NORTHROP GRUMMAN

Nationwide Health Information Network
Business Model Discussion

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DEFINING THE FUTURE

This presentation discusses an NHIN Architecture Prototype project made possible by a contract from the Office of the National Coordinator for Health Information Technology (ONC), DHHS. The content is solely the responsibility of the authors and does not necessarily represent the official view of ONC.

HEALTH

Nationwide Health Information Network

Role of the NHIN

- Should minimize services required at the national level.
- Must "lower the bar" required for entities to join as much as possible.

Network Service Providers

A provider of health information network services…

- In the business of providing exchange services for health information.

Provides a separation of business of operating an exchange community from the technology of implementing it.

- Not <u>necessarily</u> a RHIO or SNO.
- Frees the community to concentrate on the business of the local community.
- Ensures a robust exchange through specialization.
- Provides a means to foster standards.

Network Service Providers

Role of a Services Provider

- <u>Act as a broker</u>: Connect providers and customers for health information and services.

- Does <u>not *necessarily* store data</u>, but allows customers and providers the ability to operate and access data stores.

Network Service Providers

Key philosophies of the business model

- Competition and entrepreneurship must be encouraged to support <u>value-driven exchange and quality health care.</u>

- Financial flows and arrangements can (and will) vary over time.

- Success of NHIN depends on the creation of <u>additional value</u> and services:
  - for the users of exchange information, and
  - from health data.

- It is essential that ALL major players are reflected in the model.

Low-level Services

"Regular Suspects" that are the foundation of exchange:

- Patient identification
- Information location
- Routing
- Filtering
- Auditing

Network Service Providers may be dependent upon higher-value, higher-level services.

Service Offerings

Content Mapping

- Data mapping and other services that provide semantic interoperability with entities that may not (yet) be fully compliant with all national standards standards.

Clinical Data Exchange

- Exchange of health data focused on delivery of care to a single patient, such as results reporting, queries for historical labs for a patient, and secure messaging between healthcare providers. This may be expanded to address claims data as long as the focus remains on care delivery for specific patients.

Service Offerings

Surveillance

- Services that screen clinical data and forward records that correspond with specific criteria to specified entities. Surveillance activities have fairly strict requirements for timeliness of reporting.

Directory Services

- Provide both a "White Pages" and 'Yellow Pages" capability so that potential buyers and sellers of value-added services can connect.

Service Offerings

Ordering

- Services that support placing of orders and obtaining resources, such as electronically prescribing, laboratory, and ancillary orders.

Data Aggregation

- More generalized types of queries that seek de-identified data on specific populations and do not face some of the timeliness constraints that surveillance activities do.

Entities in Business Model

Types of Entities:

- **Healthcare Delivery** – entities that are both consumers and producers and consumers of health information.

- **Health Information Providers** – both ancillary services (labs, radiology) and value-added information providers (RxHub).

- **Payers** – commercial and government (e.g., CMS, VA)

- **Researchers** – commercial (e.g. pharma) and non-profit

- **Public Health**

- **Government**

- **Advocacy** – for specific illnesses and populations

- **Investors**

Entities in Business Model

Each Entity differs in :

- The services it will use the most.
- The return (financial, or perhaps non-financial) it seeks.

Goals for Stakeholder Entities

Entity Type	Revenue Source	Expects $ for Services	Seeks $ ROI from NHIN	Seeks Value from NHIN
Healthcare Delivery	■			■
Healthcare Info Providers	■	■	■	
Payers	■			■
Research	■			■
Public Health	■			■
Government	■			■
Advocacy	■			■
Investor	■		■	

Network Service Providers

Key Hurdles

- Content mapping and translation is the greatest single impediment to full health data interoperability.
- Consent for secondary use of data is essential.

Other Considerations

- Privacy and confidentiality of personal, identifiable health information.

Key Branch Points for Business Model

Degree of reliance on Grants and Loans

- Most of our scenarios envision that most Service Providers will capitalize themselves.
- Entities may need more grants and loans to meet standards.

Content Mapping may be the largest cost / revenue driver

- Prerequisite for data warehousing and secondary use.
- Our baseline scenario assumes that the need will decrease when standardized EHRs become more widespread.

Key Branch Points for Business Model

Adoption and Consent

- Potential revenues for the NHIN are directly tied to the proportion of the nations patients whose EHRs are incorporated.

- Failure to secure consent for secondary use of patient data will drastically impact the revenue generation capabilities.

Value Creation

- The degree to which for Service Providers can create added value and new services will have a large impact on the viability of NHIN.

Applications of the Model:

Baseline Scenario:

- Secondary data use starts in year three
- Minimal use of Grants and Loans
- Use of content mapping drops from 80% to 20% during 8 year period.
- Variables:
    - Different rates of adoption
    - Availability of Data aggregation services
    - Different levels of NGSP saturation

NHIN "Lite" Scenario

- Removes the requirement of content mapping
- Removes the majority of secondary use applications
- Much smaller "footprint"

An Interactive Model

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