Rising to the Challenge
Or
Keeping up with the Jetsons

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PREDICTING THE FUTURE?
WHAT WE THOUGHT
WHAT WE GOT
The future is hard to predict

But

Automation is growing fast!
Instant Data and Communications

- **Google**
  - Cell phones
  - Tablets
  - Connectivity
  - Medical software and big data

- **Traditional communication fading**
  - Electronic media
    - Twitter
    - Instagram
    - Facebook
What is the connection between instant data and public health?

- **Twitter**
  - Being used to identify and monitor concentration of flu cases by geographic area

- **Google**
  - Reported flu outbreaks based on search terms and number of searches
Google Ventures Leads $130M Round For Big Data Medical Software Company Flatiron Health

By TIMOTHY HAY

Google Ventures has made its largest medical software investment yet, providing the bulk of a $130 million financing for Flatiron Health Inc., which aggregates cancer-patient data from a wide variety of sources to help doctors make treatment decisions.

First Round Capital, Laboratory Corporation of America and angel investors also contributed to the Series B financing, which will partially be used to acquire electronic medical records company Altos Solutions Inc. Valuation was not disclosed.

Fortune earlier reported Flatiron was raising a nine-digit round led by Google Ventures.
What is the connection between instant data and public health?

- Is it ACCURATE?

- What is public perception of accuracy?

- Will cancer data be reported based on google searches?
Accuracy versus Speed

- Does perception become reality?
  - What people hear first sticks
- When does precision matter?
- Can we hold that ground?
Only if we are able to change

“Change happens to you or in spite of you. “

“If companies do not disrupt themselves, disruption will disrupt them.

- Brian Solis
- How to Build a Culture of Innovation by Killing Mediocrity
  - Linkedin.com
STRESS on Surveillance Systems!

- Recession
- Staffing
- Everyone wants us to collect something more
Survival Mode!

- Batten the Hatches!
- Benefit – possible survival

- Risk – More innovative organizations or those willing to sacrifice accuracy leave you “in the dust.”
Kodak Moment

- Enormous opportunity
  - Innovators of their time
  - Brand recognition
  - “Don’t take my Kodachrome away!”
  - First patents on digital technologies
Kodak Moment

- Company culture was not innovative
  - Relied on past for future profits
  - Too secure
  - Too confident
- Where are they NOW?
  - Sold patents!
  - Bankruptcy

Kodak sells patents for $525 million
Eastman Kodak sells 1,100 digital imaging patents for $525 million
By The Associated Press December 19, 2012 7:27 PM
Cancer Surveillance Threats/Opportunities/Challenges

- Electronic Health Records
- Health Information Exchanges
- Data warehouses
- Data linkages

Will researchers lose sight of role of central cancer registries:
- Consolidation
- Standardized data
- Population based
- Quality assessment
Cancer Surveillance
Threats/Opportunities/Challenges

- Funding
  Can we ensure adequate funding and a trained workforce?

- Increased expectations
  Can we prove our value to gain support without over-promising?
“The best way to predict your future is to create it”

— Abraham Lincoln
Easier said than done.....
How do we make our future?
We need to be clear about our “value – add”

- Standardized data
- The truth (not instant but right)
- Consolidation
- The core of any population based cancer research
- Quality assessment
Expand and Publicize
Unique Uses of Cancer Registry Data

- Monitor outcomes of Affordable Health Care Act
- Monitor success of HPV vaccine
- Monitor cancer from Hepatitis and other infectious agents
- Measure and track disparities in treatment
- Measure the effects of screening programs
Expand and Publicize
Unique Uses of Cancer Registry Data

- Explore new hypotheses
  - Assisted reproductive technology and cancer
  - Birth defects and cancer

- Facilitate large cohort studies
  - Studies around nuclear power facilities
  - Camp Lejeune – Marine Corps Base
Explore and Establish New Uses for Cancer Registries

- Comparative Effectiveness Research
  - Track outcomes
    - Measure recurrence; progression
  - Point the way to better treatment
  - Evaluate new biomarkers
Explore and Establish New Uses for Cancer Registries

- **Survivorship**
  - Second primaries
  - Co-morbidities
  - Care Plans and Treatment Summaries
Using Cancer Registries to Support Survivorship Care Plans and Treatment Summaries

- Input of data from cancer registry
  - Type of cancer
  - Stage
  - Some treatment data

Colorado Special Project – funded by CDC through the American Recovery and Reinvestment Act – CER funding
Using Cancer Registries to Support Survivorship Care Plans and Treatment Summaries

- **Data from Oncologist using modified WebPlus software**
  - Complete treatment protocols
  - Other information important to cancer survivor

- **Patient access**
  - Future web access to guide care

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Using Cancer Registries to Support Survivorship Care Plans and Treatment Summaries

- Why use the Registry?
  - Saves time
  - Saves money
  - Consolidated record
  - Reduces duplication of efforts!
Adapt to Expectations Using New Technology

- **Build in more nimbleness and flexibility**
  - New strategies and approaches

- **For example, early Incidence Reporting**
  - Cancer Incidence report
  - Treatment report
There is a trade-off between timeliness and completeness
One approach: two-stage reporting
Advantages

- **Faster incidence**
  - Incidence reporting in U.S.
  - Recruitment into clinical trials
  - Cluster investigations

- **Provides time to fully collect:**
  - Stage
  - Treatment
  - Biomarkers
  - Supports CER and Evaluation Quality of Care
Adapt New Technology

- Automate where we can

- Utilize Health Information Exchanges and other electronic systems
  - Early Case Capture; linkage studies; follow survivors - outcomes
Overarching Approach to Surveillance

- CDC Surveillance Strategy
  - Strategies related to:
    - Innovative IT
    - Availability, quality, and timeliness of surveillance data

- Can CDC help states unify their surveillance systems?
  - Common data items
  - Common IT systems
  - Cancer and birth defects, immunizations, diabetes, etc
Overarching Approach to Surveillance

- Tap the influence of all CDC surveillance systems
  - To address common surveillance challenges
    - Data access
    - Inter-state data exchange
Balance

Don’t break the system while pushing it forward
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.