How a Balanced Scorecard Can Be the Useful Bridge to Move From Lab 1.0 to Clinical Lab 2.0

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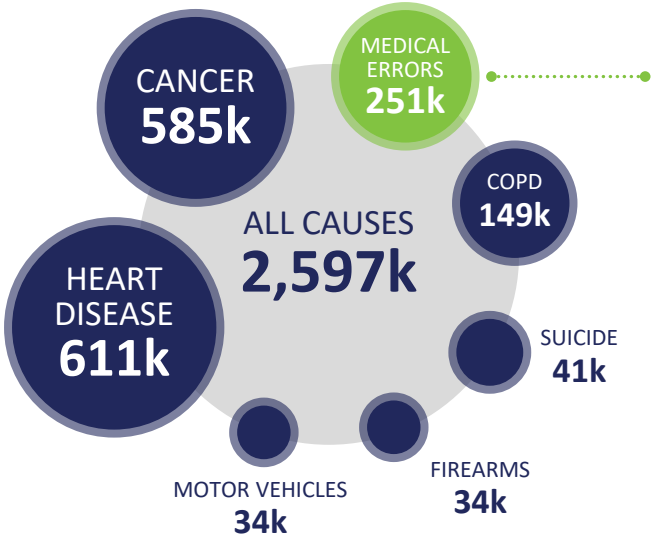
This is a Pulp Fiction Story

Medical Errors Now 3rd Leading Cause of Death in the US

CAUSES OF DEATH, US, 2013



Based on our estimate, medical errors is the 3rd most common cause of death in the US.

Not included in total: medical errors are not recorded on US death certificates.

thebmj

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Sources: Included in the notes section

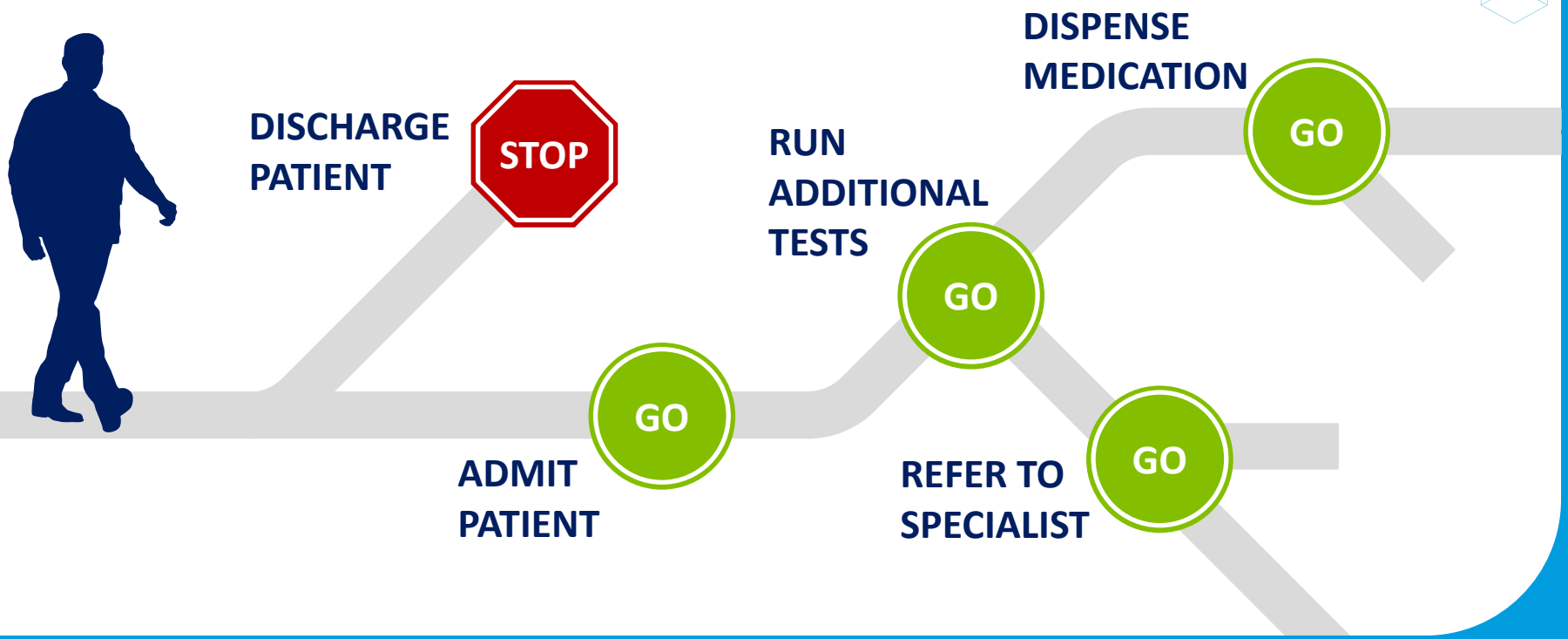
Laboratory Food for Thought

"We didn't do anything wrong but somehow we lost."

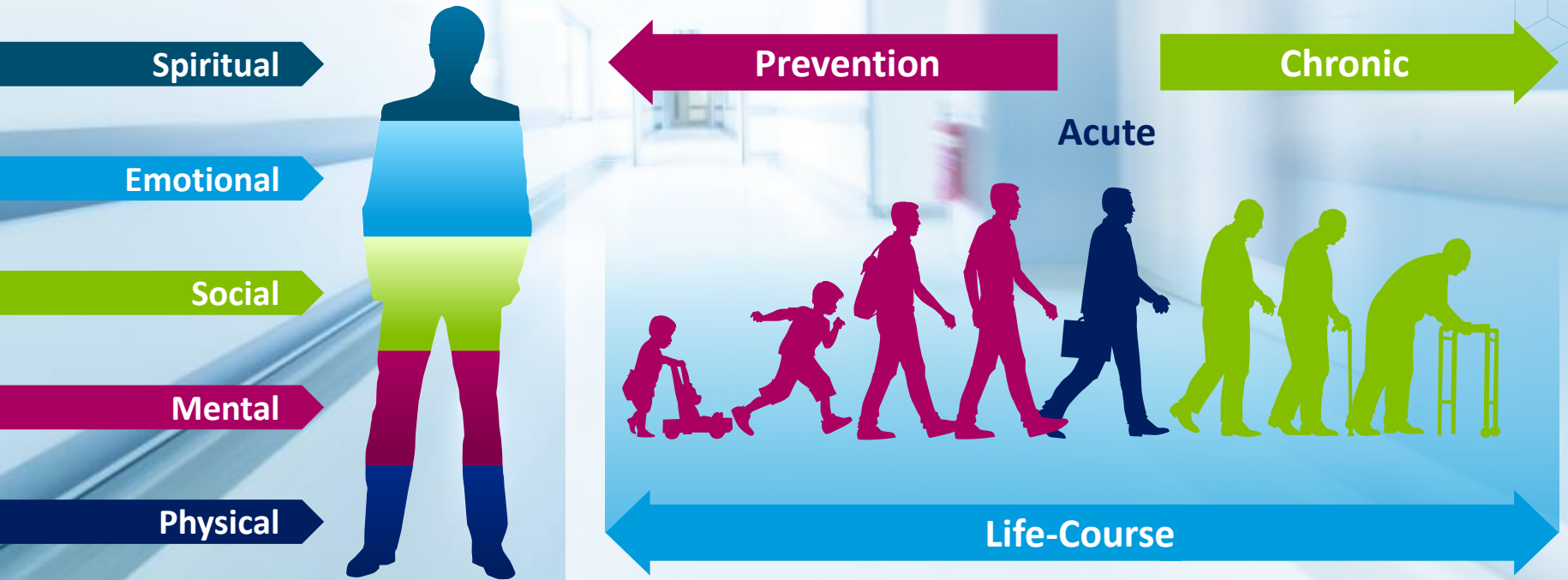
The Lab of the Future…

…is not defined by automation alone.

It’s Defined by the Ability to Influence Decision Making of Clinical and Non-clinical Constituents

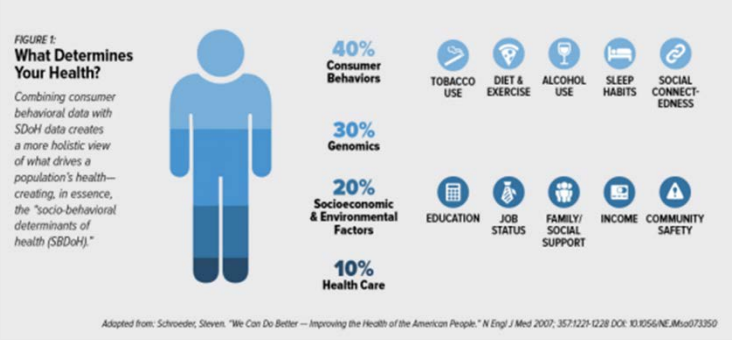


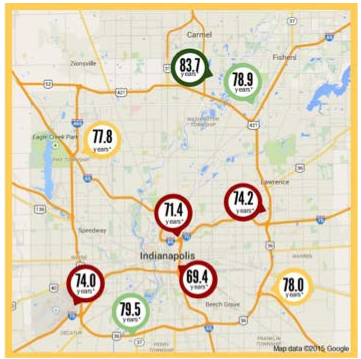
Expanding the Meaning of Health and Healthcare

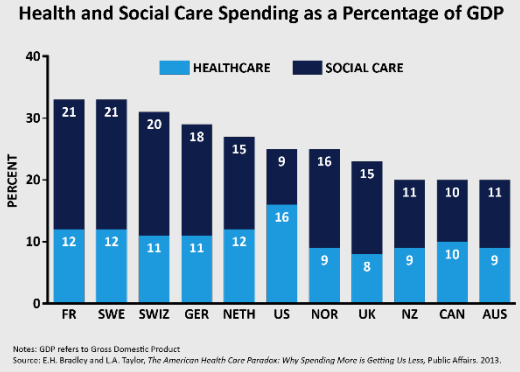


Expanding the Meaning of Health and Healthcare

What Determines Your Health?







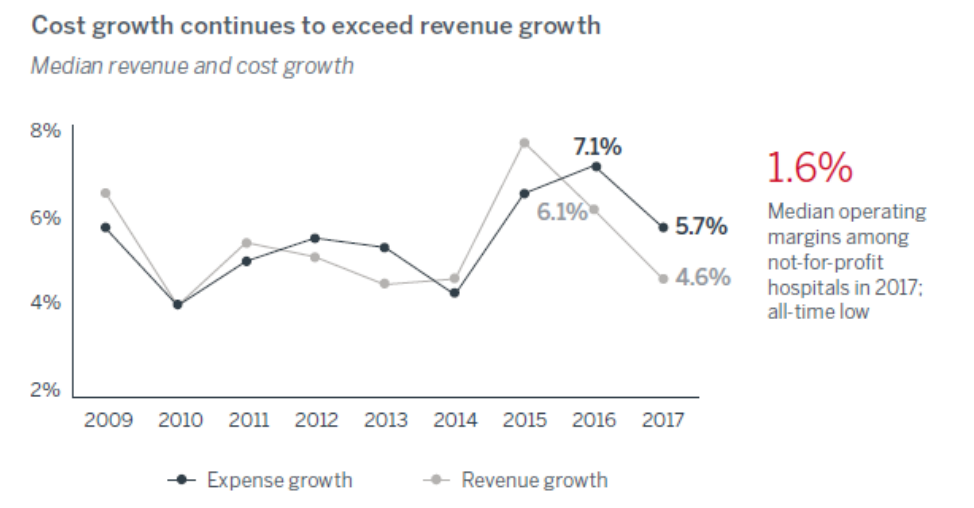
Broader Factors to Consider for the Future

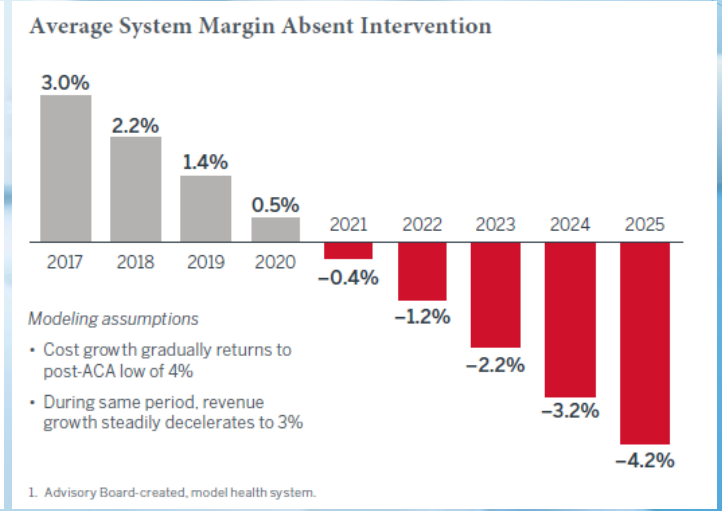
Healthcare that goes beyond personalization to **engagement...**

Broader Factors to Consider for the Future

...and is fully **integrated** into patient's daily "life flow."

Increasing Financial Headwinds





Sources: 1 – The Advisory Board Company – 15 Things CEOs Need to Know in 2019 – https://www.advisory.com/research/health-care-advisory-board/expert-insights/2019/15-things-ceos-need-to-know-in-2019

Quality Defined

WORLD HEALTH ORGANIZATION

Defines health care quality as **"the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centered."**

SAFE. Delivering health care that minimizes risks and harm to service users, including avoiding preventable injuries and reducing medical errors.

EFFECTIVE. Providing services based on scientific knowledge and evidence-based guidelines.

TIMELY. Reducing delays in providing and receiving health care.

EFFICIENT. Delivering health care in a manner that maximizes resource use and avoids waste.

EQUITABLE. Delivering health care that does not differ in quality according to personal characteristics such as gender, race, ethnicity, geographical location or socioeconomic status.

PEOPLE-CENTERED. Providing care that takes into account the preferences and aspirations of individual service users and the culture of their community.

Source: World Health Organization. (2019). *What is Quality of Care and why is it important?*.

INSTITUTE OF MEDICINE

Defines health care quality as **"the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."**

Quality Domains

The Institute of Medicine further defines quality as having the following properties or domains:

EFFECTIVENESS. Relates to providing care processes and achieving outcomes as supported by scientific evidence.

EFFICIENCY. Relates to maximizing the quality of a comparable unit of health care delivered or unit of health benefit achieved for a given unit of health care resources used.

EQUITY. Relates to providing health care of equal quality to those who may differ in personal characteristics other than their clinical condition or preferences for care.

PATIENT CENTEREDNESS. Relates to meeting patients' needs and preferences and providing education and support.

SAFETY. Relates to actual or potential bodily harm.

TIMELINESS. Relates to obtaining needed care while minimizing delays.

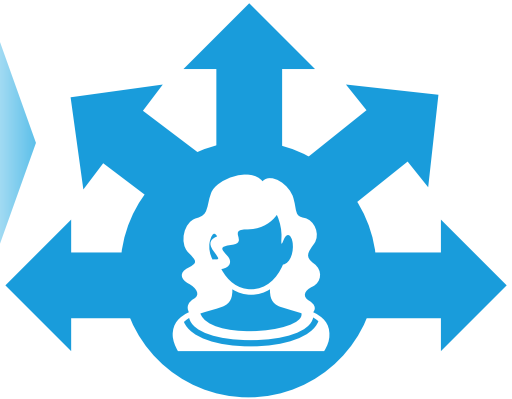
Source: Institute of Medicine. IOM definition of quality. 2013 Retrieved from http://iom.nationalacademies.org/Global/News%20Announcements/Crossing-the-Quality-Chasm-The-IOM-Health-Care-Quality-Initiative.

Implications of Future Quality

MANUFACTURING SITE

1. Treating the entire person... interconnectedness of self
2. “Life Integration”
3. Health literacy alignment
4. Integrating into “points of decision”
5. Quality of life
6. Impact on the local economy/community

DECISION ENGINE



The Evolution of Lab

LAB 1.0

SICK CARE
- Receive Sample
- Result Sample

DISEASE SCREENING
- Protocol Driven
- Requested by Physician
- Lab is derivative

WELLNESS PROGRAMMING
- Managed by Physician
- Lab is derivative

PAYMENT MODELS
- Lab is commodity
- Value is cost per test

LAB 2.0

HEALTH CARE
- Population health using lab data
- Total cost of care

RISK MANAGEMENT
- Identification of Risk
- Real-time tracking
- Risk-based pathways

WELLNESS PROGRAMMING
- Gaps in care closed with lab data
- Outcomes of program measured with lab

PREDICTIVE ANALYTICS
- What will happen, when and why?

PAYMENT MODELS
- Value of lab for total cost of care

LAB 3.0

WELLNESS CARE
- Wellness algorithms derived from all data
- Diagnosis pathways determined by best method (clinical, operational, and financial efficiency)

RISK MANAGEMENT
- Adaptive Lab Practices

WELLNESS PROGRAMMING
- Gaps identified and prevented systematically
- Outcomes of programs publicly shared

WELLNESS ANALYTICS
- Healthcare derived from past, present, and predicted future needs
- Algorithmic complexity managed by machine learning

PAYMENT MODELS
- Based on patient and population wellness
- Likely PMPY model with insurance sharing

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Five Opportunities for Improvement

1. BUSINESS PROCESS

2. EXPAND THE BUSINESS MODEL

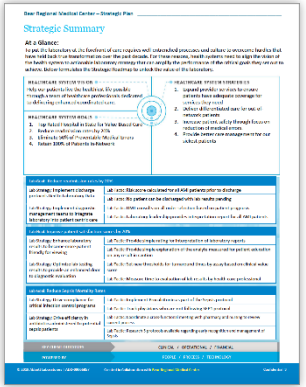
3. ESTABLISH ADAPTIVE LAB OPERATIONS

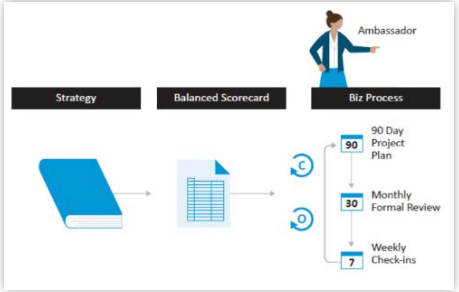
4. PROACTIVELY INTEGRATE INTO CLINICAL CARE

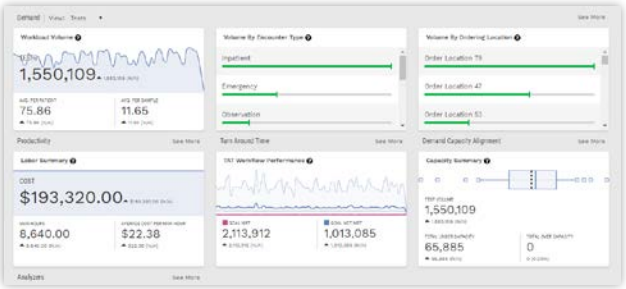
5. DEVELOP A "HEALTH CREATION" COMPETENCY

Five Opportunities for Improvement

1. BUSINESS PROCESS



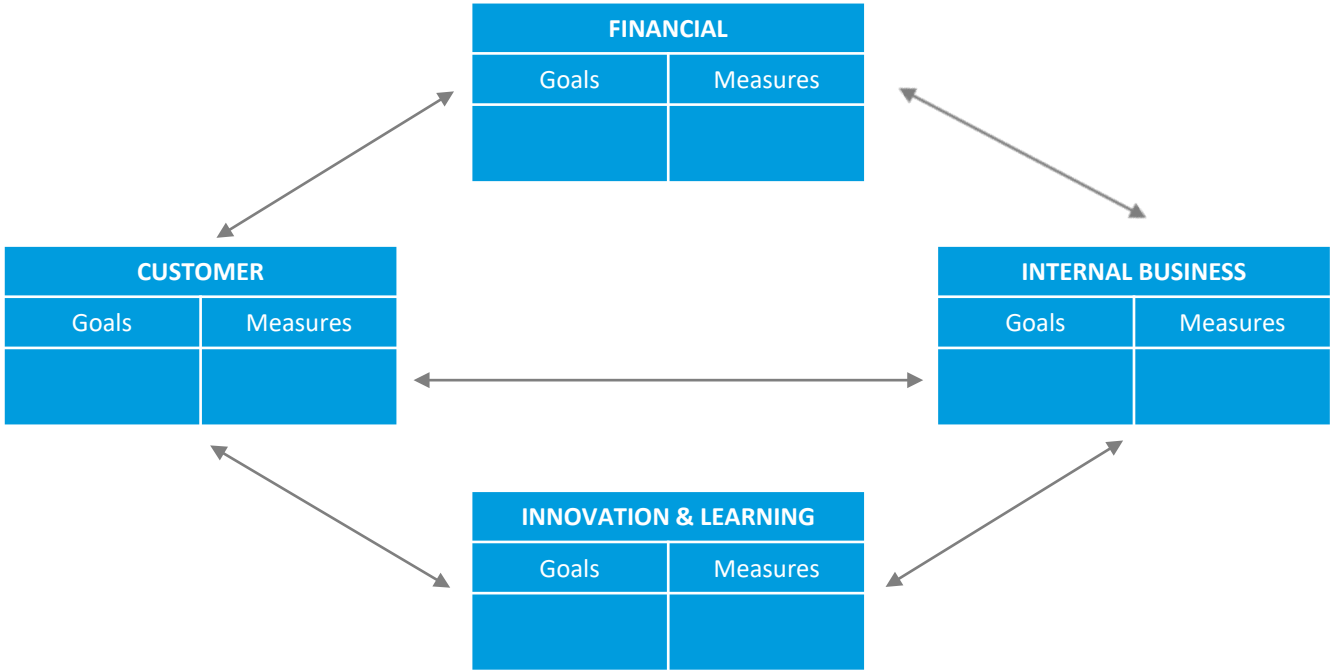




What Must be True to Become a Quality Engine?

- External lens… measures and focus
- Internal stakeholder alignment
- External stakeholder alignment
- Move to a culture of questions vs. a culture of answers
  - Asking the next best question; not seeking yesterday's answer
- Process driven execution in 120% capacity world
- Change management

Relationships in the Balanced Scorecard*



*Adapted from Martinsons, Davison & Tse,
Fig 1 p. 74. Original source Kaplan & Norton. https://maaw.info/ArticleSummaries/ArtSumMartinsonsDavisonTse99.htm

Balanced Scorecard

FINANCE

- Current profitability and net contribution to the enterprise
- Downstream cost impact analysis (i.e. sepsis impact)
- Growth

INTERNAL PROCESSES

- Readmission rate
- ER wait time
- Length of stay

CUSTOMER

- Clinician satisfaction
- Patient / Customer satisfaction
- Number of results with directed response

LEARNING AND GROWTH

- Clinical interface capability
- Employee satisfaction
- Turnover
- Promotion rate
- Internal committee membership / leadership

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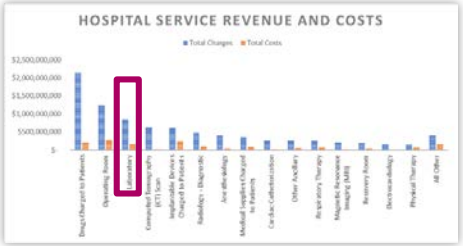
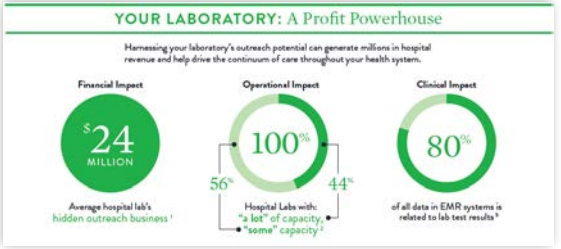
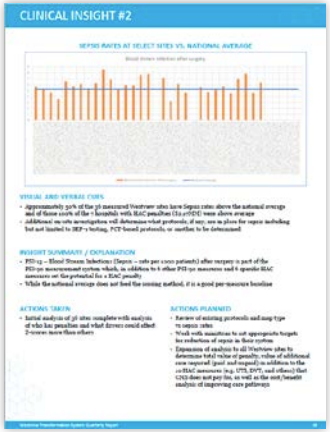
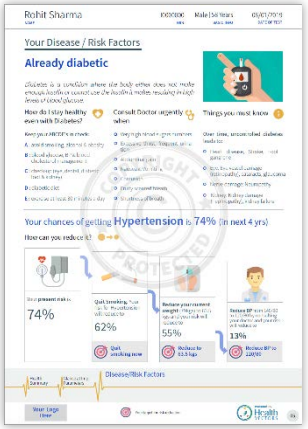
Five Opportunities for Improvement



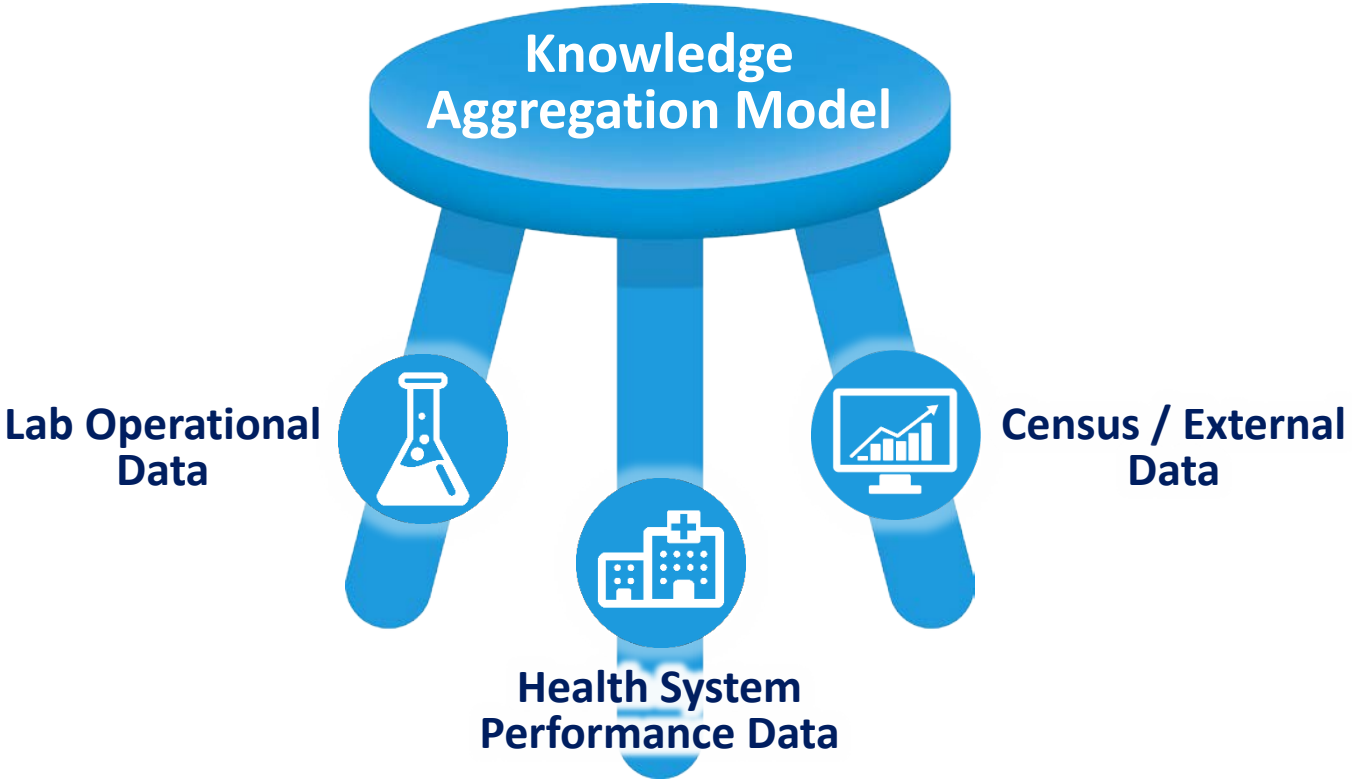


2. EXPAND THE BUSINESS MODEL





Knowledge Aggregation Model



A Lesson from Public Health

Abbott