

Deployment & delivery of pandemic influenza vaccine: update on activities and issues for further consideration

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World Health
Organization

Outline

- Deployment guidelines
 - Objectives
 - Expected outcomes
 - Contents: chapter headings
- Overview of forecasting tool
 - Inputs required
 - Expected outputs
- Assessment of cold chain & logistics
 - Requirements
 - Case study to illustrate country preparedness
- Assessment of syringe and safety box requirements and available supply
- Operational planning dependencies
- Guidance required from SAGE WG



WHO Guidelines for the deployment of a pandemic influenza vaccine

- Generic for pandemic influenza vaccines and other pharmaceuticals; already under preparation and undergoing field testing at onset of H1N1 epidemic
- Over arching goal: support development/update of a national plan for the deployment of a influenza vaccine in 7days to all distribution points.
- Eight chapters cover pre-event planning
 - Each chapter calls for assessing the current supply chain
 - Helps define actions to permit rapid deployment of the vaccine within 7 days of receipt
 - Complemented with check lists for assessment and forecasting tools
- Will be disseminated through regional/subregional training workshops
 - Participants are the EPI manager and the person with overall responsibility for managing the response to a pandemic
 - Workshop agenda will follow the chapters in guidelines



Organization of the deployment guidelines

- Introduction
- Management structures
- Legal and regulatory issues for deploying vaccine
- Information and communications management
- Human resources and security
- Supply chain logistics for deploying vaccine
- Managing waste
- Termination of deployment
- Illustrative Checklists*

* *Checklist questions are based on criteria to evaluate readiness on a specific process or structure related to each topic.*



Overview of forecasting tool

- Main question addressed by the tool
 - Quantity of vaccines and safe injection supplies required
 - Storage capacity required at different levels
 - Transportation needs from one level to the next lower level?
- Data provided by the tool
 - Estimates of vaccine requirements at different administrative levels
 - Forecasts of supplies and storage requirements
 - Scenario analysis: impact of different immunization strategies on storage and stock management
 - Cost estimates for above



Forecasting tool - Input

- Country demographic data and immunization targets
- Inventory of all available cold storage capacity, including private
 - Cold storage facilities and their storage capacity
 - Dry storage
- Inventory of transport (cold vans/capacities, trucks and fuel consumption)
- Cost of transportation units/elements
 - Distance to supply (km) } If using programme transport
 - Cost of fuel }
 - Cost of ton.km } If outsourced
 - Cost of m3.km }
- Inventory of waste disposal facilities (incinerators, others)



Forecasting tool - Output

✓ Amount of supplies needed

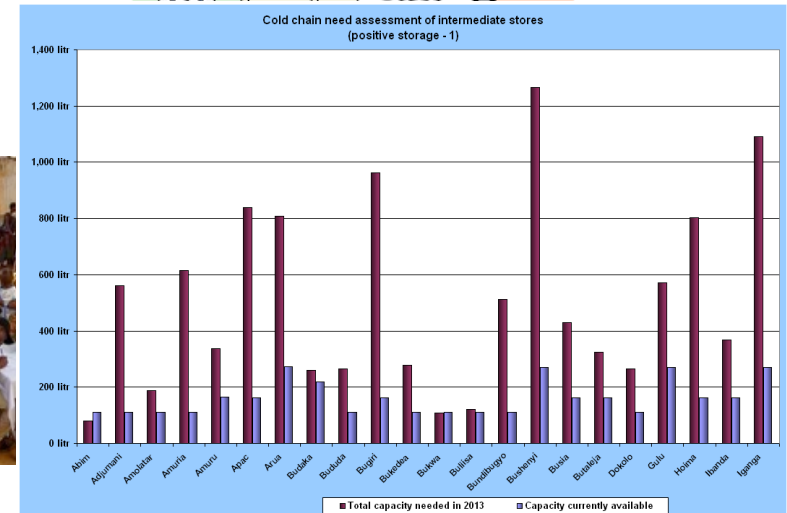
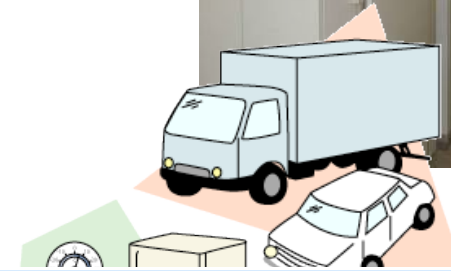
- ❖ vaccines
- ❖ injection equipment
- ❖ distribution plan (routes!!)

✓ Storage needed

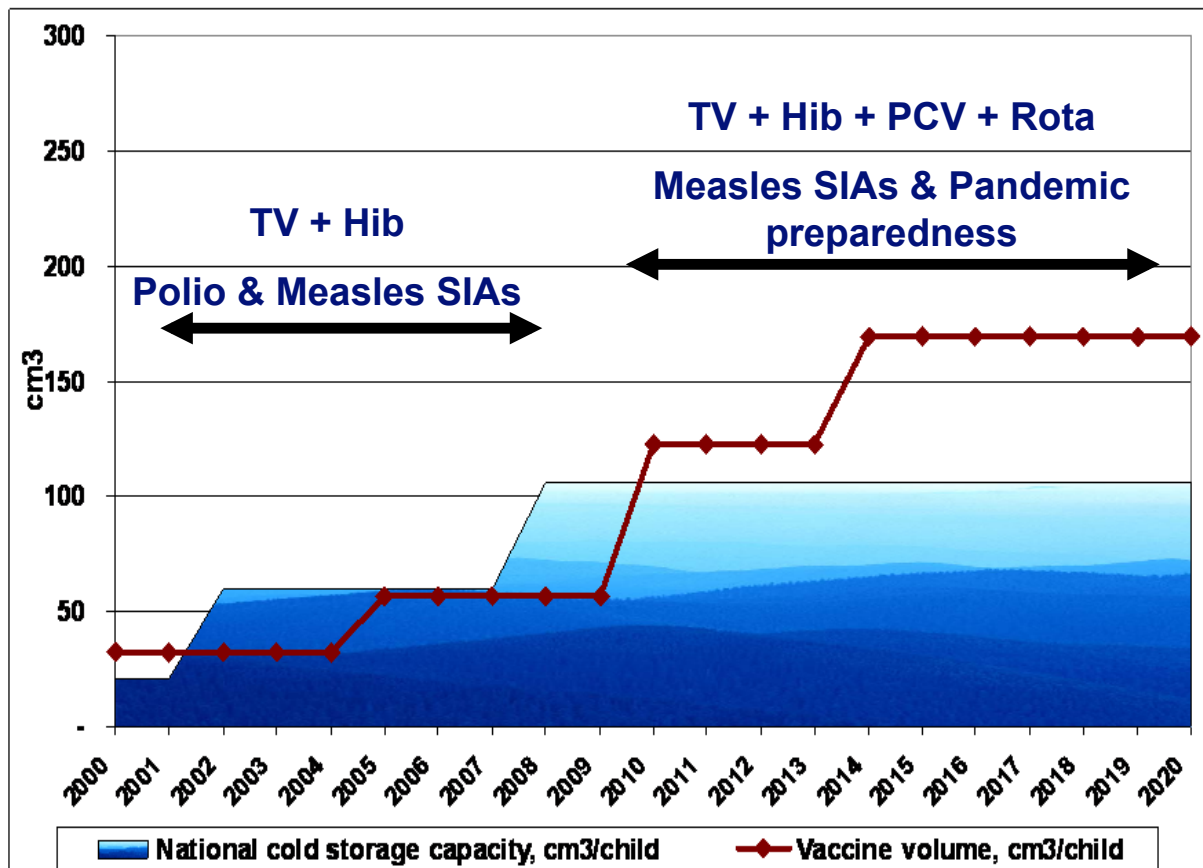
- ❖ storage capacities (cold and ambient)
- ❖ capacities for cooling/freezing packs (transport & sessions)
- ❖ transportation capacities (cold boxes, vans)

✓ Amount waste generated

- ❖ empty vials/ampoules
- ❖ used syringes



Assessment of cold chain & logistics requirement



- Up to 2008:

- Intensified mass campaigns (Polio, Measles, TT)
- Introduction of underutilized vaccines in routine (HepB, Hib)
- Existing cold chain capacity mostly adequate (routine & SIAs)
- Additional capacity hired for SIAs

- Current & future context:

- Accelerated new vaccine introduction (PCV, Rota)
- Mass campaigns (Measles, TT & pandemic preparedness)
- Current cold chain capacity over strained
- Delayed cold chain extension



Supply of syringes and safety boxes

- Questionnaires sent to manufacturers of syringes and safety boxes.
- Questionnaire on syringe supply sent to 15 Companies
 - Determine weekly production capacity for single use disposable and or AD syringes
- Preliminary results (based on responses from 6 suppliers)
 - Disposable: 21 million
 - AD: 23 million
 - Total 44 million per week (current production)
- Some *surge* capacity exist, however time required ranges, 2-6 months



Operational planning: factors influencing vaccine delivery

- **Setting**
 - WHO guidelines/tools target developing countries that do not use seasonal influenza vaccines
 - Uncertainty about supply and timing of vaccines for these countries is a major obstacle
- **Vaccine characteristics**
 - Presentation (vial size, reconstitution requirements etc.)
 - No of doses required per person
- **Vaccine and related supplies**
 - No. of vaccine doses that will be available to country
 - No. and frequency of shipment
 - Syringe and safety box supply
- **Objectives of vaccination**
 - Determines target population
- **Progression of pandemic**
 - Are social distancing and other restrictions in place



Guidance required from expert group for operational planning

- Objectives of vaccination based on current knowledge of disease epidemiology; prioritization based on vaccine supply
 - Protection of essential services
 - Mortality reduction
 - Reduce transmission
- How vaccine for developing countries should be distributed
 - Timing
 - Shipment size & frequency

