HIMSS HEART OF AMERICA Chapter

MoHIMA Missouri Health Information Management Association

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Data To Information Governance; A Vital Connection

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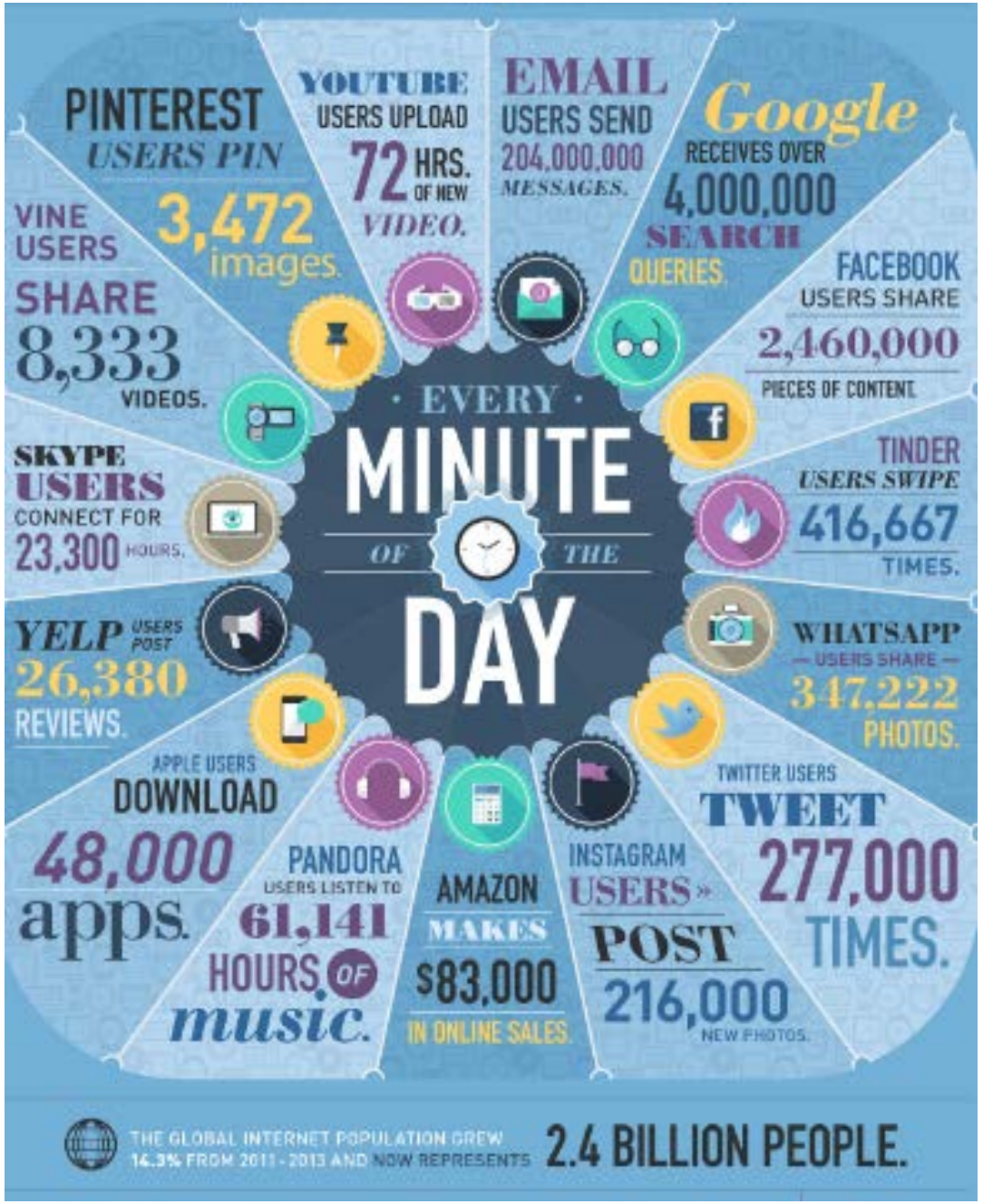
The success of Information Governance (IG) and Data Governance (DG) begins with *Clean and Reliable Data*

- Governance of data and information are vitally interdependent and represent a critical success factor in the overall strategic vision of IG.

- During this session, we will discuss the differences between the two, how they are inextricably linked in our information systems, and why they are a foundation for trusted data in our organizations.

Data and Information

Data in 60 Seconds



Courtesy of: https://aci.info/2014/07/12/the-data-explosion-in-2014-minute-by-minute-infographic/

How Much Data Do You Have?

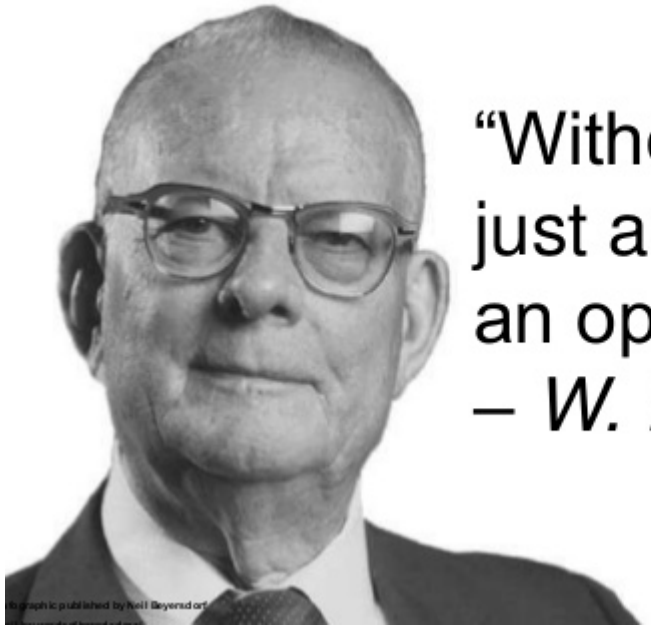
- Example:
  - 80 megabytes per patient, per year (4 text and 76 images)
  - Must retain medical records (text) for 15 years (state laws vary). Each year you will need to compute the cost of storing year 1 plus another 4 megabytes per year.
  - Must retain images for 7 years (state laws vary). Each year you will need to compute the cost of storing year 1 plus another 76 megabytes per year.

Source: http://geekdoctor.blogspot.com/2011/04/cost-of-storing-patient-records.html

How Much Data Do You Have?

- A matter of cost?
  - Costs rise when you are challenged by data migration due to new EHR implementation or new vendor
  - The more data you have, the more you are responsible for:
    - eDiscovery
    - ROI Requests
    - Backup and Recovery
    - Disaster Replication
    - Testing New Versions

Source: http://geekdoctor.blogspot.com/2011/04/cost-of-storing-patient-records.html



"Without data you're just another person with an opinion."
– *W. Edwards Deming*

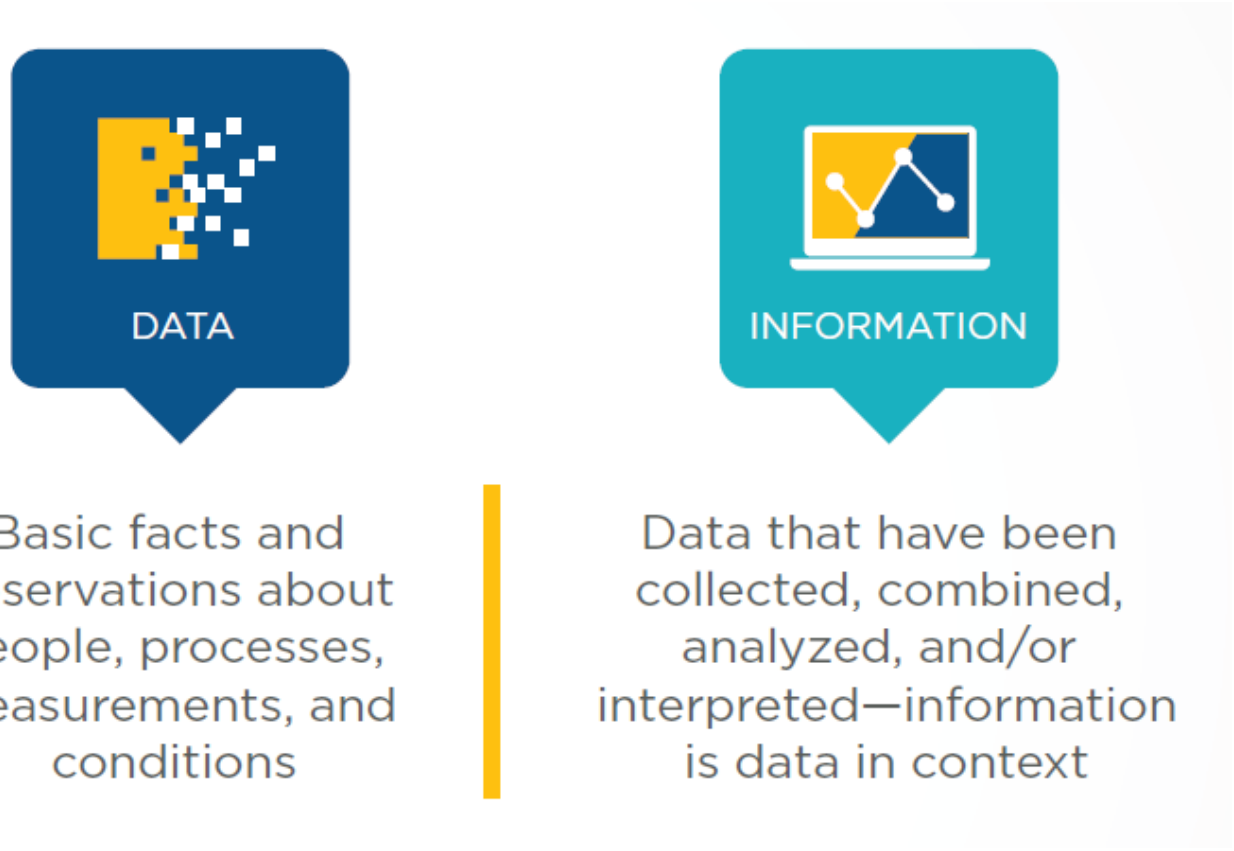
1900-1993

"If you can't describe what you are doing as a process, you don't know what you're doing."

- W. Edwards Deming

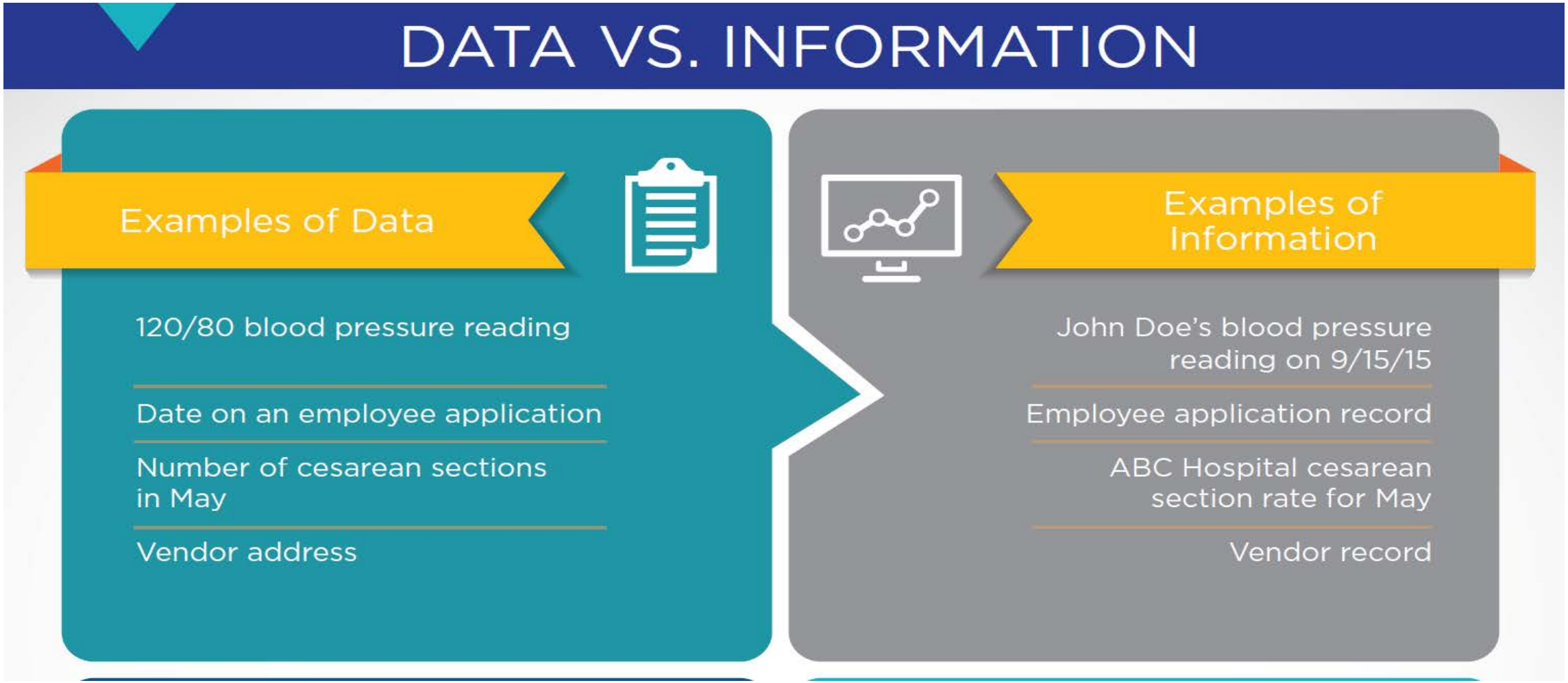
Source: http://www.slideshare.net/optimaltransformation/a-collection-of-quotes-from-w-edwards-deming,; http://likesuccess.com/1015258

Defined: Data and Information



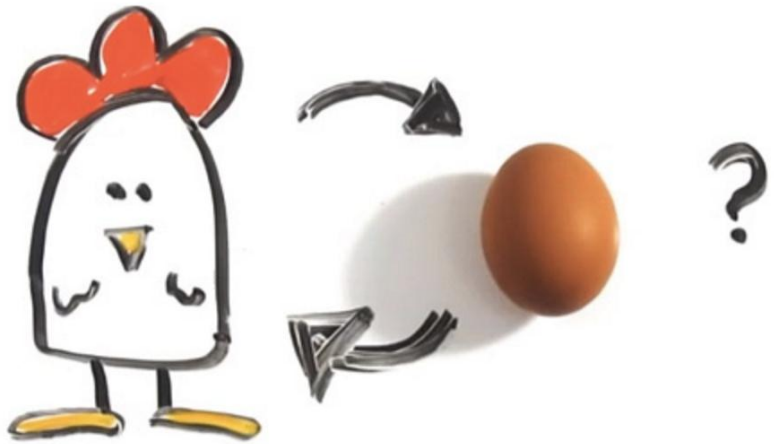
Source: AHIMA Information Governance Infographic, www.ahima.org/infogov

Data Vs. Information



Source: AHIMA Information Governance Infographic, www.ahima.org/infogov

Which Came First?



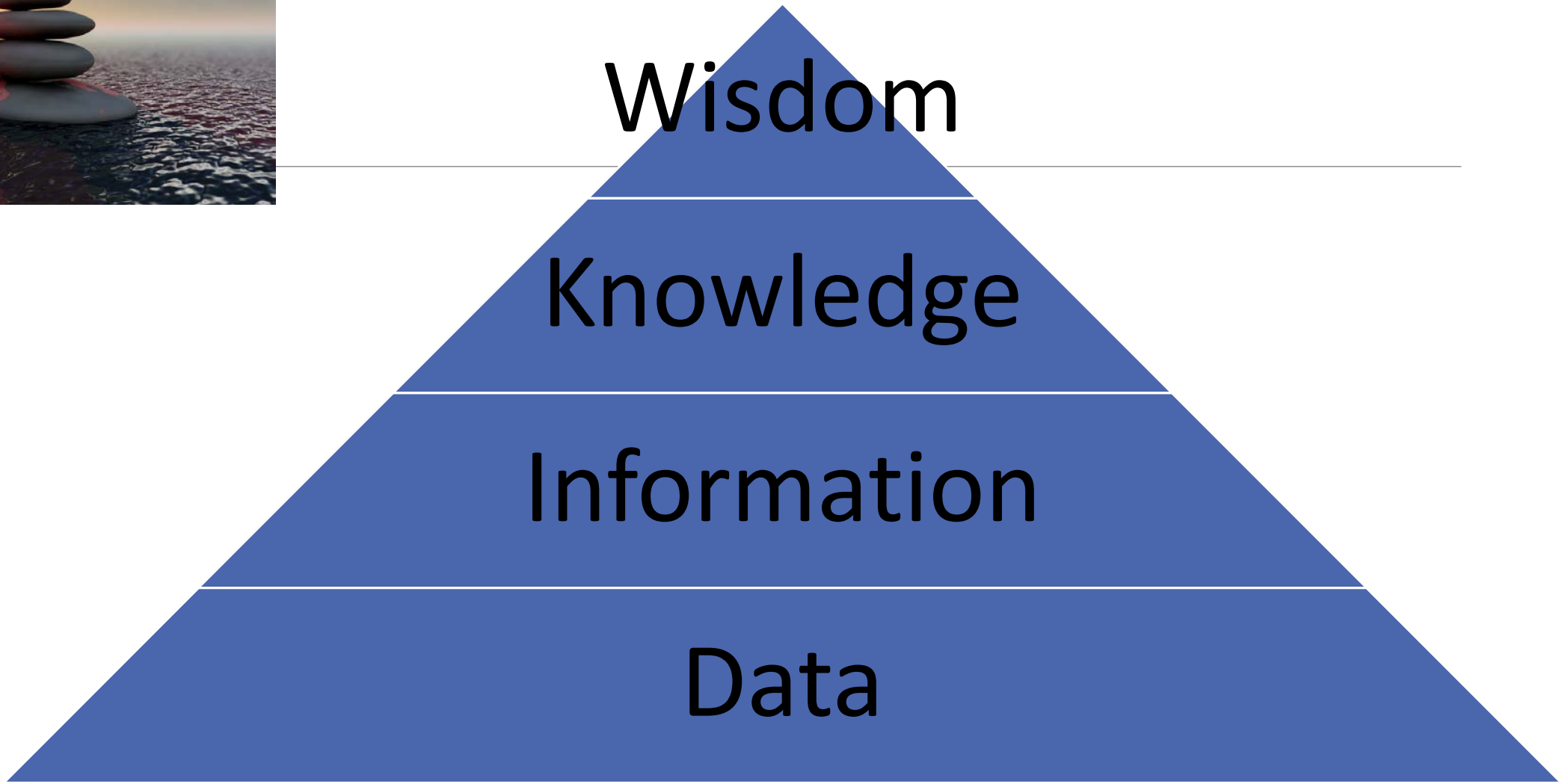
Data

- Computers Need Data
- Data is a building block

Information

- Humans need information
- Information gives meaning and context

Source: https://www.dqglobal.com/2014/05/27/what-is-the-difference-between-data-and-information/


Wisdom
Knowledge
Information
Data

Example

Data (values): Smith; Jane; Anne; 01/04/1960; 120; COPD; smoker; 40; years; 101.5; SOB; dizzy; weak; HR; 123; RR; 32; BP; 89/59; O2sat; 83%; yellow; sputum; infiltrate; density; LL; RL;

Information:

Jane Smith is a 56-year-old, 120 lb. female with history of COPD and past admissions for exacerbation of her lung disease. She has smoked one pack of cigarettes per day for 40 years and continues to smoke despite warnings from her physician.

She presents to the ED with fever (101.5 F) and increasing shortness of breath. She also says she is dizzy and feels weak. Her vital signs are: HR 123, respiratory rate 32, and BP 89/59. Her oxygen saturation while breathing room air is 83%. She is coughing up yellow sputum. Her chest x-ray reveals an infiltrate/density in the lower lobe of the right lung.

The objective data including the fever, yellow sputum, and abnormal x-ray suggest an infection, possibly a pneumonia in her right lung. Her work of breathing is increased as evidenced by her high respiratory rate. Her oxygen saturation of 83% implies that she has low blood oxygen. Her dizziness and low blood pressure indicated she could be dehydrated. Her repeated admissions for exacerbation of COPD are possibly related to the fact that she continues to smoke cigarettes.

Example, Continued

Knowledge: Possible interventions include low flow oxygen to improve her oxygen saturation, positive expiratory pressure by mask to help improve her increased work of breathing, I.V. fluids to treat the hypotension, empiric antibiotic therapy to cover likely causative organisms, and fever reducers. Possible further testing include: culture and sensitivity of the sputum, electrolytes, and an arterial blood gas.

Wisdom: The patient was diagnosed with a community-acquired pneumonia, specifically streptococcus pneumoniae, and was treated with levofloxacin. Supportive treatment included oxygen at 3 liter per minutes via nasal cannula, I.V. with normal saline, and NSAIDs.

Governance

Governance is Foundational

Foundations are built on:

- Trust
- Transparency
- Discipline

HIMSS15. A Congressional Analysis and Recommendations for Enhancing the Use of Big Data in Health Care

Inextricably Linked

Data Governance

Information Governance

What's the Difference?

DATA GOVERNANCE

- Foundation for Information Governance
- Focuses on clinical, financial and operational information
- Organization-specific
- Part of Day-to-Day Operations

INFORMATION GOVERNANCE

- Supports Data Governance
- "An organization-wide framework for managing information throughout its lifecycle and for supporting the organization's strategy, operations, regulatory, legal, risk, and environmental requirements (AHIMA)."
- Organization-specific
- Part of Day-To-Day Operations

What Does It Include?

DATA GOVERNANCE

- Data Cleansing (stripping and de-duplication)
- Quality Control
- Master Data Management and Metadata Management
- Identity Management
- Reliable and Trustworthy Systems
- Process improvement
- Compliance and Risk Management

INFORMATION GOVERNANCE

- Enterprise-wide Policies
- Lifecycle Management
- Information Use, Exchange and Preservation
- Physical and Electronic Systems Governance
- Privacy and Security
- Information Risk Management
- Legal and Regulatory Response

Source: AHIMA Infographic: How are Data Governance and Information Governance Linked?

Scenarios – Identity Management

Jane Smith comes into the ED with difficulty breathing and has red swollen hives on her arms and face. She is accompanied by her son. The patient registrar enters Jane's room to gather her demographic data. Because Jane is unable to provide any details to registrar, her son answers the registrar's questions and provides the following data values:

- First Name: Jane
- Last Name: Smith
- Middle Name: M
- DOB: 1/12/1960

The registrar searches for Jane's record under these four elements and only performs the search in one specific way. She cannot find a previous record for Jane, so she creates a new record.

Scenarios – Identity Management

As it turns out, Jane is allergic to shellfish.

The registrar transposed numbers in the field that captured the day Jane was born. Jane's correct DOB is 1/21/60.

The registrar may have found Jane's record if the son was able to provide the registrar with his mother's SSN and… the registrar included the SSN value in their search on that value.. Or if the registrar used other combinations of ways to search for a patient (if functionality existed in the EHR).

Jane's record contained the following data values:

- First Name: Jane
- Last Name: Smith
- Middle Name: Maria
- DOB: 1/21/60
- SSN: 123-45-6789

DG

How does this scenario relate to DG?

- Identity Management falls under **Data Governance**
  - Policies and Procedures relating to what and how data are collected at registration (perhaps managed within a Data Governance Committee structure)
  - How this data is structured, collected, updated, managed, and stored throughout all information systems in and outside of the enterprise (e.g. data dictionary)
  - Where the data flows (i.e. master data management system, downstream systems, third party vendor, etc.)

IG

How does this scenario relate to IG?

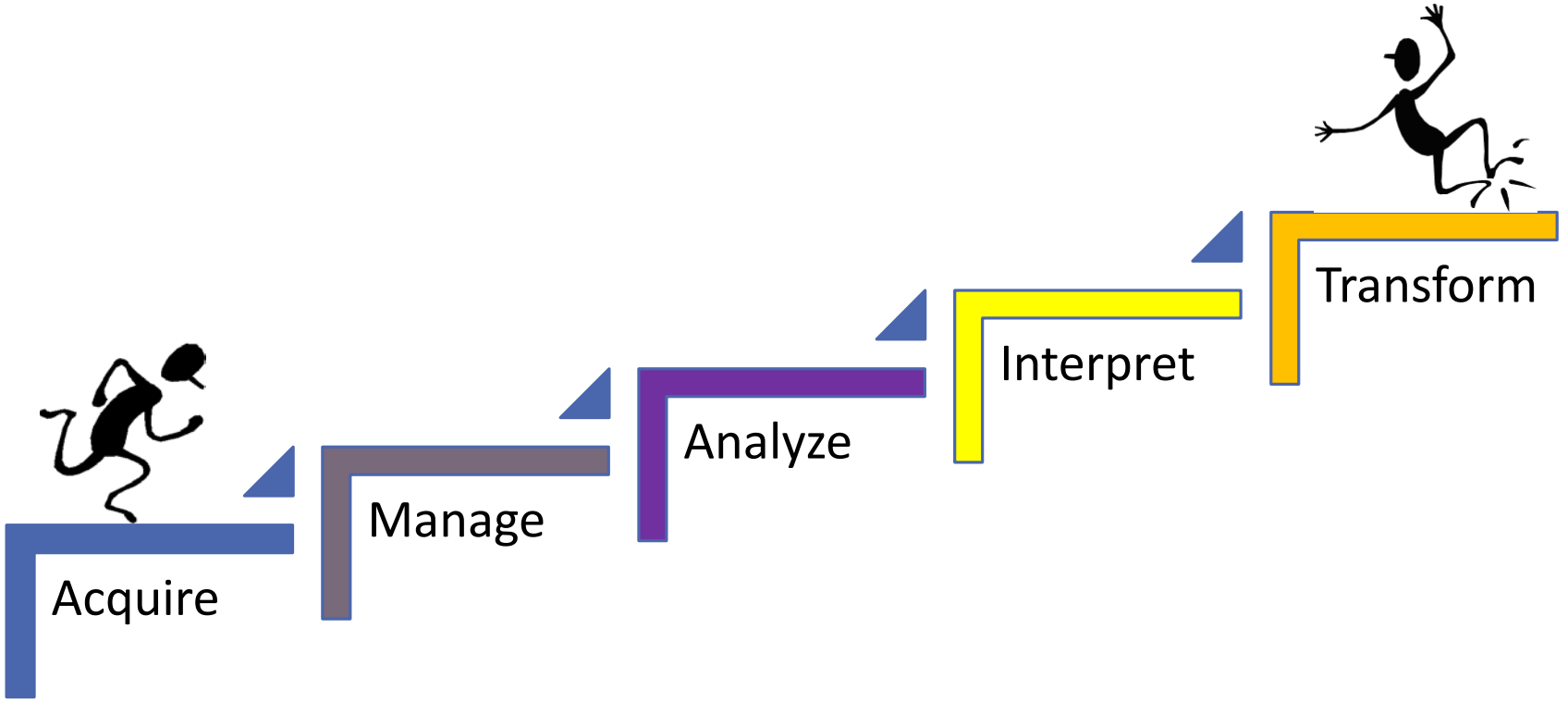
- The use of acquired information to treat Jane, falls under **Information Governance**
  - Policies and Procedures addressing how information is used, exchanged and preserved in and outside the enterprise (Information Governance Committee Structure)
  - Protocols for access management and privacy and security protocols
  - Compliance including legal and regulatory

Why Bother?

Strategy	Volume	Complexity
Critical Success Factor	Staggering Amounts of Data	Lack of standards
Organization's Overall Vision	Dark Data	Different platforms, versions and technology
Information as an Asset	Lack of Resources	No Walls, no Silver Bullet
Trusted Data Sharing Partner	Access and Use	Delivery Model and Reimbursement Changes

Information Lifecycle

Information Lifecycle



Source: AHIMA 2016 Informatics and Data Analytics Products

Information Lifecycle

Acquire

- Capture
- Create
- Enter
- Dictate
- Write
- Receive

Information Lifecycle

Manage

- Use
- Process
- Completion
- Interfaces/Integrate
- Exports/Imports
- Release
- Transmit
- Exchange and Share

Information Lifecycle

Analyze

- Confirm/Validate
- Modify: Addend/Append
- Quantify
- Discover
- Study
- Evaluate
- Examine

Information Lifecycle

Interpret

- Code
- Classify
- Assign
- Report
- Qualify

Information Lifecycle

Transform

- Transition
- Open Communication
- Levitate Our Professions!!

Share Your Expertise, Learn and Grow

Summary

- First… data must be clean
- Data is the foundation on which all information are based-upon
- Information relies on data to create trusted information
- Governance of data and information is critical to the success of all strategic efforts
- Lifecycle management stages/steps are necessary to transform our organizations and our profession

Questions

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