Emerging Technologies

UAVs for Improving Access to Reproductive Health Commodities

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GENERAL MEMBERSHIP MEETING
of the
REPRODUCTIVE HEALTH SUPPLIES COALITION

10-14 OCTOBER 2016

#RHSUPPLIES2016

Reproductive Health SUPPLIES COALITION

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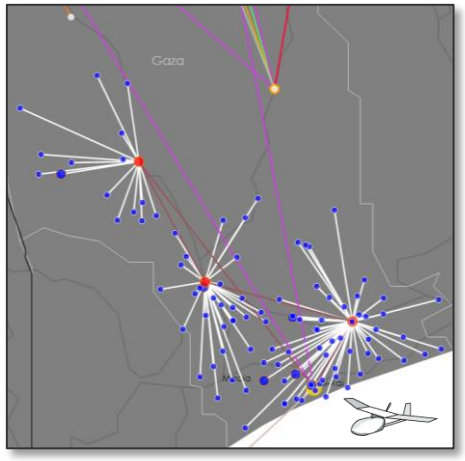
UAV Use Cases for the Last Mile



Routine

- Integrated with existing transport systems
- Routine, predictable resupply
- Movement of diagnostics

On-Demand

- Daily service needs, forecasted on-demand
- Removes need for cold chain or other specialized equipment

Emergency

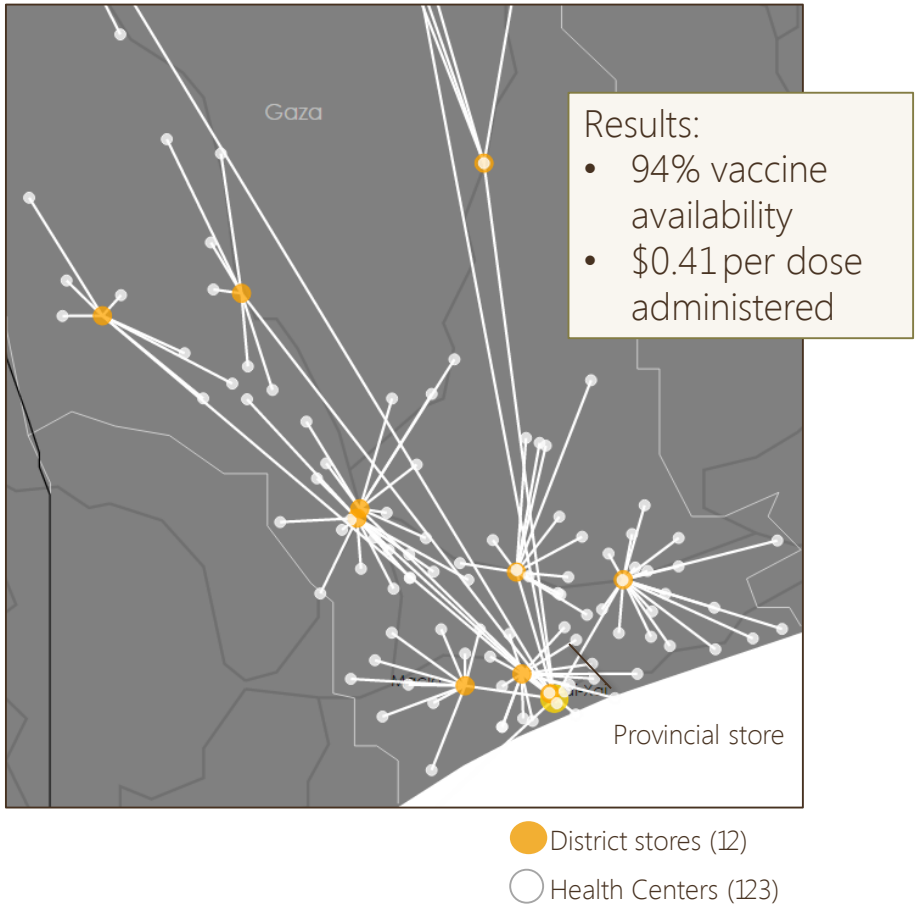
- Post partum hemorrhage
- Blood
- Rabies vaccine or other hard-to-manage prophylaxis

What is the state of the industry?

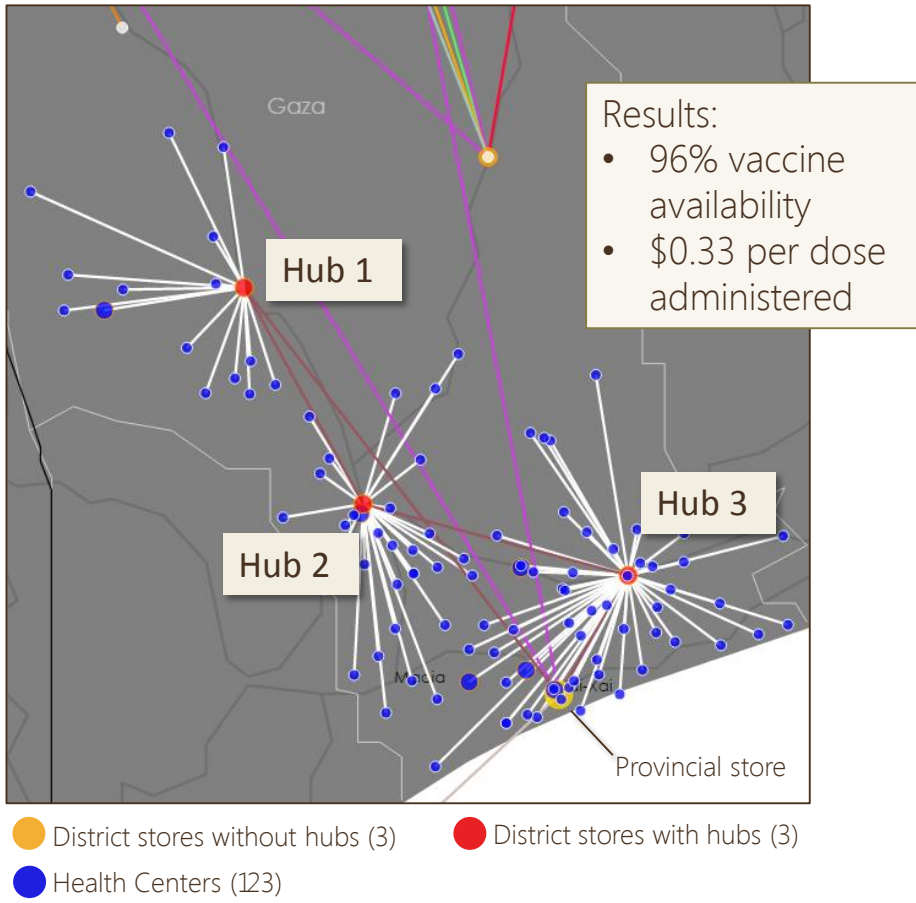
HERMES Simulation used to Assess Potential UAVs Benefits for Vaccine Delivery

Results published in July 25th issue of journal *Vaccine*

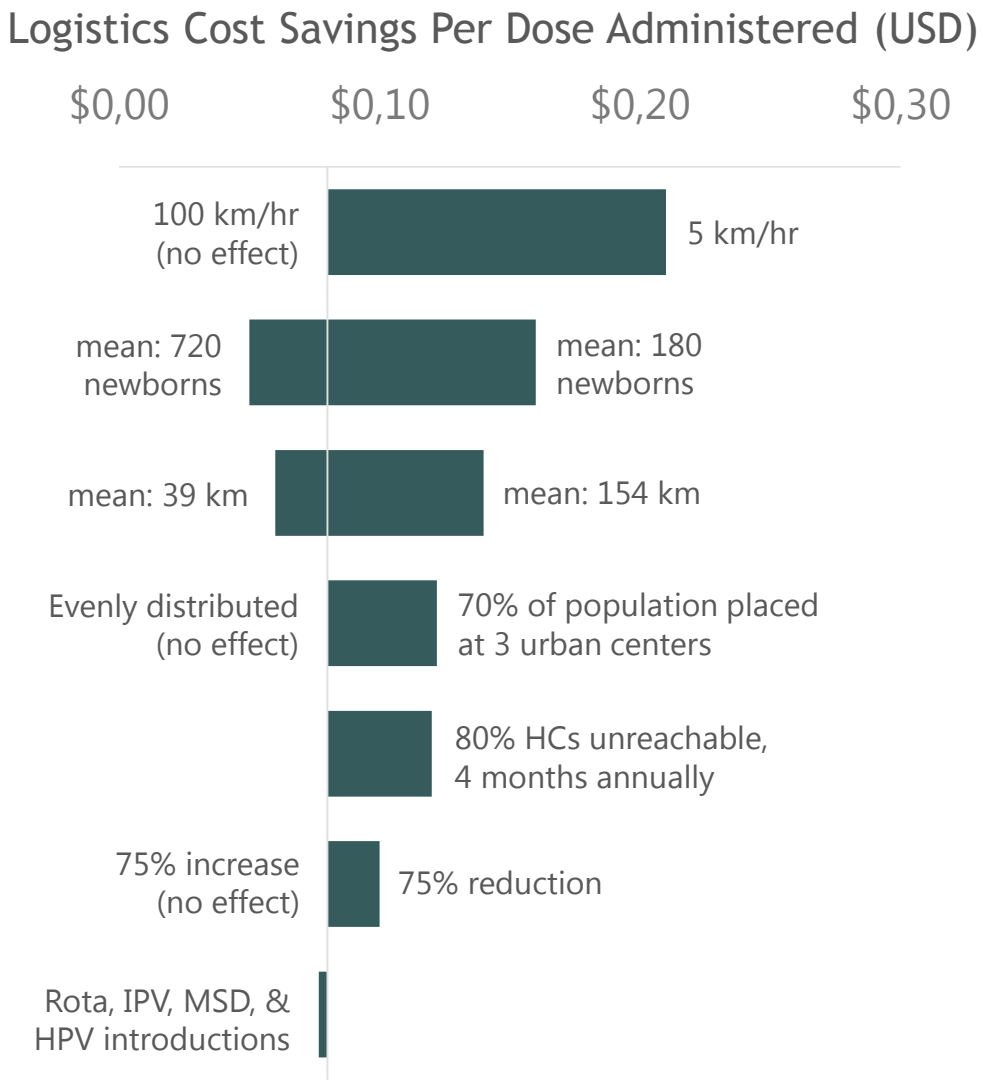
TMLTS for All Locations



UAS for Selected Locations (and TMLTS for Remaining Locations)



What Factors Made the Most Difference in Cost?



Challenges UAVs Face

- Technology
  - Distance vs. Power
  - Distance vs. Weight
  - Transmission signal
  - Battery charge & materials
  - Collision avoidance automation
- Cargo
  - Fragile
  - Sensitive to temp
  - Expensive
  - Limited space
  - Limited weight
  - Biological/biohazard
- Environment
  - Bad weather
  - Terrain/topography
  - Animals & Birds
  - Human interference
- Economic
  - Cost of drone
  - Infrastructure
  - Pilot training
  - Maintenance
  - Additional system devices
- Political
  - Regulations
  - Military connotations
  - Security – national, personal data
  - Public acceptance
  - Growing local technical capacity
- Social/Community
  - Evolving perceptions (military → healthcare)
  - Accidents – people & property
  - Security – national, local
  - Knowledge

Relevance for RHSC SSWG

Are UAVs are a good option for reproductive health commodities?

- Current system constraints
- Volumes, shelf-life, handling considerations
- Considerations around reliability vs cost

How could the SSWG help?

- Thought leadership of RH use cases
- Small scale studies (e.g., costing analysis)
- Join the UAV Payload Delivery Working Group (industry, implementers, and donors)

An optional slide, to be used for conclusions, quotes, etc.