

# **Title Slide: TOOLS,TRENDS, & RESOURCES FOR RESEARCH: M-HEALTH & HEALTH I.T.**

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## **Slide 2: Globalization 3.0: “Flattening the Global Economic Playing Field”**

[image]

Book written by Thomas L. Friedman, :The World is Flat, A Brief History of the Twenty-First Century"

[end image]

[image]

Photo of Thomas Friedman, Massachusetts Institute of Technology, May 16, 2005

[end image]

## **Slide 3 and 4: Internet per 100: 1990 to 2008**

[image]

World map showing overall increasing trend in internet users around the world from 1990 to 2008. (data from gapminder.com and available here:

<https://spreadsheets.google.com/pub?key=phAwcNAVuyj0xiDjWaypQTg&gid=0>).

Major usage is in U.S., Canada, Australia and Europe.

[end image]

## **Slide 5 and 6: Mobile per 100: 1990 to 2008**

[image]

World map showing overall increasing trend in mobile (cell) phone use around the world from 1990 to 2008 (data from gapminder.com and available here:

<https://spreadsheets.google.com/pub?key=phAwcNAVuyj2ZMli4YTn2Ag&gid=0>)

Major usage is in U.S., Canada, Australia, Bermuda, Hong Kong, Singapore and Europe.

[end image]

## Slide 7: Medline Page Views: 2006

U.S. National Library of Medicine (MedLine), 2006

[image]

World map showing the some of the page views by countries for one month.

Number of pages	Number of Countries
10,000,000 to 100,000,000	1
1,000,000 to 10,000,000	4
100,000 to 1,000,000	16
10,000 to 100,000	44
1,000 to 10,000	63
100 to 1,000	38
10 to 100	29
0 to 1	57

Examples of countries with page views:

- 10,000,000 to 100,000,000 views
  - United States
- 1,000,000 to 10,000,000 views
  - Canada
  - Spain
  - Mexico
- 100,000 to 1,000,000 views
  - Brazil
  - United Kingdom
  - Australia
- 10,000 to 100,000 views
  - South Africa
  - Russian Federation
  - Japan
  - Sweden
- 1,000 to 10,000 views
  - Fiji
  - Ethiopia
- 100 to 1,000 views
  - Namibia
  - New Guinea
- 10 to 100 views
  - Cook Islands
  - Madagascar

[end image]

## Slide 8: Changes in the Policy Environment

Health Information Technology for Economic and Clinical Health (HITECH) ACT

[image]

Kaiser Permanente web site, <https://www.kaiserpermanente.org/>

[end image]

Meaningful Use:

- Safety, Efficiency, Effective
- Patient Engagement
- Care Coordination
- Population Health
- Privacy, Security

Open Source Applications (NCI)

## Slide 9: Changes in the Policy Environment

Patient Protection and Affordable Care Act of 2009

[image]

HealthCare.gov web site, <http://www.healthcare.gov>

[end image]

Meaningful Use:

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Open Source Applications (NCI)

## Slide 10: Changes in the Policy Environment

Accountable Care Organizations

[image]

Office of Inspector General Accountable Care Organization web page,  
<http://oig.hhs.gov/compliance/accountable-care-organizations/index.asp>

[end image]

Meaningful Use

- Safety, Efficiency, Effective
  - Patient Engagement
  - Care Coordination
  - Population Health
  - Privacy, Security
- Open Source Applications (NCI)

## Slide 11: Changes in the Policy Environment

Comparative Effectiveness and Data Liquidity: Healthcare as Data Platform

[image]

Book, "The Learning HealthCare System, Workshop Summary", book i published by the National Academic Press, [http://www.nap.edu/catalog.php?record\\_id=11903](http://www.nap.edu/catalog.php?record_id=11903)

[end image]

Meaningful Use

- Safety, Efficiency, Effective
- Patient Engagement
- Care Coordination
- Population Health
- Privacy, Security

Open Source Applications (NCI)

## Slide 12: Changes in the Policy Environment

“Open Government:” Government as Platform

[image]

HHS Open web page, <http://www.hhs.gov/open/>

[end image]

Meaningful Use

- Safety, Efficiency, Effective
- Patient Engagement
- Care Coordination
- Population Health
- Privacy, Security

## Slide 13: Public Health Data Sources

[image]

Showing four different public data sources:

1. Public Health Surveillance
  - National Surveillance Data (e.g., NHIS, BRFSS, NHANES)
  - Routine behavioral surveys (e.g., HINTS)
2. University Laboratories
  - Individually published papers
  - Locally maintained data sets
3. Local Interventions
  - Mobile based data
  - Field based data
4. Medical Research Settings
  - Patient Charts
  - Clinical trials data

[end image]

## Slide 14: Cyberinfrastructure for Health

[image]

Showing four different public data sources:

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  - Clinical trials data

[end image]

## Slide 15: Cyberinfrastructure for Health

Semantic Web: The Semantic Web is a mesh of information linked up in such a way as to be easily processable by machines, on a global scale. You can think of it as being an efficient way of representing data on the World Wide Web, or as a globally linked database.

- Common Data Elements
- Open Source
- Shared “Grid” Structure

## **Slide 16 through 23: Cyberinfrastructure for Health**

Slides 16 through 22 highlight one line of information. All the information of the previous slides are on slide 23.

Tool: GEM - Grid-Enabled Measures Database, A Community Site for Researchers

URL: <https://www.gem-beta.org/Public/ConstructList.aspx?cat=1>

- Common measures: shared data
- “Prospective meta-analyses”
- “Science 2.0”: wiki approach
- Reset Social Incentives
- International Translations in FY 2012

## **Slide 24: Cyberinfrastructure for Health**

Tool: HINTS: Health Information National Trends Survey

HINTS is a national survey uniquely dedicated to learning how people, find, use, and understand health information.

URL: <http://hints.cancer.gov>

## **Slide 25: Cyberinfrastructure for Health**

Tool: HINTS

[image]

Cancer Seeking Information web page, <http://hints.cancer.gov/question-details.aspx?qid=405>

[end image]

## **Slide 26: Cyberinfrastructure for Health**

Tool: HINTS

[image]

Web page showing "Time since last sought cancer information" in a pie chart.

## Slide 27: Cyberinfrastructure for Health

Tool: HINTS:

[image]

HINTS Public Dataset web page, <http://hints.cancer.gov/dataset.aspx>. You will need to accept the "Terms of Use" before accessing the information.

[end image]

## Slide 28: Cyberinfrastructure for Health

Tool: HINTS:

[image]

HINTS web page showing article on "U.S. Social Media Use and Health Communication".

[end image]

## Slide 29: Cyberinfrastructure for Health

Tool: HINTS:

[image]

HINTS web page showing article on "U.S. Social Media Use and Health Communication" (Spanish version).

[end image]

## Slide 30: Cyberinfrastructure for Health

Tool: HINTS:

[image]

HINTS Reports and Materials web page, <http://hints.cancer.gov/pubs.aspx>.

[end image]

## Slide 31: Cyberinfrastructure for Health

Tool: HINTS:

[image]

Integrative Data analysis Conference 2012

HINTS Reports and Materials web page, <http://hints.cancer.gov/pubs.aspx>.

[end image]

## Slide 32: Cyberinfrastructure for Health

Tool: Informatics for Consumer Health

Innovation through information sharing, funding and dialog

URL: <http://informaticsforconsumerhealth.org>

## Slide 33: Cyberinfrastructure for Health

Tool: Informatics for Consumer Health

Innovation through information sharing, funding and dialog

[image]

Screen shot of an Intercall with David Blumenthal, M.D., M.P.P.

[end image]

## Slide 34: Cyberinfrastructure for Health

Tool: Informatics for Consumer Health

Innovation through information sharing, funding and dialog

[image]

Screen shot of a web conference announcing winning application of Team Ozioma for health data sets.

[end image]

## Slide 35: Cyberinfrastructure for Health

Tool: Informatics for Consumer Health

Innovation through information sharing, funding and dialog

[image]

Shows informatics and overlap between three dimensions of health information: healthcare provider dimension (e.g. physician participation sites, public transparency on quality); personal health dimension (e.g. patient participation sites, population health dimension); and population health dimension (e.g. Communities of Health, disease outbreak maps).

[end image]

## Slide 36 and 37: Cyberinfrastructure for Health

URL: [http://cancercontrol.cancer.gov/global\\_health.html/](http://cancercontrol.cancer.gov/global_health.html/)



[image]

Slide 36 shows a blanked grid. Slide 37 shows a world map of men's death from tobacco use.

- Over 25%:
  - United States
  - Canada
  - Europe
  - Russian Federation
- 20% to 24%:
  - Japan
  - Mongolia
  - Australia
  - Vietnam
  - Cambodia
- 15 to 19%:
  - Indonesia
  - Laos
- 10 to 14%:
  - China
  - India
  - Middle East
  - Northern Africa
  - Mexico
- Under 5%:
  - Central Africa
  - Southern Africa
  - Bolivia
  - Peru
  - Madagascar
  - Ecuador

[end image]

## Slide 38: Cyberinfrastructure for Health

Thank you!

[image]

Picture of Robert (Bobby) F. Kennedy with quote from him "The future is not a gift. It is an achievement."

[end image]

[End Presentation]