BroadReach
healthcare

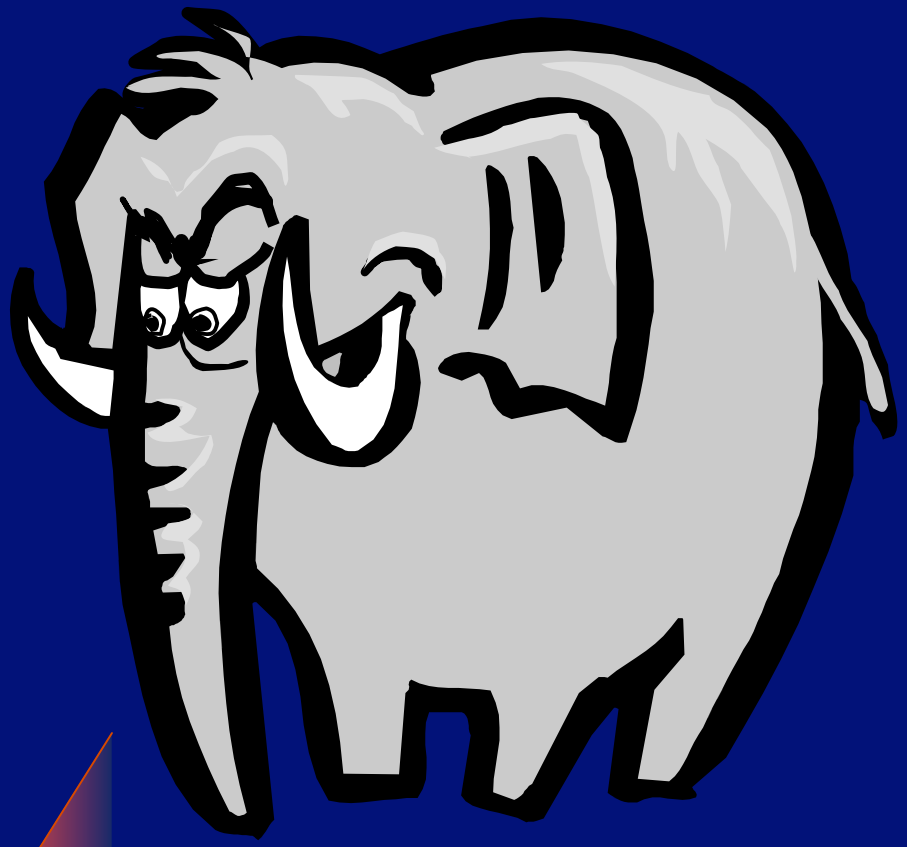
Future Direction for Community Based Laboratory Diagnostics Capacity Building

Presentation by Ernest Darkoh (MD, MPH, MBA): Toronto, August 13th 2006.

Challenge: Supply and Demand Mismatch

LACK OF CAPACITY

- Human Resources
- Data and information for policy and planning
- Skills
- Infrastructure (Space & Equipment)
- Systems (Finance, Management, Lab and Drug Logistics, Transport, Communication, Monitoring etc)
- Quality Assurance Systems
- Appropriate simple technologies (especially laboratory)



SUPPLY-SIDE

DEMAND-SIDE

Source: BroadReach Healthcare Implementation and Assessment Strategy.

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Challenges of Providing Care in the Community

- Massive burden of disease which can never be managed from hospitals and clinics and central laboratories
- Millions of “well” people requiring impeccable “lifetime” follow-up in the community
- Environmental & social, cultural & economic challenges limiting access and reach into rural areas
- Urban preference of specialist staff
- Challenging special risk groups e.g. children

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New Laboratory Technologies Needed

Need point of care technologies which provide instant results.

CURRENT TECHNOLOGY IS:

- Disaggregated, highly quantitative and time intensive
- Complex and requires highly specialized staff & procedures
- Fixed, largely non-mobile and electricity dependent
- Sensitive to sample processing
- Difficult to maintain
- Limited in ability to service remote areas
- Costly

NEED TECHNOLOGIES WHICH ARE:

- Semi quantitative with “instant” results; ideally “aggregated”
- Simple and can be operated by non-specialist staff
- Highly portable and battery/solar operated
- Largely independent of sample processing considerations
- Easy to maintain or “no maintenance” required
- Deployable in remote community settings
- Not as costly

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Failure & AE Management Protocols Needed

Need simplified decentralized means of identifying resistance-related treatment failure or adverse events and managing them at district, clinic and community level.

CURRENT PROTOCOLS:

- Are dependent on complex centralized technology
- Require VERY highly specialized staff
- Lack consensus even among experts
- Not easy to operationalize at large scale
- Are VERY costly

NEED PROTOCOLS WHICH ARE:

- Simple and practical
- Articulated as “decision tree” algorithms
- Operable on a population level basis and decentralized
- Minimally dependent on expensive technology
- Adaptable across a wide range of cadres of staff

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Thank You!

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