Leadership and Governance: Building Interoperable Solutions

Session Name: Leadership and Governance: Building Interoperable Solutions
OHIE18 Event Page - ohie.org/OHIE18
Time / Room: 8:30 - 9:30 Faru
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Standards

HNSF (Health Normative Standards Framework) - South Africa's interoperability policy
 - based on IHE profiles
MHD standard - complex, multipart message with CDA
 - Mobile Health Data, embeds CDA, with a json header
CDA - Clinical Document Archotecture
  - huge XML or piped document, with loads of metadata
  - document-centric view of clinical data records
  - can also attach human readable content
mACM - Mobile Alert Communication Message
  - Came up during Ebola response
ATNA - Audit Trail and logging

South Africa **MomConnect** program
 Set up connectathons to get various organisations connecting using MHD
 MomConnect - Flagship South African maternal messaging platform
 - Developed custom json message for handling subscriptions (non-clinical info)
 - Most data had no unique identifier (closest was a mobile number, not unique)
 - Designed to feed into the natioal pregnancy/birth registry
 - DHIS2 acted as the FR, SHR, CR.
 - As the product matured, switched to using FHIR for referrals and other clinical observations
  - More readily adopted by partners
  - In production now

Moving towards interopable systems
 - Need to understand your workflow first, and then pick the right profile/standards to address the use case
 - If you find a profile and it doesn't fit your use case 100%, can put in a change requets to IHE to update this
 - IHE Connectathons
   - Provides way to test and validate standards and system interoperability
 - Develop a roadmap, find a balance for when to incorporate standards
 - Can add complexity, but helps when you want to scale or work with multiple systems
 - Selection of standards should not always be done exclusively by the developer/technical team (it's not just a technical problem)
 - Adopt, adapt, develop model
 - Standards can be a leveraging factor in compliance
 - FHIR can make things simpler
 - Need to consider capacity of groups that are going to support the system/solution in the long run
 - Do we have the capacity to build and maintain that standard?
 - First look at what's out there before going custom
 - Point to point is fine for 1-1 and 2-1 systems communication, but as you add more systems, the challenge increases exponentially
 - Be pragmatic
 - Be careful that what you build isn't too brittle
 - Looking to adapt things like HNSF as a reference manual
 - Build once, and then reuse
  - Initial overhead to set up standards, but once it's done, can
 - Open Health Toolkit, HAPI libraries - helps with building and understanding IHE profiles at code level

CSIR Community Health Worker (CHW) Project
- With HL7 you can use pid for patient demographics, but very specific to health
- no IHE profile that matches CHW use case perfectly
- need to capture additional household (non health) data
- Adapted pid to include household data

Uganda Use Case
- OpenMRS, DHIS2, BLIS (lab system)
- Have to have separate accounts in each system
 - Why can't we have one login/single access to all the data, rather than having to go into each system
 - linking EMR and lab system while reporting to DHIS2
 - Need to uniquely idenitfy patients across facilities
 - By MOH standards, not supposed to have patient level data in the cloud
 - Challenging problem because of complex info/system ecosystem

Questions:
- How did government get involved in interopability (in South Africa)?
  - Fortunate to have high-level buy in
  - Minister quoted as saying interoperability is a priority
  - Can be issues between private and public health systems
  - Good idea to create some form of agency with a mandate for driving, managaing and maintaining standards etc.
  - If government doesn't understand/get involved from the initial stages, it's hard to include them at a later stage
    - Need for government to understand the ins and outs (complexity) - breaking down barriers
    - EMR standards guideline can help with sustainability
    - 1. work on governance
    - 2. is there capacity to support info systems
    - 3. having functional information systems
    - 4. country ownership

Closing comments:
  - technology is not the hard part, it's everything else that surrounds it. Sometimes you have to make technology choices based on other reasons.
  - standards are not simple, it's a complex process to go through
  - no silver bullet to find a perfect fit
  - the best resourc we have is each other (**community**!!!)

Next Steps:
  Community, connect