Access to Vaccines

The powerful role for manufacturers

Dr. Jayasree K. Iyer, Executive Director
26th October 2016
5 billion people have access to medicine

2 billion to go

Availability
Accessibility
Affordability
Acceptability
Research on, and incentives for, pharmaceutical companies and access to medicine

- Fully independent from pharmaceutical companies
- Multi-stakeholder approach

- 2016: 5th Access to Medicine Index
- 2017: 1st Access to Vaccines Index
Our model for change

Build consensus on what to expect from the industry and where incentives and disincentives exist.

Stimulate a “race to do well” in key access-to-medicine areas, by creating competition on targets and topics.

Diffuse best practices to share information and new insights into the best approaches for driving change.
What we do

Access to Medicine Index

Thematic studies

Access to Vaccines Index

Advancing the debate
**Funders**

“The companies at the top of the Index want to do more. The ones at the bottom see that and push forward on it.”

Bill Gates

**Pharma Companies**

“The Index challenges us to think harder about how we drive innovation and enable access to our products.”

Sir Andrew Witty, GSK CEO

**Global Health**

“The Index is a very important project. What gets measured, gets done.”

Dr Margaret Chan

**Media**

“While progress is uneven, many drug makers are, by and large, making headway. In fact, access is increasingly seen as a necessary business issue.”

Wall Street Journal

**Investors**

“We are increasingly reviewing corporate approaches to access to medicine as a key strategic consideration.”

53 Signatory Investors
What we do

Access to Medicine Index

Thematic studies

Access to Vaccines Index

Advancing the debate
58 investors – AUM in excess of USD 5.31 trillion
What we do

Access to Medicine Index

Thematic studies

Access to Vaccines Index

Advancing the debate
**Thematic Studies**

April 2015
**Improving Maternal Health**
- Pharma’s contribution to MDG 5
- UN Foundation – Every Woman, Every Child
- 2 new commitments from companies

September 2015
**Vaccine Pipeline Analysis**
- Pipeline study for high-burden diseases
- Blogpost in GHTC
- Increased investor engagement on company plans

December 2015
**On Hepatitis-C**
- Access to Hepatitis C treatments
- Landscape study – policy recommendations
- Publication in WHO Bulletin
What we do

Access to Medicine Index

Thematic studies

Access to Vaccines Index

Advancing the debate
What we do

Access to Medicine Index

Access to Vaccines Index

Thematic studies

Advancing the debate
DCVMN: Contributing to access

Scientific American

China Enters Global Vaccine Marketplace for the First Time
The first World Health Organization endorsement of a Chinese-made vaccine may result in inexpensive, high-quality inoculations for the developing world

By Jiao Li, Nature magazine on October 18, 2013

Vaccines work wonders. They prevent disease from striking, which is better than treating it after the fact. They are also relatively cheap and easy to deliver. Yet millions of children do not get them. This has always been stunning to me. When we started the Gates Foundation, we hoped to find obvious solutions to our top priorities. As luck would have it, one of those priorities was vaccines. We also hoped that other organizations would take up the challenge. That does not always happen. In many cases, a new vaccine is introduced too slowly, or not at all.

The Japan Times

A new study confirms that spending $1 on childhood vaccines can save $44 in future savings, in poor countries

By Frédérique, February 11, 2016

New Scientist

Use vaccines as a weapon against antibiotic-resistant bacteria

Brazil to produce measles and rubella vaccine for poor countries

REUTERS

Indiasn Times

The Times of India

The Economic Times

Pharmaceuticals

DCVMN International to quicken access to affordable vaccines

NEW DELHI: Vaccine manufacturers of India along with some developing countries have decided to undertake an over $45 million project to support initiatives for making available affordable high-quality vaccines.

The Developing Countries Vaccine Manufacturers Network (DCVMN) international today announced intention to support the programme regarding access to affordable high-quality vaccines.

This is to be done by enabling a larger number of vaccine manufacturers to achieve a more sustainable and secure supply of priority vaccines for international procurement, the representative body said.

The Hindu

Indian firm develops Zika vaccine candidates

VIDYA KRISHNAN

Vaccines manufacturer Bharat Biotech on Wednesday announced a breakthrough in developing the world’s first Zika vaccine. The Hyderabad-based company has submitted to the government two vaccine candidates one inoculated and one recombinant.

It said pre-clinical studies would be concluded in the next five months, and then the process for regulatory approval would start. An inactivated vaccine consists of the disease-causing virus killed with chemicals, heat, or radiation. This is more stable and safer than live vaccines. A recombinant vaccine is produced through recombinant DNA technology. This involves inserting the DNA encoding an antigen (such as a bacterial surface protein) that stimulates an immune response.

Zika virus is transmitted through Anopheles mosquitoes, which also causes dengue and chikungunya.

The World Health Organization has reported 22 countries and territories in America from where the transmission of Zika virus has been reported.

MIT Technology Review

The Hidden Cost of Avoiding Vaccines

Vaccine preventable diseases cost the U.S. $9 billion in 2015, mostly because unvaccinated people got sick.

by Michael Rely, October 13, 2016

It’s no wonder— and not getting your shot could prove costly.

Last year, influenza flung the U.S. economy for $40.5 billion in lost productivity, hospital visits, and other costs, with the next majority of that coming from people who didn’t get vaccinated, according to a new study in the journal Health Affairs. While close to 47 million infections were accounted for the bulk share of the losses, pneumonia, meningitis, hepatitis B, and HIV infection all had significant parts to play.
Access to Vaccines Index: A new catalyst for action

• What is the role for vaccine companies in improving access?

• Baseline of companies’ access efforts, e.g.:
  - R&D to fill product gaps
  - Registration in high-need countries
  - Collaboration to align supply and demand
  - Addressing supply chain issues

• Track progress
• Identify incentives and barriers for the industry
• Share best practices
Building the methodology in 2015
Methodology:
Access to Vaccines Index
Scopes

- Preventive vaccines
- 69 diseases
- 107 countries
- 9 companies
Disease scope

WHO position
• Routine immunization schedules
• R&D priority

Stakeholder recommendations
• Maternal immunisation
• Emerging infectious diseases
• Diarrhoeal diseases
• Lower respiratory infections
• Neglected tropical diseases
# 69 Diseases

## Diseases with Existing Vaccines
- Cholera
- Dengue
- Diphtheria
- Haemophilus influenzae type B (Hib)
- Human papillomavirus (HPV)
- Japanese encephalitis
- Malaria
- Measles
- Meningococcal disease
- Mumps
- Pandemic influenza
- Pertussis
- Plague (Yersinia pestis)
- Pneumococcal disease
- Polio
- Rabies
- Rotavirus
- Rubella
- Seasonal influenza
- Tetanus
- Tick-borne encephalitis
- Tuberculosis
- Typhoid
- Varicella
- Viral hepatitis (A, B, C, E)
- Yellow fever

## Diseases without Existing Vaccines on the Market
- Adenovirus
- Amoebiasis
- Balantidiasis
- Buruli Ulcer
- Campylobacter enteritis
- Chagas disease
- Chikungunya
- Clostridium difficile
- Cryptosporidiosis
- Cytomegalovirus (CMV)
- Dracunculiasis
- Ebolavirus
- Echinococcosis
- Enterovirus 71
- Escherichia coli infections
- Food-borne trematodiasis
- Giardiasis
- Group B streptococcus
- Hantavirus pneumonia
- Human African trypanosomiasis
- Human Immunodeficiency virus (HIV)
- Human metapneumovirus
- Human monkeypox
- Isosporiasis
- Klebsiella pneumoniae
- Lassa fever
- Leishmaniasis
- Leprosy
- Lymphatic filariasis
- Marburg (haemorrhagic) virus
- Onchocerciasis
- Parainfluenza
- Pneumocystis jiroveci
- Respiratory Syncytial Virus (RSV)
- Schistosomiasis
- Severe Acute Respiratory Syndrome (SARS)
- Shigellosis
- Soil-transmitted helminthiasis
- Staphylococcus aureus
- Taeniasis/cysticercosis
- Trachoma
- Yaws
- Yersinia enterocolitica
107 countries

Legend: Basis for inclusion
- On Gavi support
- Transitioning from Gavi support
- Not on Gavi support
- Outside country scope
9 companies

List of companies included in the 2017 Access to Vaccines Index – 9 companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Total revenue 2014 (bn USD)</th>
<th>Vaccine revenue 2014 (bn USD)</th>
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<tbody>
<tr>
<td>AstraZeneca plc</td>
<td>GBR</td>
<td>26.1</td>
<td>0.295</td>
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<tr>
<td>Daiichi Sankyo Co. Ltd.</td>
<td>JPN</td>
<td>7.6</td>
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<td>GlaxoSmithKline plc</td>
<td>GBR</td>
<td>37.9</td>
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<td>Johnson &amp; Johnson</td>
<td>USA</td>
<td>74.3</td>
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<tr>
<td>Merck &amp; Co. Inc.</td>
<td>USA</td>
<td>42.2</td>
<td>6.25</td>
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<tr>
<td>Pfizer Inc.</td>
<td>USA</td>
<td>49.6</td>
<td>4.48</td>
</tr>
<tr>
<td>Sanofi</td>
<td>FRA</td>
<td>43.1</td>
<td>5.85</td>
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<tr>
<td>Serum Institute of India Ltd.</td>
<td>IND</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Takeda Pharmaceutical Co. Ltd.</td>
<td>JPN</td>
<td>14.8</td>
<td>0.315</td>
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</tbody>
</table>
Research Areas

R&D

Affordability

Manufacturing & Supply
A. Research & Development

A.1 R&D investments
A.2 R&D projects – vaccines
A.3 R&D projects – technologies
A.4 Facilitating access
B. Affordability

B.1 Needs-based pricing
B.2 Pricing transparency
B.3 Registration
C. Manufacturing & Supply

C.1 Overcoming local barriers
C.2 Ensuring rational use
C.3 Responding to shortages
C.4 Collaboration to align supply and demand
C.5 Supporting vaccine security
C.6 Increasing global manufacturing capacity
Questions?
Thank you

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www.atmindex.org
Data points – general

- Vaccines revenues
- Number of vaccine dosages sold annually
- Examples of response to market incentives
- Examples of market disincentives
- Vaccine R&D expenditures
- R&D projects – technologies
- Vaccine pricing strategy
- Public disclosure pricing strategy and price points
- Policy for filing for registration in Index Countries
- Strategy for responding to stock-outs
- Policy for engaging with purchasers and market shapers
- Policy for considering global health needs
- Examples of assisting manufacturers in Index Countries
Data points – product-specific

**Marketed vaccines:**
- Patent information
- Registration in Index Countries
- Adaptations to vaccines
- Adaptations to vaccine packaging and brochures

**Pipeline vaccines:**
- Phase of development
- Type of development (adaptive/innovative)
- Partnership information
- Access provisions