



# Clinical Informatics

**HIMSS**

CENTRAL & SOUTHERN OHIO *Chapter*

# Definition, Benefits and Outcomes

## Objectives:

- Will be able to define Clinical Informatics
- Will be able to understand the benefits to having a clinical informatics approach to technology based implementations
- Will be able to define the role of a Clinical Informaticist
- Will be able to understand the importance of a strong clinical informatics project team with positive outcomes

# Definition:

“The interdisciplinary study of the design, application, use and impact of information technology, and the relationship between the information system design and its use in real-world settings.”

University of California at Irvine, Informatics Department

# Interdisciplinary:

Analyses, synthesizes and harmonizes links between disciplines into a coordinated and coherent whole.

- Combination of computer science, information science and healthcare science designed to assist in the management and processing of clinical data, information and knowledge to support clinical practice and the delivery of patient care
- Can be performed by anybody in healthcare field
  - Doctors
  - Pharmacists
  - Lab technologists
  - Radiology techs
  - Nurses
  - Rehab therapists and so on
- Do not have to be in a health care discipline to be in Clinical Informatics

# Goals of Clinical Informatics

- To streamline the processes of patient care
- To provide clinicians with accurate data in a timely manner,
- To improve the quality of care
- To reduce costs
- Improving overall healthcare through appropriate use of analytical tools at the point of care

# Benefits of Clinical Informatics:

- Improve the quality of patient care
- Support best practices
- Capture documentation of care administered
- Support and promote technology that can:
  - reduce medication errors through drug-allergy interactions and dose-range checking
  - Prevent duplication of costly tests
- Analyze outcomes data to determine what is or isn't working and make adjustments when necessary
- Return on investment by producing data sets such as hospital mortality rates, lengths of stay, re-hospitalization, and infection rates
  - Improvements in metrics can show reduced costs

# How does Clinical Informatics convert to operations?

It is through developing a team of Clinical Informaticists that the goals and benefits of Clinical informatics is achieved.

# Clinical Informaticist

Edward Shortcliffe, M.D., a Clinical Informatics pioneer and former president and CEO of the American Medical Informatics Association, defines the role of a Clinical Informaticist as much more than having a technical background.

*“Information technology is part of the training, but Clinical Informaticists also bring an understanding of the world of clinical medicine and practice, and an understanding of workflow and the health-care culture.”*



# Clinical Informaticist Skills

- Strong Communication
- Organized
- Ability to prioritize
- Time management
- Interpreter – to translate clinical to technological and technology to clinical
- Leadership
- Facilitator
- Flexibility – can be a leader, supporter or worker at any given time
- Must be a change advocate

# Day in the Life of a Clinical Informaticist

Jack of all trades!!

- Rewarding
- Challenging

#1 ~ Liaison between IT and clinical

- The ability to speak both languages is important
- Don't need to be an expert
- Being able to translate what a clinician is saying and relaying that to a technical person (and vice versa) is a valuable skill in this role
- Foundation of day to day work

# Day in the Life of a Clinical Informaticist

## Technical Components

- Technical support (Hardware, software)
  - Don't need to be an expert
  - Know who to call, what resources to pull in
- Super User
  - If you don't know, know who to call
  - Facilitate asking the question

# Day in the Life of a Clinical Informaticist

## Healthcare Business Components

- Analysis
  - Of data
  - Of process
  - Of reports
- Facilitating
  - Meetings
  - Decision making
  - Education
  - Communication

# Day in the Life of a Clinical Informaticist

## Change Agent

- Understanding, facilitating, promoting
  - Spend time learning about the dynamics of change
  - Can be difficult conversations
  - Facilitating conversations about change can be learned
- Can be challenging
  - “We have always done it this way”
  - “We don’t want to change because it works”
  - “That’s not the way we do it”
- Healthcare culture can be particularly difficult to change

# Day in the Life of a Clinical Informaticist

## Process Improvement

- Take the time to understand current process
- Engage the key stakeholders early
- What are the gaps between current process and future process
  - Barriers can be real or perceived
- Would prefer that process drives the technology but that is not always the case. Technology can drive process change.
  - Sometimes harder to promote

# Day in the Life of a Clinical Informaticist

## Project Management

- Planning, organizing, motivating, and controlling resources to achieve specific goals.
  - Undertaken to meet goals and objectives, typically to bring about beneficial change or added value.
  - Requires the development of distinct technical skills and management strategies.
- The primary challenge of project management is to achieve all of the project goals and objectives while honoring the preconceived constraints.
  - Scope, time, resources, quality, budget

# Clinical Informaticist

*“...Clinical Informaticists also bring an understanding of the world of clinical medicine and practice, and an understanding of workflow and the health-care culture.”*



# Clinical Informatics Does Not Replace the Clinician



**“Rapid pulse, sweating, shallow breathing ...  
According to the computer, you’ve  
got gallstones.”**

Herman by Jim Unger

# Questions?