

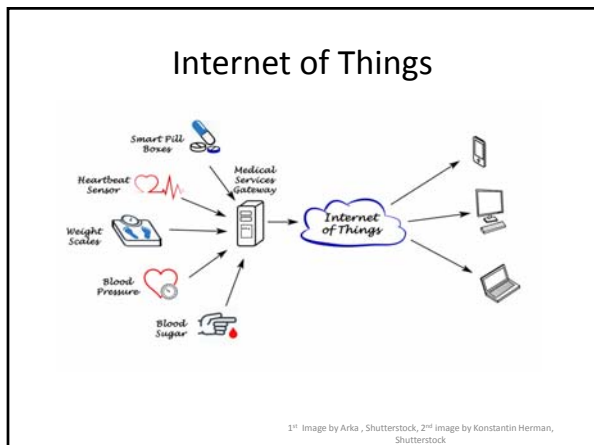
## Analyze This! Building Analytics Capacity in the VA Workforce

Kathleen Brandt, RN-BC, MS, PMP  
 Program Analyst  
 Department of Veterans Affairs  
 Office of Informatics and Information Governance  
 Applied Informatics, Workforce Development Team  
 kathleen.brandt@va.gov

## Objectives

**At the completion of the session, the participants will be able to:**

1. Describe an approach used to build a workforce knowledgeable in data analytics at a health care organization
2. Identify publicly available resources that health care organizations can leverage to deliver training in a cost effective manner



## Background

- Health data analytics number one training need
- Manage and harness the tsunami of health data available





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## Office of the National Coordinator (ONC) for Health Information Technology, Bellevue College and Department of Veterans Affairs (VA)



## Target Audience



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## Course Objectives

1. Discuss the role of data analytics in health care quality and performance improvement efforts
2. Describe tools and techniques used for data analytics in health care organizations
3. Identify techniques to communicate insights gained from data analysis



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## Course Credit

31 General education credit hours

Course accreditation:

- ACCME (Physicians)
- ACCME-NP (Non-Physicians)
- ACPE (Pharmacists)
- ASWB (Social Workers)
- ANCC (RNs)
- APA (Psychologists)



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## Course Platform & Resources



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## Course Structure



## Course Content & Activities

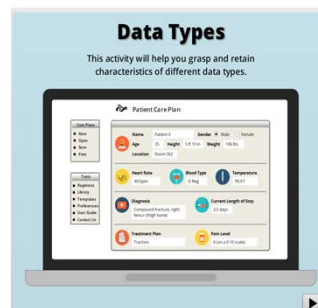
### Course Format:

- Voice over PowerPoint video lectures, quizzes, questionnaires and online discussion forums as well as individual activities
- Course accessible from any PC or mobile device with Internet access 24/7
- Course work is asynchronous



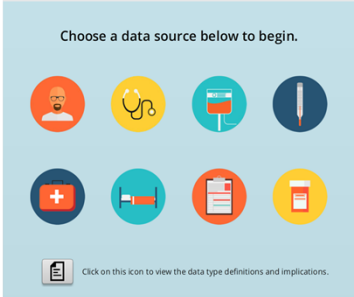
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## Activity Example 1 of 4



### Activity Example 2 of 4

Choose a data source below to begin.



Click on this icon to view the data type definitions and implications.

### Activity Example 3 of 4

Data source: Heart Rate = 40 bpm  
Is the data qualitative or quantitative?

Qualitative  
 Quantitative

Submit

### Activity Example 4 of 4

Data source: Heart Rate = 40 bpm  
Is the data qualitative or quantitative?

Qualitative  
 Quantitative

Submit

Correct. Heart rate is expressed in numbers and can be measured, which makes this quantitative data.

Data source: Heart Rate = 40 bpm  
Is the data qualitative or quantitative?

Qualitative  
 Quantitative


How could you further classify this data?

Discrete  
 Continuous

Submit

Correct. Heart rate is described in whole numbers and cannot be further subdivided.

### CAUTI Case Study 1 of 2




**Assignment #1 Defining the Problem with Baseline Data**

In Part I of the case study, you were introduced to the concept of CAUTI as well as the problem definition. In this assignment, you are asked to define the problem by obtaining baseline data on the facility's current monthly CAUTI rates. This is assignment #1 of 4.

**Assignment Instructions:**

- Download the CAUTI case study data by clicking the Download icon.
- Save to your computer.
- Upload the data to the data editor "Data for Facility Baseline CAUTI Rates Run Chart" under the chart and submit by following the submission instructions below.



**Assignment #2 Defining and Measuring (Project Charter & Facility vs. Network Run Chart)**


In Part II, the case study continues with further definition of the problem by defining a project goal, measuring the facility rate compared to the network CAUTI rates and creating a project charter.

A project charter is a performance improvement project tool that sets and communicates goals, identifies roles, assigns key stakeholders, and keeps a project on track by establishing clear ownership. The charter is a study in progress that is updated throughout the project as more information about the problem is obtained.

In this assignment, you will show the information you learned in the case study to create a draft of an initial project charter as well as construct a baseline run chart comparing the facility and network CAUTI rates.

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### CAUTI Case Study 2 of 2




**Assignment #3 Analyzing the Data (Pareto Chart)**

In Part III of the case study, you will use the Analyze phase. Charts and you want to see which units have the highest CAUTI rates. The Pareto chart will show where to focus the quality improvement.

**Assignment Instructions:**

- Download the CAUTI case study data by clicking the Excel icon.
- Save to your computer.
- Based on the data, enter "Data for Pareto Chart" create a Pareto chart and submit by following the submission instructions below.



**Assignment #4 Demonstrating Post-Implementation Improvements (Run Chart)**


In this final section of the case study, you explored the causes of the high CAUTI rates and interventions to address these causes. The interventions were implemented and new data was used to see if there is an improvement in the CAUTI rates in this assignment. You will create a run chart to see if there is an improvement in the CAUTI rates.

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### Results

Course	Course completion	Post course evaluation
Fall 2016	353	334 (95%)
Spring 2017	591	556 (94%)
<b>Total</b>	<b>944</b>	<b>890 (94%)</b>

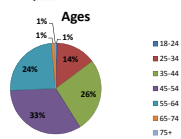
### Results- Demographics



50% Master's  
24% Bachelor's



75% Female




**Ages**

- 18-24: 1%
- 25-34: 1%
- 35-44: 14%
- 45-54: 26%
- 55-64: 33%
- 65-74: 1%
- 75+: 1%

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### Results- Level 1 & 2 Evaluations

**Participant Satisfaction 94%**




**Learning and Skill Acquisition 96%**



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### Results- Level 3 Evaluation

**Job Impact/Job Application**




N=129  
Response rate = 40%

Successfully utilized training	4.32 (5)
Shared content with co-workers	<b>87%</b>
Amount of perceived improvement in job performance	<b>16%</b>
Felt that they improved VHA strategic objectives	<b>73%</b>

Image by Affendi Shahidan, Shutterstock


### Participants Comments (1 of 3)



*"This course stood out among other analytics courses. It's approach was easy to follow and apply in a relevant work setting. The presentation was understandable regardless of whether an employee has a statistical background. The course itself presented the material in a wonderfully engaging method."*

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### Participants Comments (2 of 3)



**Application of knowledge gained:**  
*"I created a database for tracking beneficiary travel clerk productivity, resulting in the elimination of processing backlog."*

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### Participants Comments (3 of 3)



**Application of knowledge gained:**  
*"I learned to utilize graphs and charts to explain my written data. This class also helped me to organize my thoughts for the written portion so the data could reinforce the points and help my leadership to make more informed decisions."*

Images by Zaur Rahimov, Yuralaits Albert, Shutterstock

## Barriers and Enablers

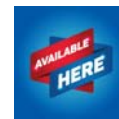
### Barriers

- Time to apply (33%)
- Resources (21%)
- Work Environment (9%)

### Enablers

- Motivation to apply content (83%)
- Ability to apply content (74%)
- Knowledge and Skill to apply content (73%)

## Available to Public



Available at <http://www.healthit.gov>

### Topics include (lectures and Storyline activities):

Introduction to Quality Improvement and Data Analytics  
 Health Care Data as an Organizational Asset  
 Working with Data Lectures  
 Data Analysis Tools and Techniques  
 Databases Part I  
 Databases Part II  
 Data Warehouse  
 Using Data to Solve Problems  
 Telling the Story with Data Lectures

## Guest Access to Course

1. Click this link: <https://vatraining.remote-learner.net/course/view.php?id=314#section-0>
2. Scroll to the bottom and Click on **Log in as guest** button 

## Contact Information



Kathleen M Brandt, RN-BC, MS, PMP  
 Department of Veterans Affairs  
[Kathleen.brandt@va.gov](mailto:Kathleen.brandt@va.gov)

## Acknowledgements

- Katherine Gianola, MD, MS
- Diane Bedecarré, RN-BC, MS, CPHIMS
- Elizabeth Chapman, MS, CPHIMS
- Danielle Marano, MSN, RN
- Jennifer Kalman, MBA, CPHIMS
- Adelaide Quansah-Arku, BSBA, CPM
- Serge LaCerte, MS, CPIM, MLSSBB
- Ron Frey-berg, MS
- Jessica Hill, MHA
- Rob Silverman, PharmD
- Debra Macdonald, RPh.
- Kathleen Lysell, Ph.D.
- Casey Grysen
- Patricia Hubbard PhD, ATP
- Margaret Murphy, M.A. (Bellevue College)
- Vivian Todhunter (Bellevue College)
- Heather Neikirk (Bellevue College)

## Questions



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2<sup>nd</sup> image by Konstantin Hermann (2017)/ Digitalization, Information Overload. Retrieved from <https://www.shutterstock.com/image-photo/digitalization-information-overload-623434925>

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