children, preventable deaths...
- 19 countries will exit Gavi by 2020
- Risk factors
  - More vaccines & higher fertility rate
  - Smaller health budget
  - Weak institutions and procurement capacity
  - Fast GNI p.c. growth
Example: Ghana

- Adopted 8 Gavi vaccines
- Strong political support for immunization
- Rapid economic development: transition out of Gavi 15 years earlier than projected

But...

- Economic struggles and large fiscal deficit
- Reforms to create more fiscal space underway but take time
Policy Directions And Lessons Learned

- Balancing act: protect immunization continuity while incentivising domestic financing scale-up
- No perfect indicator for ‘ability to pay’
- Rapid GNI growth can be a double-edged sword
- Make transition predictable, prepare
EPIC Studies: Governments Finance, On Average, More Than Fifty Percent Of Immunization Expenses, 2010-11

Logan Brenzel, PhD
Carl Schutte
Keti Goguadze
Jean-Bernard Le Gargasson
Teresa Guthrie
& the EPIC study teams

HealthAffairs
Need For Better Tracking Of Immunization Expenditures

- Resource tracking can provide information on the share of government spending for immunization.
- Countries report expenditures but there are issues of reliability and accuracy.
Methods For Financial Mapping

• EPIC consisted of detailed costing studies complemented by a financial mapping: www.immunizationcosting.org

• Conducted in Benin, Ghana, Honduras, Moldova, Uganda and Zambia

• Needed to ensure consistency of analysis across countries

• Modified System of Health Accounts coding (more detailed)

• Incorporated results and assumptions from the complementary costing study
$210m Spent For Routine Immunization In 6 Countries In 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>2010 (in millions)</th>
<th>2011 (in millions)</th>
<th>Per child dose administered in 2011 for routine immunization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>$10.0</td>
<td>$11.5</td>
<td>$3.11</td>
</tr>
<tr>
<td>Ghana</td>
<td>$55.5</td>
<td>$70.1</td>
<td>$7.38</td>
</tr>
<tr>
<td>Honduras</td>
<td>n/a</td>
<td>$47.6</td>
<td>$12.52</td>
</tr>
<tr>
<td>Moldova</td>
<td>n/a</td>
<td>$8.8</td>
<td>$12.96</td>
</tr>
<tr>
<td>Uganda</td>
<td>$24.7</td>
<td>$32.9</td>
<td>$2.77</td>
</tr>
<tr>
<td>Zambia</td>
<td>n/a</td>
<td>$39.0</td>
<td>$8.12</td>
</tr>
</tbody>
</table>

Note: Expenditures for 2010 were only collected in three of the six countries.
Government Sources Account For >50% On Average

- Benin: 50% (27% Domestic sources, 20% GAVI Alliance, 3% Multilateral agencies, 5% Bilateral agencies, 15% Other)
- Ghana: 79% (61% Domestic sources, 18% GAVI Alliance, 2% Multilateral agencies, 4% Bilateral agencies, 15% Other)
- Honduras: 95% (61% Domestic sources, 18% GAVI Alliance, 4% Multilateral agencies, 5% Bilateral agencies, 15% Other)
- Moldova: 95% (61% Domestic sources, 18% GAVI Alliance, 4% Multilateral agencies, 5% Bilateral agencies, 15% Other)
- Uganda: 82% (61% Domestic sources, 18% GAVI Alliance, 4% Multilateral agencies, 5% Bilateral agencies, 15% Other)
- Zambia: 82% (61% Domestic sources, 18% GAVI Alliance, 4% Multilateral agencies, 5% Bilateral agencies, 15% Other)
Good News, But Implications For Affordability And Sustainability

• Generally encouraging news that governments are spending higher shares
• Still concerns about lower income countries and their ability to finance costs of vaccines and their RI program
• Quality of health expenditure analysis depends upon quality of data- clear need to improve financial data systems
• Trends in government immunization expenditures should be tracked as part of total government spending.
Routes Countries Can Take To Achieve Full Ownership Of Immunization Programs

Michael McQuestion, PhD  
Andrew Carlson

Khongorzul Dari, PhD, MA  
Devendra Gnawali, PhD, MSc  
Clifford Kamara, MD, MPH  
Helene Mambu-Ma-Disu, MD  
Jonas Mbwangue, MPA  
Diana Kizza, MSc  
Dana Silver, MPH  
Eka Paatashvili, MD, PhD, MPA
Problems And Opportunities

• Immunization costs rising faster than government spending -> growing dependency on external financing

• Self-financing uncharted territory for most poor countries

• Country ownership potential increasing
New Practices -> Ownership

- Financing
  - Earmarks, trust funds, public-private partnerships

- Financial management
  - Sharing expenditure data, empirical budgeting, value for money

- Advocacy
  - Central -> subnational governments

- Legislation (slow, rare, essential)
Government Routine Immunization Expenditures, 2014
SIF Countries Catching Up

Fig. 1. Govt routine immunization spending (lowess regression)
# Immunization Legislation Progress

## Immunization Legislation Processes Across Four SIF Program Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Legislative Project</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Phase IV</th>
<th>Phase V</th>
<th>Phase VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRC</td>
<td>Immunisation Bill</td>
<td></td>
<td>Drafting Workshops/Expert Consultations [# of Both]</td>
<td>Public Vets Bill</td>
<td>Government Submits Bill to Parliament</td>
<td>Parliament Registers Bill for Vote</td>
<td>Parliament Passes Bill/Gov’t Adopts Decree</td>
</tr>
<tr>
<td></td>
<td>Health Bill</td>
<td>May12</td>
<td>May 12-Nov13</td>
<td></td>
<td></td>
<td>Jan15-Sep15</td>
<td></td>
</tr>
<tr>
<td>Mongolia</td>
<td>Law of Mongolia on Immunization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Apr00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government Resolution on Immunization Fund</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mar01</td>
</tr>
<tr>
<td>Nepal</td>
<td>Immunization Bill</td>
<td></td>
<td>Feb 10-Sep 11</td>
<td>Nov 11-Sep 14</td>
<td></td>
<td>Jan15</td>
<td>Jul15</td>
</tr>
<tr>
<td>Uganda</td>
<td>National Immunisation Bill I</td>
<td>Sep 11-Jun 12</td>
<td>Feb 12</td>
<td>Apr 14</td>
<td></td>
<td></td>
<td>Dec15</td>
</tr>
<tr>
<td></td>
<td>National Immunisation Bill II</td>
<td>Oct 14</td>
<td>Mar 15-Nov 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend**

- **Active Project**
- **Discontinued Project**

*Source: Sabin Vaccine Institute*
Country Ownership Indicators

• Full domestic financing for routine immunization program
• Legislation assures public financing
• Program technically sound
• Transparent, accountable financial management
• Parliamentary engagement
• Public aware, educated
Country Ownership And Gavi Transition: Comprehensive Approaches To Supporting New Vaccine Introduction

Angela K. Shen ScD, MPH
Jonathan M. Weiss MPH
Jon Andrus, MD, MPH
Clint Pecenka, PhD
Deborah Atherly, PhD
Katherine Taylor MS
Mike McQuestion, PhD

Photo: USAID

Health Affairs
Setting The Stage: Growing Progress In Low And Low-middle Income Countries Vaccination Programs

- Greater global commitment
- Many countries have growing technical and managerial capacity to do vaccination programs
- Many countries have larger budgets (thanks to improved economies) and flexibility to spend more on vaccines
- Gavi, the Vaccine Alliance financial support has increased access to new and underutilized vaccines
Gavi Transition: Going From Some Support To No Support Will Be Challenging

- Requires commitment
- Involves significant planning
- Money (domestic resources)
- Absorbing the full cost of new and recently added vaccines
- Sustaining health system improvements
Achieving Success Requires Overcoming Common Barriers

• Limited and modest progress toward country ownership
• More stable and predictable domestic revenue generation and support – despite sometimes fragile growth in LLMICs
• Better, more resource tracking including finding and removing bottlenecks
• New, innovative approaches to financing and revenues (e.g. excise tax on mobile phones)
Key Elements For A Successful Transition

• Affordable vaccines
  - Vaccines must remain affordable in the absence of a subsidy
  - Cost-effectiveness vs. absolute cost

• Low and low-middle income countries need:
  - Good coordination between MOH and MOF
  - Effective and/or improved financing functions
  - Ability to finance, including timely payment for vaccines and vaccination programs
Looking Forward: *Striving for immunization to be delivered continuously and equitably*

- Governments will need to increase their investments
- Transitions are and will be happening
- Transitions won’t always be smooth or easy
- But the transitions need to happen – all countries benefit from valuing and supporting vaccines and vaccination programs
- Investment in children provide long-term returns in the form of healthier and more productive societies
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Panel 3: Delivering Vaccines
Slow Progress In Finalizing Measles And Rubella Elimination In The European Region

*European Regional Measles/Rubella Verification Commission (RVC) and World Health Organization Secretariat*

Presented by Robin Biellik, DrPH, RVC member, on behalf of all authors

Washington, DC, 9 February 2016
Reported Vaccination Coverage And Reported Cases Of Measles And Rubella Among Member States Of The World Health Organization European Region, 1980–2014

**SOURCE** Authors’ analysis of data reported annually to the World Health Organization and United Nations Children’s Fund. **NOTES** Measles and rubella cases (bars) relate to the left-hand y axis. Measles- and rubella-containing vaccine, first dose (MRCV1) and measles- and rubella-containing vaccine, second dose (MRCV 2; lines) relate to the right-hand y axis. Data were incompletely reported in the earlier period.
## EXHIBIT 2

Algorithm To Standardize Conclusions Based On The Presentation Of Evidence On The Status Of Measles Or Rubella Elimination

<table>
<thead>
<tr>
<th>Absence of endemic cases supported by high-quality surveillance, including genotyping information</th>
<th>Demonstrated high population immunity</th>
<th>RVC classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Interrupted transmission</td>
</tr>
<tr>
<td>Yes</td>
<td>No or inconclusive</td>
<td>Interrupted transmission but at risk</td>
</tr>
<tr>
<td>Inconclusive</td>
<td>Yes, no, or inconclusive</td>
<td>Inconclusive</td>
</tr>
<tr>
<td>No</td>
<td>No or inconclusive, or presence of high-risk groups</td>
<td>Endemic transmission</td>
</tr>
</tbody>
</table>

**Source** Authors’ analysis. **Note** RVC is the European Regional Verification Commission for Measles and Rubella Elimination.
### Exhibit 3

**Measles Elimination Status Among Member States Of The World Health Organization European Region, December 31, 2013**

<table>
<thead>
<tr>
<th>Measles elimination status</th>
<th>Number of states</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupted transmission</td>
<td>15</td>
<td>Andorra, Armenia, Belarus, Czech Republic, Estonia, Finland, Hungary, Israel, Malta, Portugal, Slovakia, Slovenia, Sweden, Tajikistan, Turkmenistan</td>
</tr>
<tr>
<td>Interrupted transmission but at risk</td>
<td>7</td>
<td>Azerbaijan, Bulgaria, Cyprus, Latvia, Luxembourg, Norway, Republic of Moldova</td>
</tr>
<tr>
<td>Inconclusive report</td>
<td>9</td>
<td>Austria, Croatia, Denmark, Greece, Iceland, Montenegro, the Netherlands, Spain, Uzbekistan</td>
</tr>
<tr>
<td>Endemic transmission</td>
<td>13</td>
<td>Belgium, France, Georgia, Germany, Ireland, Kazakhstan, Lithuania, Poland, Romania, Russian Federation, Switzerland, Turkey, United Kingdom</td>
</tr>
<tr>
<td>Report to be resubmitted</td>
<td>3</td>
<td>Kyrgyzstan, Serbia, former Yugoslav Republic of Macedonia</td>
</tr>
<tr>
<td>No report submitted</td>
<td>6</td>
<td>Albania, Bosnia and Herzegovina, Italy, Monaco, San Marino, Ukraine</td>
</tr>
</tbody>
</table>

**Source**: Authors’ analysis.
# EXHIBIT 4

## Rubella Elimination Status Among Member States Of The World Health Organization European Region, December 31, 2013

<table>
<thead>
<tr>
<th>Rubella elimination status</th>
<th>Number of states</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupted transmission</td>
<td>16</td>
<td>Andorra, Armenia, Belarus, Czech Republic, Estonia, Finland, Hungary, Israel, Malta, the Netherlands, Portugal, Slovakia, Slovenia, Tajikistan, Turkmenistan, United Kingdom</td>
</tr>
<tr>
<td>Interrupted transmission but at risk</td>
<td>7</td>
<td>Azerbaijan, Cyprus, Ireland, Latvia, Luxembourg, Norway, Spain</td>
</tr>
<tr>
<td>Inconclusive report</td>
<td>12</td>
<td>Austria, Bulgaria, Croatia, Denmark, Greece, Iceland, Lithuania, Montenegro, Republic of Moldova, Russian Federation, Sweden, Uzbekistan</td>
</tr>
<tr>
<td>Endemic transmission</td>
<td>9</td>
<td>Belgium, France, Georgia, Germany, Kazakhstan, Poland, Romania, Switzerland, Turkey</td>
</tr>
<tr>
<td>Report to be resubmitted</td>
<td>3</td>
<td>Kyrgyzstan, Serbia, former Yugoslav Republic of Macedonia</td>
</tr>
<tr>
<td>No report submitted</td>
<td>6</td>
<td>Albania, Bosnia and Herzegovina, Italy, Monaco, San Marino, Ukraine</td>
</tr>
</tbody>
</table>

**Source:** Authors’ analysis.
Measles And Rubella Elimination In The European Region
Combining Global Elimination Of Measles And Rubella With Strengthening Of The Health Systems In Developing Countries

Jon Kim Andrus, MD
Stephen L. Cochi, MD, MPH
Louis Z. Cooper, MD
Jonathan Klein, MD, MPH

Health Affairs
Major Take Home Messages...

• Elimination of measles and rubella provides opportunities to:
  – Strengthen health systems
  – Reduce inequities
  – Ensure national security

• Strengthening health systems requires proactive planning and implementation

• Elimination of CRS is a no brainer
Congenital Rubella Syndrome

Rubella syndrome

- Microcephaly
- PDA
- Cataracts
High morbidity rationale for immunization interventions

Autistic boy
Spastic, deaf
Autistic
Deaf-blind, retarded

Rubella Project for Multihandicapped: Bellevue Hospital – 1968
Courtesy Dr. L. Cooper
Reduction in estimated measles deaths,
1985-2014

90% drop from 1985-2014

WER 2015; 90(46):623-32
Figure: Global estimated measles mortality and measles deaths averted, 2000 - 2014

- Estimated measles deaths in absence of vaccination (numbers indicate the cumulative number of deaths prevented in millions)
- Estimated measles deaths with vaccination
- 95% CI of estimated measles deaths with vaccination
- Deaths averted by measles vaccination
“Ann al’ vaksynen por dechuoke ribeyol ak polyu!” said Dr. Robert Auguste, Minister of Health and Population (Let’s vaccinate to eliminate rubella and polio!). On 5 November, Haiti will launch the most ambitious vaccination campaign in the country’s history and administer measles-rubella vaccine to children and young adults aged 1-19 years and oral polio vaccine to children <5 years throughout the territory. In the words of Prime Minister Jacques Edouard Alexis, “The national vaccination campaign will be an opportunity to show our people the colors of solidarity, love, and life.” And Gabriel Bien-Aimé, Minister of Education, to add: “This is an effort led by the whole Haitian State, not just two ministries, to bring health and well-being into our schools.”
Major Take Home Messages...

- Elimination of measles and rubella provides opportunities to:
  - Strengthen health systems
  - Reduce inequities
  - Ensure national security

- Strengthening health systems requires proactive planning and implementation

- Elimination of CRS is a no brainer
The Global Polio Eradication Initiative: Progress, Lessons Learned, And Polio Legacy Transition Planning

Carol A. Pandak, EdD
Director, PolioPlus
Rotary International

Health Affairs
Polio Legacy
Transition Planning

Health Affairs briefing
February 9, 2016

2 Polio Endemic countries

Last type 2 polio in the world

Last Polio Case in India

Last Polio Case in Nigeria & Africa

Polio cases (thousands)

The Three Key Components of Polio Legacy Transition Planning

1. Maintaining and mainstreaming essential polio functions (e.g., immunization, surveillance)

2. Sharing knowledge and lessons learned from GPEI to improve child health globally

3. Transitioning polio capacities, infrastructure, and assets to support other public health priorities, where appropriate
Internationally-supported GPEI Workforce (N=30,000+)

- Millions of vaccinators
- Tens of thousands of local social mobilizers
- Thousands of skilled technical staff
- Hundreds of highly skilled technical managers/leaders

Includes social mobilizers. Does not include vaccinators or regional/headquarters personnel.
Countries have learned many lessons on the road towards eradication

- Accessing insecure and hard-to-reach areas
- Accountability
- Communications
- Social mobilization/community engagement
- Working in a complex global partnership
- Achieving and maintaining political commitment
- Global disease surveillance networks

How can these lessons be used for greater benefit?
16 Priority countries for polio transition planning

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.
What is Expected of Countries?

• The goal in the next 12 months is for 14 countries, nine of which are in Africa, to develop polio transition plans by end-2016 (+ PAK and AFG by end-2017)

• Plans will provide roadmap for transition of essential polio functions, resources and lessons learned during 2017-2019

• Plans should include budget commitments from governments and donors to enable implementation starting in 2017
Legacy Planning: Overall, what would a successful outcome look like?

- National & Institutional legacy plans developed, building on the strengths of the GPEI (e.g. access) to benefit generations to come, including:
  - Essential polio functions mainstreamed into ongoing national and institutional structures (e.g. immunization)
  - Resources, lessons and knowledge documented and transitioned to other health priorities as appropriate

**Goal:** To ensure, that these are the outcomes of the Legacy Planning process, and that we all plan a rational future together.
Thanks: For Their Generous Support Of The February 2016 Thematic Issue On Vaccines And Today’s Briefing
Panel 4: Childhood Vaccines In The US
Exploring The Impact Of The US Measles Outbreak On Parental Awareness And Support For Vaccinations

Michael A. Cacciatoore, PhD
Glen J. Nowak, PhD
Nathaniel J. Evans, PhD
Center for Health & Risk Communication, Grady College of Journalism, University of Georgia
U.S. Multi-state Measles Outbreak
December 28, 2014 - April 24, 2015

From December 28 to April 24, 2015, 147 people from 7 states [AZ (7), CA (131), CO (1), NE (2), OR (1), UT (3), WA (2)] were reported to have measles and are considered to be part of a large outbreak linked to an amusement park in California*.

*Provisional data reported to CDC’s National Center for Immunization and Respiratory Diseases
Measles outbreak: How bad is it?

By Mariano Castillo, CNN

Updated 10:14 PM ET, Mon February 2, 2015 | Video Source: CNN

CDC urges measles vaccinations amid nationwide outbreak; 100 cases confirmed so far
Did The Outbreak Affect Parents?

• A “natural” experiment
  – Survey 1: Nov. 3 – Dec. 1, 2014
  – Survey 2: May 19 – June 19, 2015

• Independent samples of 1,000 parents of children 5 years old and younger using YouGov panel

• Measured: Vaccine-related concerns, confidence, beliefs regarding state immunization, mandates, future vaccination intentions

• Comparisons involved “no,” “low,” and “high” awareness parents to those in Survey 1
“YouGov Sample”

• A leading survey research company that has become the online survey provider for the NY Times.
• YouGov employs a stratified sampling procedure designed to produce representative survey results.
• The most recent research suggests YouGov’s sampling approach yields results similar to random digit dial telephone surveys and mail-based probability samples (Ansolabehere & Schaffner, 2014)
• Response rates of 36.3 and 32.7%, respectively, for the two surveys
Key Findings Included. . .

• 52.6% of parents were aware of recent measles cases in the U.S. – with 33% not, and 13.7% unsure.

• “No awareness” parents:
  – Had highest levels of vaccine-related concerns, were most likely to have delayed or declined recommended vaccines, and most likely to plan to delay or decline in the future.

• “High awareness” parents:
  – Had high levels of vaccine-related concerns, highest confidence in vaccines, strongest support for vaccine mandates, and second highest percentage of those planning to delay or decline in future.

• “Low awareness” parents:
  – Similar overall to parents in Survey 1 in terms of vaccination confidence and intentions and support for vaccine mandates.
“Lessons Learned”

• Visible vaccine preventable disease outbreaks can impact parents – particularly cognitive outcomes.
• But - don’t assume outbreaks cause widespread parent awareness or knowledge -- a highly visible outbreak may only foster modest increases in both.
• Level of awareness and interest matter.
  – Levels varied among parents of young children
  – Awareness ≠ “deeply followed” (need to measure level)
• High outbreak awareness can increase parent confidence and mandate support, but may not reduce vaccine-related concerns; and may not change the plans of some of the parents who closely follow media stories.
A Tale Of Two States: Mississippi, West Virginia, And Exemptions To Compulsory School Vaccination Laws

Abigail Lowin, MPH
Columbia Law School
Motivation For The Study

• In 2004, members of Institute of Medicine panel wrote of “Fragility of the U.S. Vaccine Supply”
  – Are there fewer shortages today?

• Shortages should be rare and brief in well-functioning markets
  – What are characteristics of shortages?
Few Shortages In Recent Years

Authors’ analysis of data from University of Utah, 2004 to 2013
Higher Prices, Fewer Vax Shortages

Authors’ analysis of data from University of Utah and IMS Health, 2004 to 2013
Conclusions

• Fewer vaccine shortages today
  – New vaccines launched at higher prices

• Higher prices...
  – encourage “investment” (meaning R&D)
  – encourage investment in quality and capacity
  – make manufacturers want to enter and stay

• Tradeoff
  – Higher prices can help avert shortages
  – But must be responsible stewards of government funding
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