Plenary Session 2: Landscape

Measles Aerosol Vaccine
Measles Vaccine, Dry Powder (Inhalable)

Next-Generation Vaccine Delivery Technology Meeting
Geneva, Switzerland

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Measles Aerosol Vaccine

Technology Description:

• Respiratory delivery of the currently available freeze dried measles vaccine
Measles Aerosol Vaccine

1. Controller
   - 1000 doses without recharging
   - Operates automatically for 30 seconds

2. Nebulizer
   - Auto-disable after one working session

3. Disposable mask
   - One per dose administered

4. Plastic needle syringe
   - For vaccine reconstitution
Phase 1 measles aerosol vaccine:

No. of adverse events in 145 healthy measles immune volunteers 1-35 years of age, India - 2007-08

Most AE were mild or moderate

Two SAE not vaccine related
Measles Aerosol Vaccine
Phase II / III RCT

Seropositivity by study arm

85.4% (82.5% – 87.9%)

94.6% (92.7% – 96.0%)

Seropositivity %

Aerosol Subcutaneous
Measles Aerosol Vaccine

Status:

- Bench testing
- Animal immunogenicity
- Animal Toxicity
- Phase 1 in healthy adults
- Phase II/III in adults
- Usability and acceptability
- Cost and ICEA
Measles Aerosol Vaccine

Benefits:

• Non injectable, easier to administer
• No waste disposal
• Similar cost per dose

Challenges:

• Need demonstration studies with MR to further document benefits
• Resources to conduct demonstration studies
40 children vaccinated

Injectable route

Aerosol route
Measles Aerosol Vaccine: Opportunities – Way Forward

Global Public Health Challenge:

Technology Availability:
• Could be available in 3-5 years time if funding for trial and demonstration studies with MR recommended by SAGE were conducted