

# "Implementation Issues in EHRs"

Focus on Interoperability and Health IT Policy Levers



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## Who We Are: Experts in Health IT & Quality



## **Woman and Minority-Owned Small Business**

Connecting public and private sectors

**Doctors** Strategists

**Technologists** 

Putting strategies into practice

Payment Reform

ACOs

PCMH

CQMs

Nurses

Clinicians

Researchers

Experienced consultants and clinicians with on-the-ground experience

Public Health





**Policy Experts** 

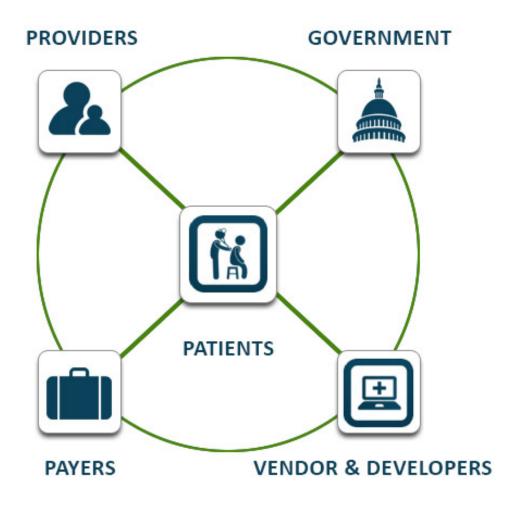
Delivering health technology solutions to Federal, State and Local clients

## Who We Are-Our Focus



Our goal is to support and educate our clients in understanding the implications of health IT policy and regulations. We provide strategic input into the policy development process, and continue to work towards improved integration and access to data to deliver quality care for patients. Our expertise includes:

- Program Management & Evaluation
- Strategic & Operational Planning
- Policy & Regulatory Analysis
- Usability & Clinical Workflow
- Meaningful Use
- Certification & Testing Methods
- Interoperability & Standards
- Privacy & Security
- Clinical Quality Measurement
- Health Information Exchange
- Telemedicine & mHealth
- Patient Engagement
- Behavioral Health



# Audience: What Does Interoperability Mean to You?

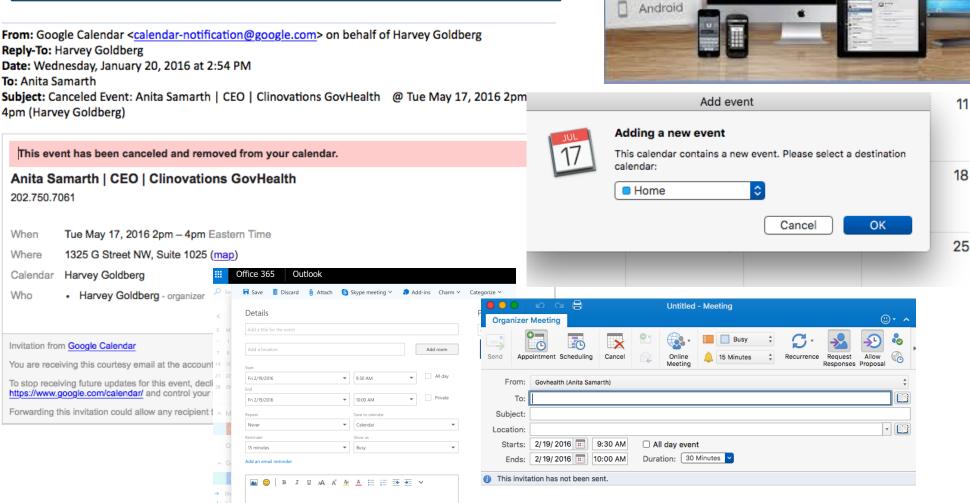


# Why is EHR Interoperability So Hard?!



## WE ARE NOT ALONE..... Calendar Interoperability: My Pet Peeve!

Add to Calendar: Outlook® Calendar | Google Calendar™ | iCal®



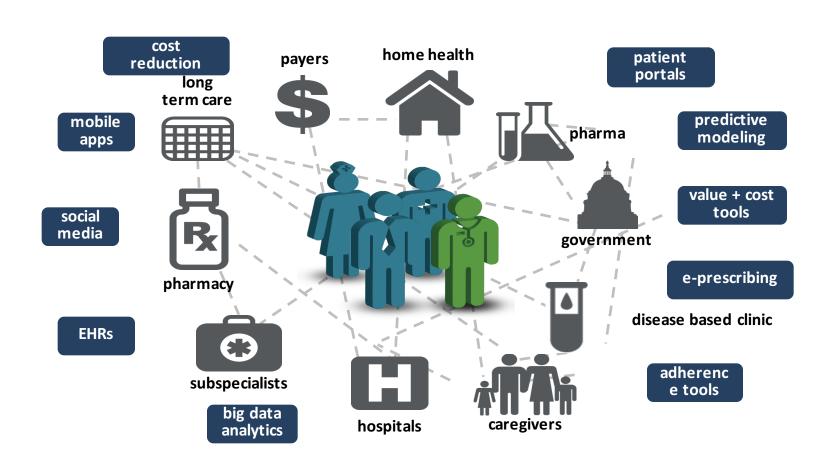
Mac

iPad

Windows Phone

## **Coordinated Care Challenges**





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# Isn't The Government "Here To Help"?



**Providers:** Losing ability to be the "lever" to drive Vendor development

Frustrated with state of the market

## Government:

Sets policy, not process

Certification: Sets the "what",

not the "how"

MU: Sets the measurement

# Provider Organizations:

Focused on meeting requirements, incentives, avoiding penalties

Vendors: Offer functionality

**Providers:** Implement functionality – often don't customize due to limited

resources

## **Vendors**:

Race to "first-tomarket"

# EHR Examples – Challenges in Measurement



- Transition of Care
- Medication Reconciliation
- Coded Problem List/ICD Codes (Inpatient)
- Sending Electronic Info to Other Providers
- Structured vs. Coded vs. Narrative Data Capture vs. Templated Notes

## **EHR to EHR Data Migration**



- Certification provides for:
  - Data portability criterion (C-CDAs)
- Vendor implementation
  - On-site vs. hosted vs. cloud implications
  - Data migration data elements flat file
  - Maintenance of legal medical record
  - Legacy data
  - Workflow

# EHR to PHR/Patients Data Exchange



- Patient portals / sending C-CDAs
- Patient Generated Health Data (PGHD)
  - Standards not set/still evolving
  - Steps variation across monitors
  - Data often sent to an intermediary
  - Validity of information and provenance
  - Data overload what to providers want to see?
  - Responsibility what are providers responsible for?

## ABCs.... Or Maybe 7 "I"s in Health Information



- Integrate: Form, link, coordinate, or blend into a functioning or unified whole ensuring that the subsystems function together as a system or act as a coordinated whole
- Interface: Point of interaction, The place or area at which different things meet and communicate with or affect each other
- Interact: Two or more objects have an effect on each other, To act upon one another
- Interconnect: Connect two or more things together
- Information exchange: Informal term referring to either bi-directional information transfer or communication
- Incorporate: Unite or work into something already existent so as to form an indistinguishable whole
- INTEROPERATE: Ability of a system to work with or use parts of another system

## Health IT Standards, Specs, Certifications



# Interoperability Made Easy?!

- Integrate
- Interface
- Interact
- Interconnect
- Information exchange
- Incorporate
- INTEROPERATE



## **Definitions of Interoperability**



Approved by the HIMSS Board of Directors April 5, 2013:



"In healthcare, interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged."

## Levels of Interoperability (HIMSS)



- **"Foundational"** interoperability allows data exchange from one information technology system to be received by another and **does not require the ability for the receiving** information technology system to interpret the data.
- "Structural" interoperability is an intermediate level that defines the structure or format of data exchange where there is uniform movement of health data from one system to another such that the clinical or operational purpose and meaning of the data is preserved and unaltered... It ensures that data exchanges between information technology systems can be interpreted at the data field level.
- **"Semantic"** interoperability is the ability to exchange information and to **use the information that has been exchanged**. Semantic interoperability takes advantage of both the structuring of the data exchange and the **codification of the data including vocabulary** so that the receiving information technology systems can interpret the data.

## What This Can Mean?







From RTI.com: The Path to Semantic Interoperability, by Lacey Rae Trebaol, July 29, 2013.

## Doesn't Meaningful Use Take Care of This?



#### Stage 1 (via 2011 EHR Certification)

- Vocabularies: Problems, Procedures, Lab results, Medications, Immunizations, Race and Ethnicity
- Content Exchange: Patient Summary Record (CCD or CCR), e-Prescribing, Electronic submission of lab results, Electronic submission for syndromic surveillance, Electronic submission for immunization registries

#### Stage 2 (via 2014 EHR Certification)

- Vocabularies: Problems, Procedures, Lab results, Medications, Immunizations, Race and
   Ethnicity, Preferred Language, Smoking Status, Encounter diagnoses, Family health history
- Content Exchange: C-CDA, Updated specs for syndromic surveillance, Immunization messaging, lab results, Lab results transmission to public health, QRDA for CQMs
- Transport: Direct (required), optional transport using SOAP and Direct with XDM for provider-to-provider communication

## Stage 3 (via 2015 EHR Certification)

- Vocabularies: Expanded
- Content Exchange: Updated and expanded from 2014/MU2
- Transport: Direct, Email, Secured and Unsecured Exchange, Includes Delivery Notification (ability to determine whether recipient actually received what was sent)

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