

Mini Summit 4.4

Pilot Efforts to Connect Across Agencies: What's Next to Further Open Data Science

Health Datapalooza 2016

May 10, 2016

Session Presenters

Louis Fiore, MD, MPH

Clinician, Clinical Investigator, and Healthcare Systems Engineer (VA)

The Department of Veterans Affairs Point of Care Clinical Trial and Precision Oncology Programs:
Using Electronic Medical Record Systems and Health System Data in Support of Learning
Healthcare System Activities

Connie Lee, MPH, FACHE Healthcare Administrator (VA)

Michelle Berny-Lang, PhD Program Director (NCI)

Jennifer Lee, MD, PhD Clinician-Investigator (Stanford and VA)

Lesley Park, PhD, MPH Epidemiologist and BD-STEP Fellow (Stanford)

Big Data Scientist Training Enhancement Program

Peter Kuhn, PhD Physicist (USC)

Jeannine Walston Patient Educator and Advocate (Integrative Cancer Care)

Patient Life Span Navigation

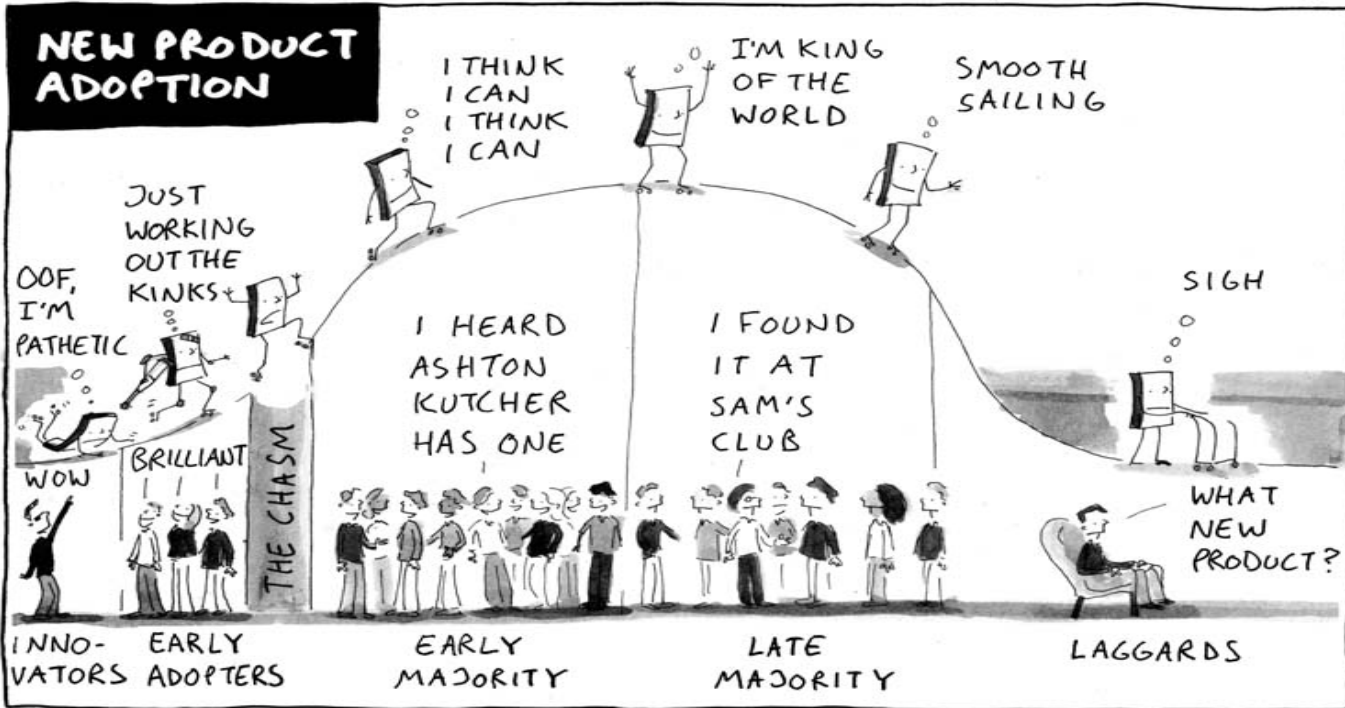
National Cancer Moonshot Initiative Research Areas

- Cancer Vaccine Development
- Early Cancer Detection
- Immunotherapy and Combination Therapies
- Genomic Profiling of Tumor and Surrounding Cells
- Enhanced Data Sharing
- Pediatric Cancer
- Oncology Center of Excellence
- Vice President's Exceptional Opportunities in Cancer Research Fund

Concept... to Reality

BRAND CAMP

by Tom Fishburne



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Discussion Question Themes

- [Collaborations](#)
- [Training and Education](#)
- [National Learning Healthcare System](#)
- [Enabling and Engaging Patients](#)
- [Data Science Community Contributions](#)

Discussion Questions: Collaborations

- How did a collaboration enable your research efforts that might not have been possible otherwise?
- Where do we need better collaborations/connections between data; communities; and people to accelerate cancer research?

BD-STEP: Collaborations

NCI & VA



SU Physical Scientists
VA Clinician-Investigators

Stanford

CS/E, Physics, Statistics,
PHS, Informatics



VA - Palo Alto

Cooperative Studies Program
HSR&D, Clinical Services



EHR-based Data Access & Sharing

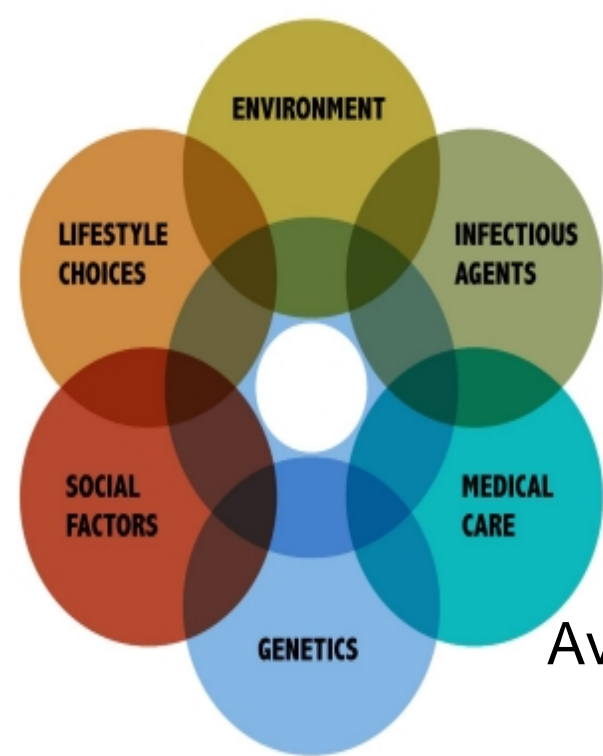
Real-world research mill

8M people in a single year

15-year capture of granular HCS data



[Discussion Question Themes](#)



HCS: a Zettabyte (10^{21}) per year

Whole genome sequencing now costs
under \$1000

Avg. life expectancy in Atwater, CA is 87 years but
just 8 miles away, it's only 78.

HCS + Individual Daily Living + Community

[Discussion Question Themes](#)

Discussion Questions: Training and Education

- How do we ensure that our scientific researchers are properly equipped and enabled to utilize the data and computing resources becoming available?
- How do we ensure that clinical care teams can understand, utilize, and communicate to the patient complex data and interpretations of the data?

Stanford/VA Palo Alto Data Bootcamp

The VA DART Application

Nicole Flores
September 16, 2015



9/16/2016



VA Lab Data

Vilija R. Joyce, MS
VA Data Bootcamp
September 16, 2015



HERC Average Cost Datasets

Todd H. Wagner, Ph.D.

September 2015



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VA Medicare

VA-Medicare Linked Data for Research

September 16, 2015



September 2015



214

VA Cancer Data: BD-STEP

John Leppert, MD MS
Director of Urologic Oncology, VA Palo Alto
Cancer Liaison Physician, VA Palo Alto
Assistant Professor, Stanford University
@johnleppert : twitter

A Tour of VA Inpatient and Outpatient Data

Todd Wagner, PhD

Sept 16, 2015
Palo Alto VA Bootcamp



Using VA Pharmacy Data

An Example from a Case-Control Study of
Lipid-Lowering Medications as Risk Factors for
Amyotrophic Lateral Sclerosis

Lorene Nelson, PhD, MS
Associate Professor, Division of Epidemiology
Associate Director, Stanford Center for Population Health Sciences
Stanford University School of Medicine

Todd Wagner, PhD
Director, HERC, VA Menlo Park
Consulting Professor, Departments of Medicine and Health Research and Policy
Stanford University School of Medicine

Barbara Topol, MA
Division of Epidemiology
Stanford University School of Medicine

VA Data Boot Camp September 16, 2015

Non-VA Medical Care Data

Megan E. Vanneman, PhD, MPH
VA HSR&D Center for Innovation to Implementation (C2i),
VA Palo Alto Health Care System &
Stanford University School of Medicine, Center for Health Policy/
Primary Care and Outcomes Research (CHPPCOR)

VA Data Bootcamp
September 16, 2015

[Discussion Question Themes](#)

VA Informatics and Computing Infrastructure (VINCI)

VINCI Workspace - Internet Explorer
https://vhacdvrldgat.vha.med.va.gov/RDWeb/Pages/en-US/De... VINCI Workspace

File Edit View Favorites Tools Help

VINCI workspace


VINCI VA Informatics and Computing Infrastructure




































Welcome to VINCI Workspace
Standard and Development Workspaces

Announcements
(3 of 3) **Retiring R 3.2.2 effective April 30 from the VINCI Workspace. New R 3.2.4!**
In VINCI's continuing efforts to improve the VINCI environment, we have installed a newer version of R thus we will be retiring R 3.2.2 effective April 30th. Please use R 3.2.4 going forward.

Standard Workspace | **Development Workspace** **Request a Workspace** | **Help**

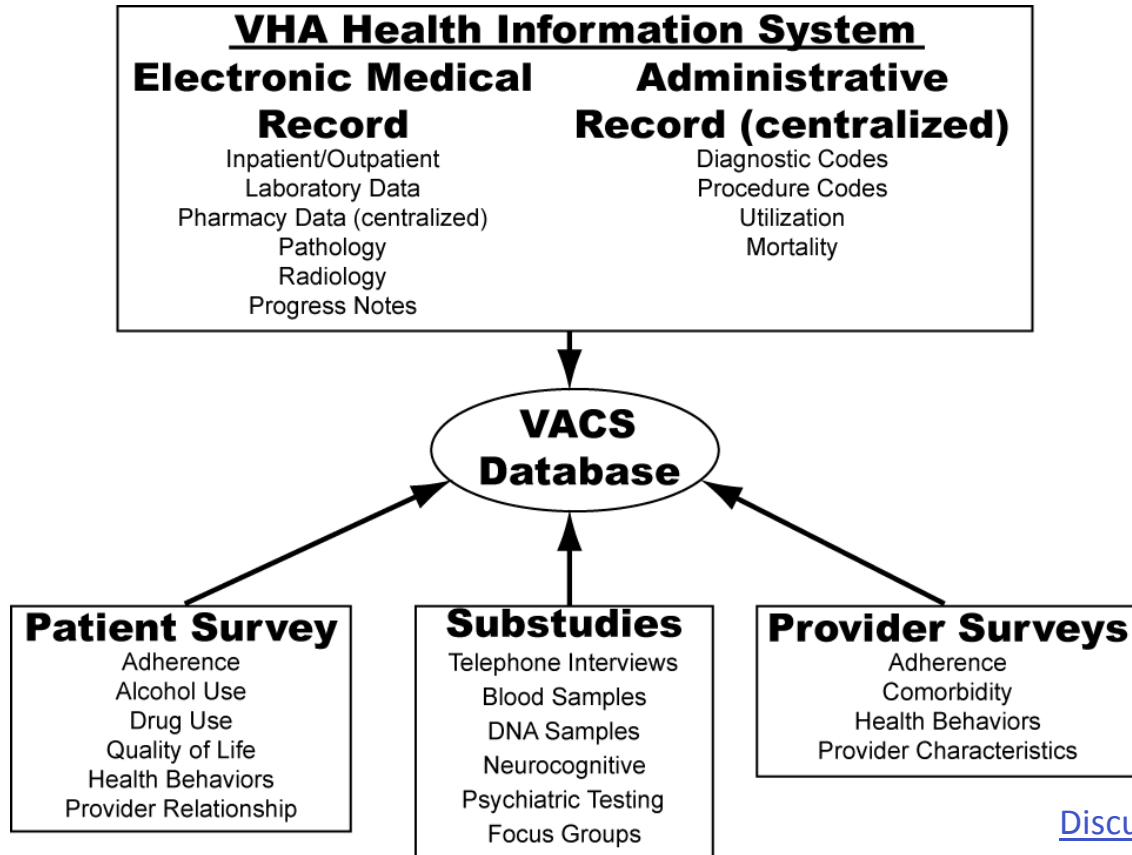
Important Instructions
Click **once** on any icon below to start the application.
When prompted to enter your login, please enter it in the form of **DomainName\Login**.
This site is only supported on the Internet Explorer browser with Java Script enabled.

If you are not able to see the application icons below, [click here](#)  to access the VINCI Standard Workspace Desktop to access all applications.

 7-Zip File Manager	 Adobe Reader XI	 Altova XMLSpy	 ArcMap 10	 Explorer	 GATE 5.2.1 GUI	 JMP Pro 12	 MATLAB R2015b	 Microsoft Access 2010	 Microsoft Excel 2010
 Microsoft InfoPath Designer	 Microsoft InfoPath Filter 2010	 Microsoft OneNote 2010	 Microsoft PowerPoint 2010	 Microsoft Word 2010	 MySQL Query Browser	 Notepad++	 NVivo 8	 Protégé 3.3.1 (Knowtator)	 Protégé 3.4.8 (Knowtator)
 R x64 3.2.2	 R x64 3.2.4	 RStudio	 SAS 9.4	 SAS E-Miner - OPS Grid	 SAS E-Miner - VINCI Grid	 SAS Enterprise Guide 7.1	 SAS Universal Viewer	 SAS XML Mapper	 SPSS Modeler 15
 SPSS	 SQL Server	 StataMP 14	 StatTransfer	 WinDiff					

[Discussion Question Themes](#)

Big Data to Clean Data



[Discussion Question Themes](#)

Discussion Questions: National Learning Healthcare System

- How can we use what we are learning in cancer research to accelerate the improvement of the lives of cancer patients and survivors?
- How can the care and outcomes of current cancer patients and survivors inform the research enterprise?

Discussion Questions: Enabling and Engaging Patients

- How can data science enable and empower patient care?
- What are avenues for patients and their families/caregivers to be partners in research and care? How do we ensure engagement?

Discussion Questions: Data Science Community Contributions

- How do we engage more data scientists to work in biological and clinical sciences? What opportunities exist for the data science community to contribute?

- How can we leverage existing data resources to truly demonstrate the societal benefit of cancer research (e.g., the non-financial “return on investment”)? How can the data science community inform this assessment?



**NATIONAL
CANCER
INSTITUTE**

www.cancer.gov

www.cancer.gov/espanol