# PDVI Ensuring Vaccine Access

Richard T. Mahoney, PhD Director, Vaccine Access Pediatric Dengue Vaccine Initiative International Vaccine Institute Seoul, Korea





# Why Access?

#### The lessons of Hep B

- Don't wait till licensure start early!
- Clearly enunciate the burden of disease
- Involve endemic developing countries
- Address a wide range of issues many things to do
- Build wide international consensus
- Promote competitive supply
- Improved public health is the measurement of success





# Why Access?

- The evolution of PDPs\* Oxford Conference
  - Many PDPs, e.g. Aeras, IAVI, et al., have concluded that their mission must include helping to ensure access
    - The meaning of partnership: not just a technology but jointly reinforcing outcomes
      - Public sector: improved public health
      - Private sector: a market
    - A PDP becomes an invaluable global resource of expertise that is essential to ensuring a public health impact

#### \*PDP = Product Development Partnership





# Why Access?

- A part of a more mature concept of public sector involvement in health technology innovation\*
  - Discovery
  - Development
  - Delivery
  - + Advocacy

\* As enunciated by the Bill & Melinda Gates Foundation





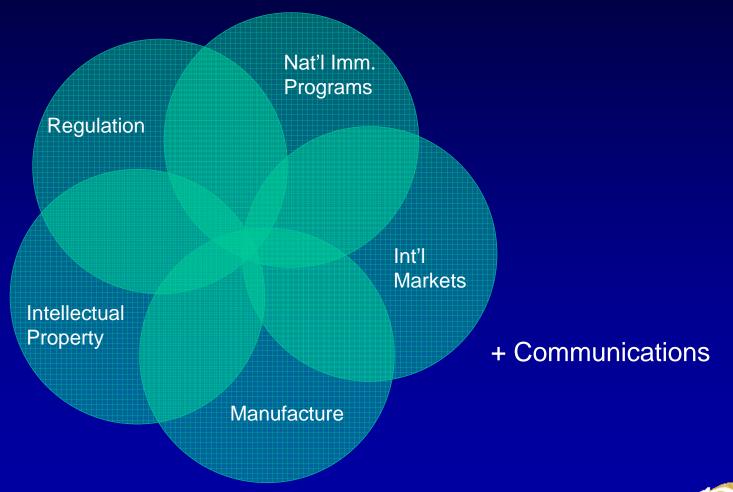
# How Access?

- Unlike R&D, there is no widely accepted evidence-based intellectual framework for Access.
- R&D has preclinical, Phase 1-3, Post Phase 3, Adverse Events monitoring, etc.
- How do we do Access?





# Linked Components of Vaccine Access







# **Core Cross-cutting Activities**

# Dengue Prevention Boards Investment Case





# **Core Cross-cutting Activities**

#### Dengue Prevention Boards:

- Asia Pacific Dengue Prevention Board (APDPB)
- Americas Dengue Prevention Board (AmDPB)
- Independent experts from endemic countries who review key issues in dengue prevention and issue authoritative reports to help advance the field





# **APDPB Membership**

#### Members

- Agus Syahrurachman, Indonesia
- Nihal Abeysinghe, Sri Lanka
- Gregory Dever, Palau (US)
- Jeffrey Hannah, Australia
- Tom Kiedrzynski, South Pacific
- Ken Lam, Malaysia
- Pratap Singhasivanon, Thailand
- Thien Nguyen, Vietnam
- Eng Eong Ooi, Singapore
- Sirenda Vong, Cambodia
- Yukiko Wagatsuma, Japan
- Observers
  - SEARO
  - WPRO





# **AmDPB Membership**

- Members
  - Anabel Alfaro Abando, Costa Rica
  - Juan Jose Amador, Nicaragua
  - Antonio Arbo, Paraguay
  - Jose Cordero, Puerto Rico
  - Eduardo Fernandez, Honduras
  - Maria Guzman, Cuba
  - Jorge Mendez, Mexico
  - Pedro Vasconselos, Brazil
  - Iris Villalobos, Venezuela
- Observers
  - Jose Luis San Martin PAHO
  - Wellington Sun CDC
  - Steve Waterman CDC





## Dengue Prevention Boards Crosscutting mechanism for Access

#### APDPB

- Surveillance, June 2007, Colombo
- Diagnostics, December 2007, Bangkok
- AmDPB:
  - Surveillance, January, Mexico City
  - Diagnostics, Mid-year, Brazil
- Issue joint report on surveillance meetings
- Joint meeting: Investment Case I, Third quarter 2008
- Other topics
  - Case management and treatment
  - Burden of Disease
  - Vector control
  - Health Education
  - Vaccines





# **Investment Case**

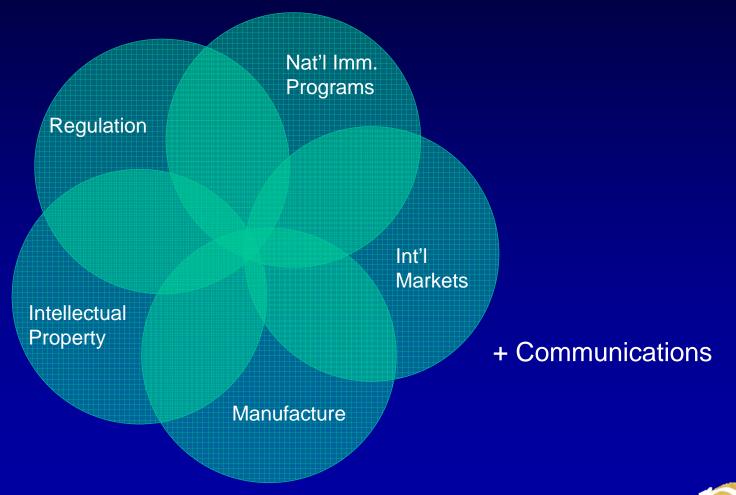
 A comprehensive document laying out the justification and need for funding and support of discovery, development and delivery of dengue vaccines and diagnostics.

If it takes \$2-3 billion over the next 10 years to get from today to general availability of dengue vaccines, how do we do it in detail?





## Linked Components of Vaccine Access







## The PDVI Vaccine Access Program

- National immunization programs/Domestic markets
- International markets/global procurement and supply
- Regulatory systems
- IP management systems
- Manufacture





# Domestic markets/ National immunization programs

- Cost of illness undervalued dengue?
  - Much priority setting is mortality based
  - Dengue causes great morbidity and financial burden to government, health providers, patients and their family
- Vaccine use projections in public and private sectors
- Modeling of national immunization plans
- Key input to Investment Case





## The PDVI Vaccine Access Program

- Domestic markets/national immunization programs
- International trade/global procurement and supply
- Regulatory systems
- IP management systems
- Manufacture





# International trade/ Global procurement and supply

- Bottom up strategy: Work with a group of endemic developing countries to launch vaccine procurement in advance of international commitment. Leads to pressure on international policy makers to act, *cf.* hepatitis B
- Innovative procurement strategies
  - Advance Market Commitments (AMCs)
    - Can donors accelerate the innovation of dengue vaccines by guaranteeing a market?
  - Combined procurement by several countries, e.g. PAHO Revolving Fund
  - Long-term procurement agreements (IFFIm)





## The PDVI Vaccine Access Program

- Domestic markets/national immunization programs
- International trade/global procurement and supply
- Regulatory systems
- IP management systems
- Manufacture





# **Regulatory Issues**

- Working with WHO
  - Developing Countries' Vaccine Regulators
     Network
    - DCVRN "Statement" on dengue vaccines
    - In-depth training course
    - Joint review of clinical trial applications

Update guidelines for manufacture of dengue vaccines (pre-qualification)





# **Regulatory Systems**

- Member countries of DCVRN
  - Brazil
  - China
  - Cuba
  - India
  - Indonesia
  - Russia
  - South Africa
  - South Korea
  - Thailand

- Additional countries as observers recommended by PDVI
  - Cambodia
  - Colombia
  - EMEA
  - Mexico
  - Nicaragua
  - Philippines
  - United States
  - Vietnam
  - Other?





## The PDVI Vaccine Access Program

- Domestic markets/national immunization programs
- International trade/global procurement and supply
- Regulatory systems
- IP management systems
- Manufacture





# Access IP Map

- Shows how IP could help determine manufacturers' market strategy and potential role of second comers.
- Patents are specific to country in which issued
- Key patents for dengue issued in US, Europe, Japan, etc. but not developing countries
- Patent applications on new technologies are being submitted in developing countries
- But know-how is very important particularly for a vaccine like dengue that will be tetravalent





## The PDVI Vaccine Access Program

- Domestic markets/national immunization programs
- International trade/global procurement and supply
- Regulatory systems
- IP management systems
- Manufacture





# Manufacture

- Role of manufacturers in developing countries
  - PDVI accords high priority to working with developing country manufacturers
  - Preliminary case study has shown that developing country manufacture has the potential to be less costly
  - PDVI partnerships with Butantan, Biological E InViragen/Shantha and Panacea will include assessment of advantages/disadvantages of these producers





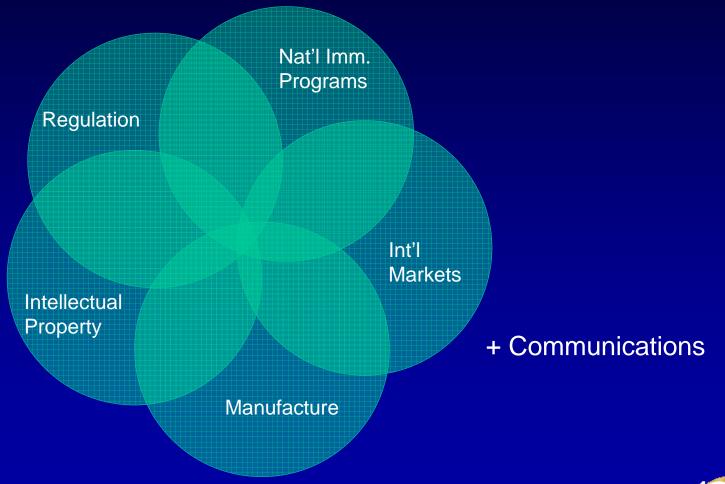
# Summary

The world of public sector involvement in health technology is changing Not enough just to have a technology - Work through public-private partnerships – Want to have an impact on public health No established methodology for access PDVI's methodology addresses five dynamically linked components of access to improve public health with vaccines





# **Components of Access**







# Thank you



