Value Creation in Health IT

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Value Creation in Health IT

- Value creation in Health IT refers to **generating benefit** from health information technology investments, with that value encompassing goals related to quality, safety, patient centricity, and cost management.
- Value creation is achieved through processes that improve communication, management of healthcare practices, resource allocation, and efficient resource flow.
- A value creation system, supported by information systems, can address and overcome challenges faced within a healthcare organization.

How Value is Created Through Health IT

- **Improved Outcomes and Efficiency**
  - Health IT provides data to recognize, understand, and assess outcomes, enabling performance improvements.
- **Co-Creation of Value with Stakeholders**
  - The involvement of patients in the decision-making process is crucial, as they are the most important individuals in the value chain.
- **Better Clinical Decision-Making**
  - Digitized data empowers clinicians, in combination with their expertise, to drive performance improvements and significant advances in clinical care quality.

How Value is Created Through Health IT

- **Improved Data Capture and Sharing**
  - Data serves as an empowering force for improvement, informing strategic decision-making and communication at all levels within healthcare organizations.
- **Enhanced Population Health Management**
  - Information technology can scale and improve the quality and efficiency required to impact population health, revolutionizing how it is managed and providing tools for providers, patients, and researchers.
- **Innovation**
  - Healthcare IT strategically directs investments for improved clinical efficiency and patient outcomes.

How Value is Created Through Health IT

- **New Revenue Streams**
  - Health IT enhances clinician productivity, leading to potential revenue growth.
- **Co-Creation of Services with Patients**
  - New services can be co-created through close interactions with patients.

Challenges in Quantifying Value in Health IT

- **Lack of a Universal Approach**
  - There is no well-defined, universally accepted method for determining the value realized from digital health technologies.
- **Complexity of Calculations**
  - Measuring return on investment (ROI) in digital health is complex due to various influencing factors.
- **Intangible Outcomes**
  - Combining measurable outcomes, such as reduced readmissions, with intangible outcomes, such as staff satisfaction, makes value determination difficult.
- **Subjectivity**
  - Perceptions of value vary, with some individuals or groups focusing on access, satisfaction, efficiency, profitability, or quality of care.

Challenges in Quantifying Value in Health IT

- **Difficulty in Measurement**
  - Many investments in HIT systems, along with their derived benefits, are challenging to quantify.
- **Multidimensional Concept**
  - Health outcomes are difficult to quantify into a metric and assign a fiscal value.
- **Intervening Variables**
  - Numerous intervening variables need consideration when assessing the causal relationship between technological interventions and financial performance.
- **Satisfaction Barriers**
  - User satisfaction remains a significant challenge. Physicians and staff continue to express dissatisfaction with EHRs, EMRs, and other IT tools.

Challenges in Quantifying Value in Health IT

- **Poorly Understood Quantitative Value**
  - Quantitative value (such as ROI) is not well understood. Business leaders often struggle to directly quantify value or make strategic decisions based on the greatest sources of value.
- **Causation Challenges**
  - Determining causation between HIT interventions and outcomes is complex. Some frameworks more directly reflect causal linkages than others.
- **Feature vs. Benefit**
  - Differentiating between "HIT features" and "HIT benefits" is critical. Many fail to articulate the value of HIT initiatives when they use features as evidence of value.

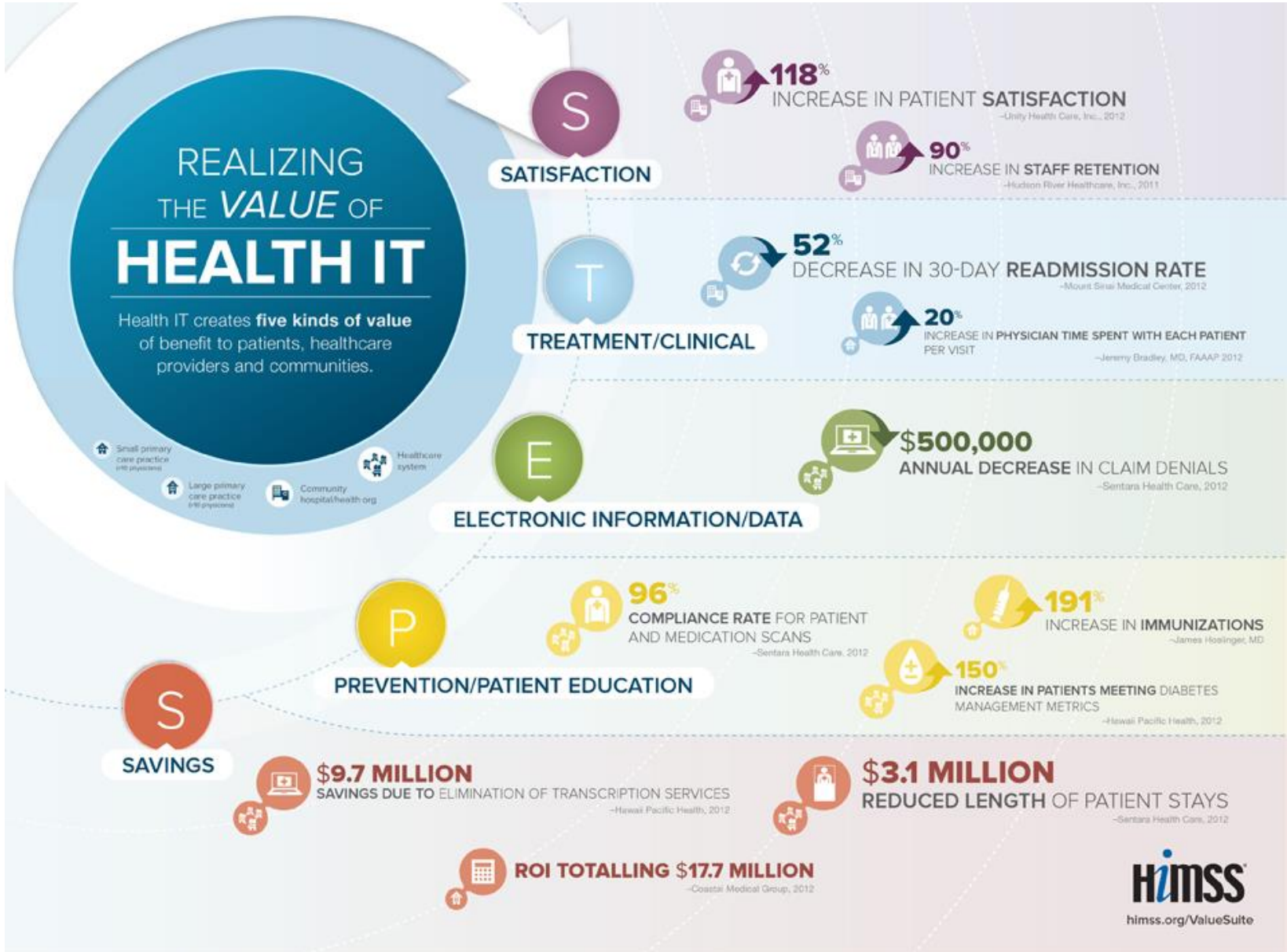
Addressing Value Measurement Challenges

- **To overcome these challenges, the HIMSS Value STEPS™ Framework was developed to help organizations identify and measure the value of HIT investments.**

- **The goal is to provide healthcare organizations with tools to:**
  - Measure and document the value of HIT investments
  - Identify opportunities for improvement
  - Align technology implementation with organizational goals
  - Support decision-making for future investments
  - Demonstrate compliance with regulations

The HIMSS Value STEPS™ Framework

- **This framework is built around five domains of value that are important to healthcare organizations and providers:**
  - **S**atisfaction
  - **T**reatment/Clinical Care
  - **E**lectronic Secure Data and Information
  - **P**atient Engagement and Population Management
  - **S**avings


REALIZING
THE VALUE OF
HEALTH IT
Health IT creates five kinds of value of benefit to patients, healthcare providers and communities.
Small primary care practice
Large primary care practice
Community hospital/health org
Healthcare system
S
SATISFACTION
118% INCREASE IN PATIENT SATISFACTION
–Unity Health Care, Inc., 2012
90% INCREASE IN STAFF RETENTION
–Hudson River Healthcare, Inc., 2011
T
TREATMENT/CLINICAL
52% DECREASE IN 30-DAY READMISSION RATE
–Mount Sinai Medical Center, 2012
20% INCREASE IN PHYSICIAN TIME SPENT WITH EACH PATIENT PER VISIT
–Jeremy Bradley, MD, FAAAP 2012
E
ELECTRONIC INFORMATION/DATA
$500,000 ANNUAL DECREASE IN CLAIM DENIALS
–Sentara Health Care, 2012
P
PREVENTION/PATIENT EDUCATION
96% COMPLIANCE RATE FOR PATIENT AND MEDICATION SCANS
–Sentara Health Care, 2012
191% INCREASE IN IMMUNIZATIONS
–James Hoslinger, MD
150% INCREASE IN PATIENTS MEETING DIABETES MANAGEMENT METRICS
–Hawaii Pacific Health, 2012
S
SAVINGS
$9.7 MILLION SAVINGS DUE TO ELIMINATION OF TRANSCRIPTION SERVICES
–Hawaii Pacific Health, 2012
$3.1 MILLION REDUCED LENGTH OF PATIENT STAYS
–Sentara Health Care, 2012
ROI TOTALLING $17.7 MILLION
–Coastal Medical Group, 2012
HIMSS
himss.org/ValueSuite

	Value Category (STEPS™) and Subtypes	Documented Examples
S	**Satisfaction:** **Patient; Provider; Staff; Other**	• Improved communication with patients • Improved patient satisfaction score • Improved internal communication
T	**Treatment / Clinical:** **Safety; Quality of Care; Efficiency**	• Improved patient safety • Reduction in medical errors • Reduced readmissions • Improved scheduling
E	**Electronic information / Data:** **Evidence Based Medicine; Data Sharing and Reporting**	• Increased use of evidence-based guidelines • Increased population health reporting • Improved quality measures reporting
P	**Prevention and Patient Education:** **Prevention; Patient Education**	• Improved disease surveillance • Increased immunizations • Longitudinal patient analysis • Improved patient compliance
S	**Savings:** **Financial / Business; Efficiency Savings; Operational Savings**	• Increased volume • Reduction in days in accounts receivable • Reduced patient wait times

1. Satisfaction

- **Focus:**
    - Increasing stakeholders' satisfaction with healthcare delivery through people, processes, and technology.

- **Sub-domains:**
    - Patient satisfaction
    - Provider satisfaction
    - Staff satisfaction

1. Satisfaction

- **Key Concepts:**
  - Draws from Maslow's Hierarchy of Needs - basic needs (fair wages, safe working conditions) must be met before higher-order needs (belonging, esteem, self-actualization)
  - Herzberg Two-Factor Theory distinguishes between hygiene factors (which prevent dissatisfaction) and motivators (which create satisfaction)
  - Provider satisfaction is linked to HIT implementation, particularly e-prescribing
  - HIT can improve provider work-life balance and prevent burnout
  - Patient convenience, improved communications, ready access to medical records, and reduced wait times are commonly identified benefits

1. Satisfaction

- **Key Insight:**
  - HIT implementation needs to consider the needs and expectations of all stakeholders, not just patients.
  - Dissatisfied providers or staff can negatively affect quality of care, costs, and patient safety.

2. Treatment/Clinical

- **Focus:**
  - Effective and improved patient treatment and enhanced patient outcomes.

- **Sub-domains:**
  - Quality of care
  - Patient safety
  - Clinical efficiencies
  - Reduction in medical errors
  - Reduction in inappropriate/duplicate care

2. Treatment/Clinical

- **Key Concepts:**
  - Lies at the core of healthcare
  - Focuses on how HIT facilitates patient care interventions (treatment) and enhances patient outcomes (clinical)
  - Acknowledges the challenge of clinical decision-making, which involves gathering, interpreting, and evaluating data
  - Evidence-Based Medicine (EBM) is a foundational element, integrating research evidence with clinical judgment and patient values
  - Addresses challenges such as "underuse, overuse, misuse, and variation in use" of healthcare resources

2. Treatment/Clinical

- **Example:**
  - UC Davis Medical Center used its EHR to reduce the sepsis mortality rate by 25% and saved 54 lives in 2011.

- **Key Insight:**
  - This domain underscores the importance of using HIT to standardize and improve the consistency and safety of patient care interventions.

3. Electronic Secure Data/Information

- **Focus:**
    - Improved data capture, data sharing, reporting, use of evidence-based medicine, and improved communication between physicians, staff, and patients.

- **Sub-domains:**
    - Privacy and security
    - Data sharing
    - Data reporting
    - Enhanced communication

3. Electronic Secure Data/Information

- **Key Concepts:**
  - Recognizes data as a critical asset for improving medical care, access, and cost reduction
  - Highlights the importance of systems theory in healthcare, where various sub-units (finance, diagnostics, IT, etc.) must work together
  - Data should follow the patient to avoid fragmented care, high costs, and lower quality
  - The volume of healthcare data is growing exponentially, creating opportunities for improved access to evidence-based decision-making
  - Electronic data collection is enabled through widespread EHR adoption
  - EHR mobile apps allow patients to securely connect to their records/data from any mobile device

3. Electronic Secure Data/Information

- **Key Insight:**
    - This domain highlights the need for interoperability and data sharing while ensuring privacy and security.

4. Patient Engagement and Population Management

- **Focus:**
    - Improved population health and reduction in disease through improved surveillance/screening, immunizations, and increased patient engagement through improved patient education and access to information.

- **Sub-domains:**
    - Patient education
    - Patient engagement
    - Prevention
    - Screenings

4. Patient Engagement and Population Management

- **Key Concepts:**
  - Focuses on improving the health of groups of individuals, not just individuals
  - Recognizes that patient engagement is crucial for improving health outcomes, promoting healthy behaviors, and reducing costs
  - HIT tools include advanced population analytics, patient portals, and telehealth/telemedicine
- **Example**
  - Kressly Pediatrics used its EHR to flag patients overdue for wellness visits, increasing wellness visit rates from 66% in 2013 to 93% in 2016.
- **Key Insight:**
  - This domain emphasizes the shift towards proactive, patient-centered care, where technology empowers individuals to manage their health.

5. Savings

- **Focus:**
  - Documented financial, operational, and efficiency gains.

- **Sub-domains:**
  - Financial/business savings
  - Operational efficiency
  - Improved charge capture
  - Improved use of staff resources and workflow
  - Improved scheduling of patients
  - Improved use of space
  - Disaster preparedness

5. Savings

- **Key Concepts:**
  - Directly addresses the financial impact of HIT, which is often a primary concern for healthcare leaders
  - Acknowledges that HIT implementation is expensive and that demonstrating financial benefits can be challenging
  - Operational efficiency (non-financial savings from waste elimination) often precedes cost savings
  - Distinguishes between productivity (output per unit of input) and efficiency (using the lowest amount of inputs to create the greatest amount of outputs)
  - HIT can reduce costs and increase profitability by optimizing productivity, advancing efficiency, and maximizing return on investment

5. Savings

- **Key Insight:**
    - While difficult to quantify, the Savings domain highlights the potential for HIT to improve financial performance by optimizing productivity and advancing efficiency.

HIMSS Value STEPS™ Framework

Domain	Focus	Subdomains
S - Satisfaction	*Increasing stakeholders' satisfaction with healthcare delivery through people, processes, and technology*	• Patient satisfaction • Provider satisfaction • Staff satisfaction
T - Treatment/Clinical	*Effective and improved patient treatment and enhanced patient outcomes*	• Quality of care • Patient safety • Clinical efficiencies • Reduction in medical errors • Reduction in inappropriate/duplicate care
E - Electronic Secure Data/Information	*Improved data capture, data sharing, reporting, use of evidence-based medicine, and improved communication*	• Privacy and security • Data sharing • Data reporting • Enhanced communication
P - Patient Engagement and Population Management	*Improved population health and reduction in disease through surveillance/screening, immunizations, and increased patient engagement*	• Patient education • Patient engagement • Prevention • Screenings
S - Savings	*Improved population health and reduction in disease through surveillance/screening, immunizations, and increased patient engagement*	• Financial/business savings • Operational efficiency • Improved charge capture • Improved use of staff resources and workflow • Improved scheduling of patients • Improved use of space • Disaster preparedness

Inter-Relationships of the STEPS™ Domains

- **The five domains of the STEPS™ Framework are interrelated, with important connections:**
  - The domains are interrelated, with one value domain often being dominant
  - The "T," "E," and "P" domains reflect direct beneficial evidence of HIT interventions, whereas the "S" domains tend to reflect the indirect impact of HIT
  - There can be direct and indirect causal linkages between HIT interventions and outcomes
  - Data-driven improvement is essential, requiring specific data and technology
  - The human factor is essential to achieving value; technology must be used correctly and consistently

Update

- **The HIMSS Value STEPS™ Framework, introduced in 2013, served as a comprehensive model to help healthcare organizations assess and articulate the value derived from their health IT investments.**
- Over time, HIMSS has evolved its methodologies to better align with the rapidly changing healthcare IT landscape.
- This evolution has led to the development of more specialized and updated frameworks, such as the Analytics Maturity Assessment Model (AMAM) and the Electronic Medical Record Adoption Model (EMRAM).
- Given these advancements, **the original Value STEPS™ Framework has been phased out and is no longer available online**.
- Healthcare organizations are encouraged to adopt these newer models to better assess and enhance the value of their health IT systems in today's dynamic environment.

Bonus Content (for NON-Healthcare)

- **IRACIS**
  - Increase Revenue
  - Avoid Costs
  - Improve Service