

# Achieving a Learning Health System

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NATIONAL ACADEMY OF MEDICINE

Leadership • Innovation • Impact | *for a healthier future*

# The vision

A continuously learning health care system

In the learning health care system, **science, informatics, incentives, and culture** are aligned for continuous improvement and innovation—with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience.





## BEST CARE AT LOWER COST

The Path to Continuously Learning  
Health Care in America

INSTITUTE OF MEDICINE  
OF THE NATIONAL ACADEMIES

# Imagine

- **Banking** – ATM transactions slowed by misplaced records
- **Home building** – carpenters, electricians, and plumbers all working independently and with different blueprints
- **Retail stores** – no product prices posted, and charges varying widely by method of payment
- **Auto manufacturing** – no warranties for defects or product line quality assessment
- **Airline travel** – pilots all designing their own pre-flight safety checks



# Imagine

Health care operating with best sector practices

- **Records** immediately updated and available for use by patients.
- **Care delivered** proven reliable at the core, tailored at the margins.
- **Patient and family needs** and preferences a central part of the decision process.
- **Team members** all fully informed in real time about each others' activities.
- **Prices and costs transparent** to all participants.
- **Payment incentives** reward outcomes and value, not volume.
- **Errors** promptly identified, reported, and corrected.
- **Continuous improvement** based on real-time practices and outcome monitoring.



# New tools and levers

## Capacity changes since 2000

- **Computing**
  - **Better connectivity** to information and among participants
  - **Stronger processing capacity** for new knowledge
- **Systems/process improvement strategies** spreading with increasing success
- **Patient-clinician culture** change strategies in play
- **Policy levers** for incentives, transparency, accountability, engagement



# Committee recommendations

## Foundational elements

- **The digital infrastructure** – Improve the capacity to capture clinical, delivery process, and financial data for better care, system improvement, and creating new knowledge.
- **The data utility** – Streamline and revise research regulations to improve care, promote the capture of clinical data, and generate knowledge.



# Priorities for progress

## Priority needs in moving to continuous learning health care

- **Informatics**

- Seamless patient & family electronic portals
- Real-time access to updated best practices
- Digital capture, storage, and analysis of the care experience

- **Science**

- Alternative study designs tailored to observational data and large simple trials
- New science of mega-database structure and analysis
- Regulatory science reform : real-time tools and phased introduction protocols
- Strategy moving from registries and distributed data to global clinical data trust

- **Incentives**

- Core quality, cost, health metrics at HCO, city, regional levels
- Advances in transparency (reliable reporting on care, costs, outcomes)
- incentives aligned for improving effectiveness/efficiency

- **Culture**

- Democratization of care decisions, value, care improvement
- Leadership-instilled culture of continuous learning
- Supportive training and system competencies





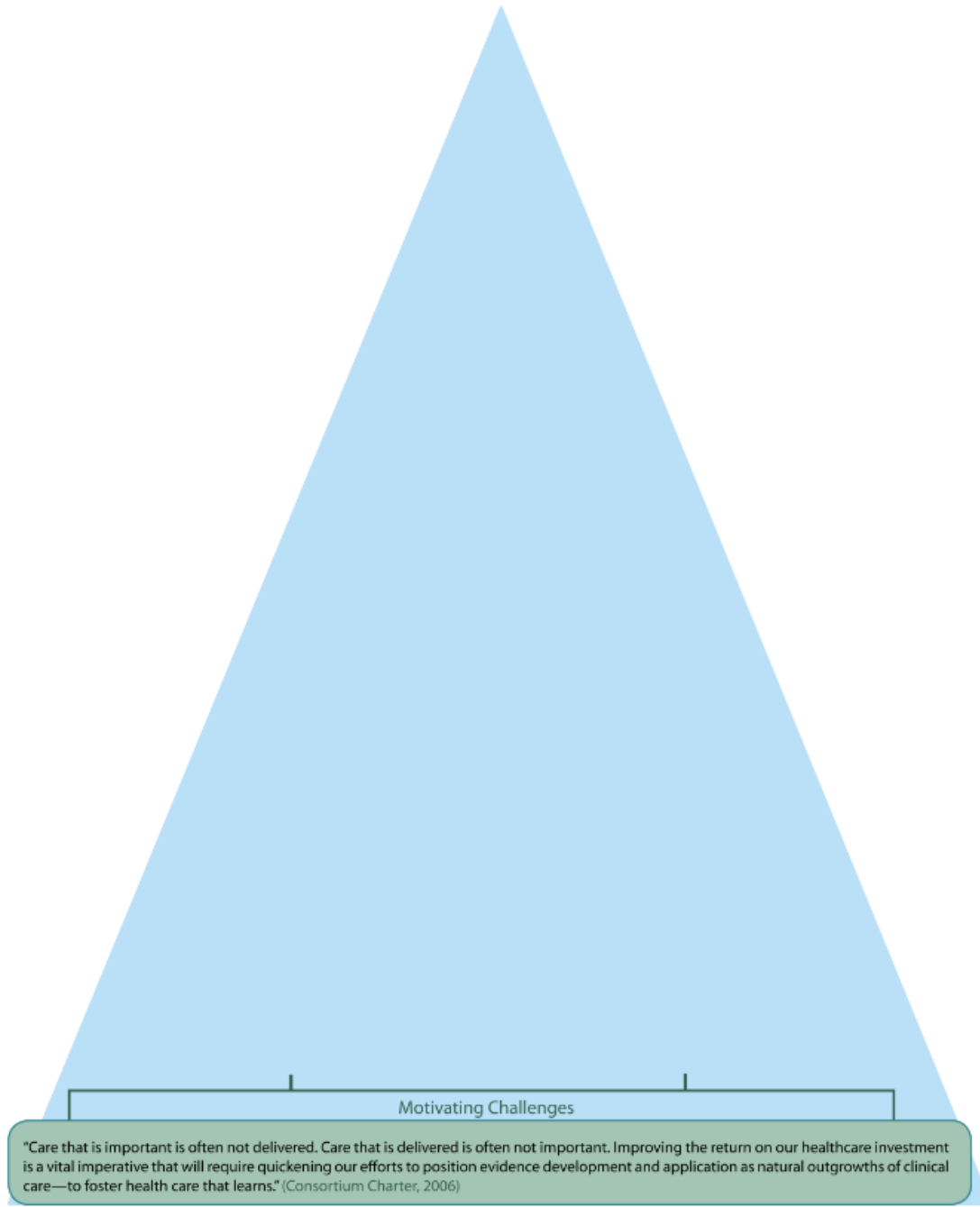
# National Academy of Medicine

## Facilitative priorities

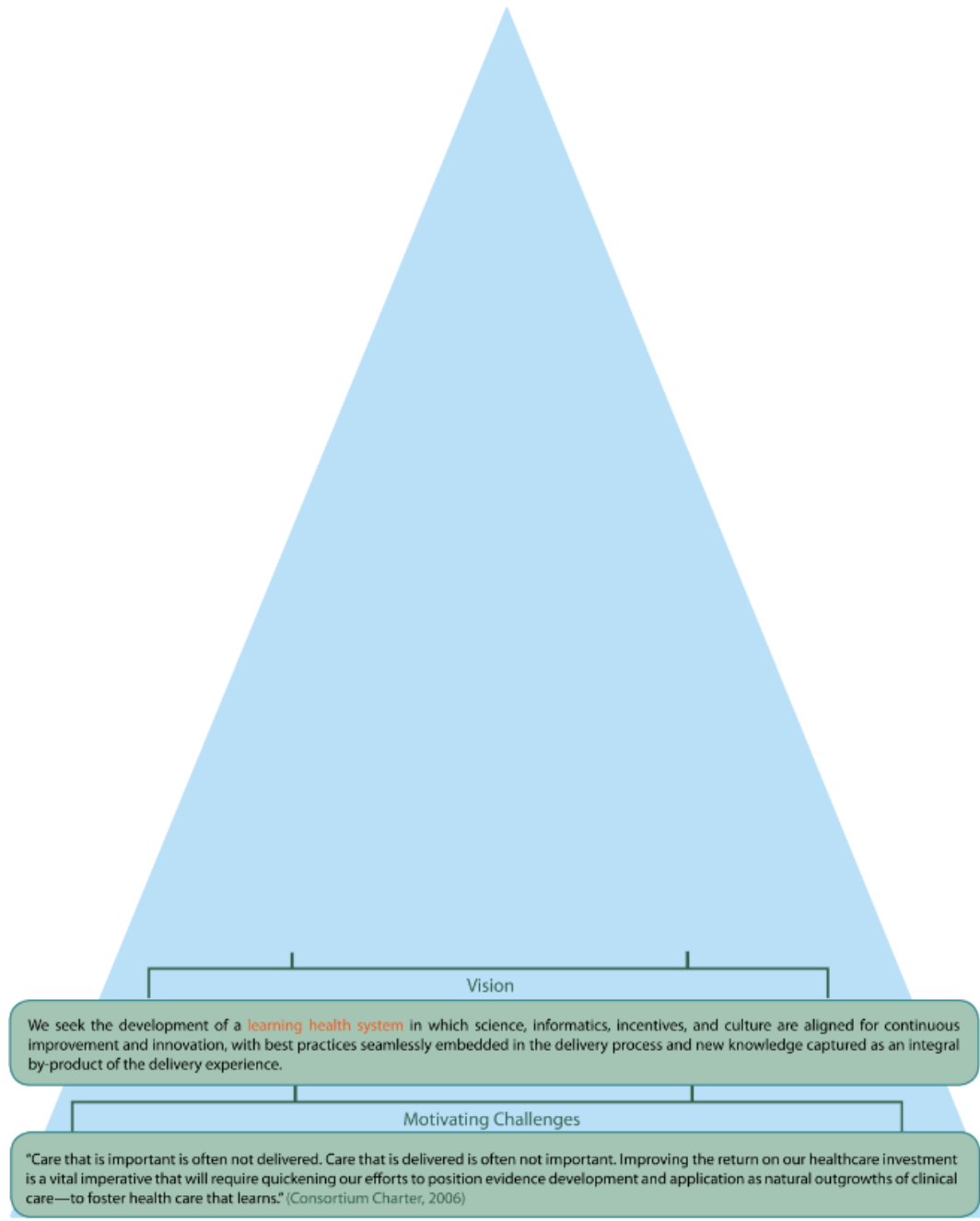
- 1. Foster a continuously learning health system**
- 2. Steward Innovation Collaboratives**
- 3. Link stakeholders in networks**
- 4. Sharpen the assessment focus**



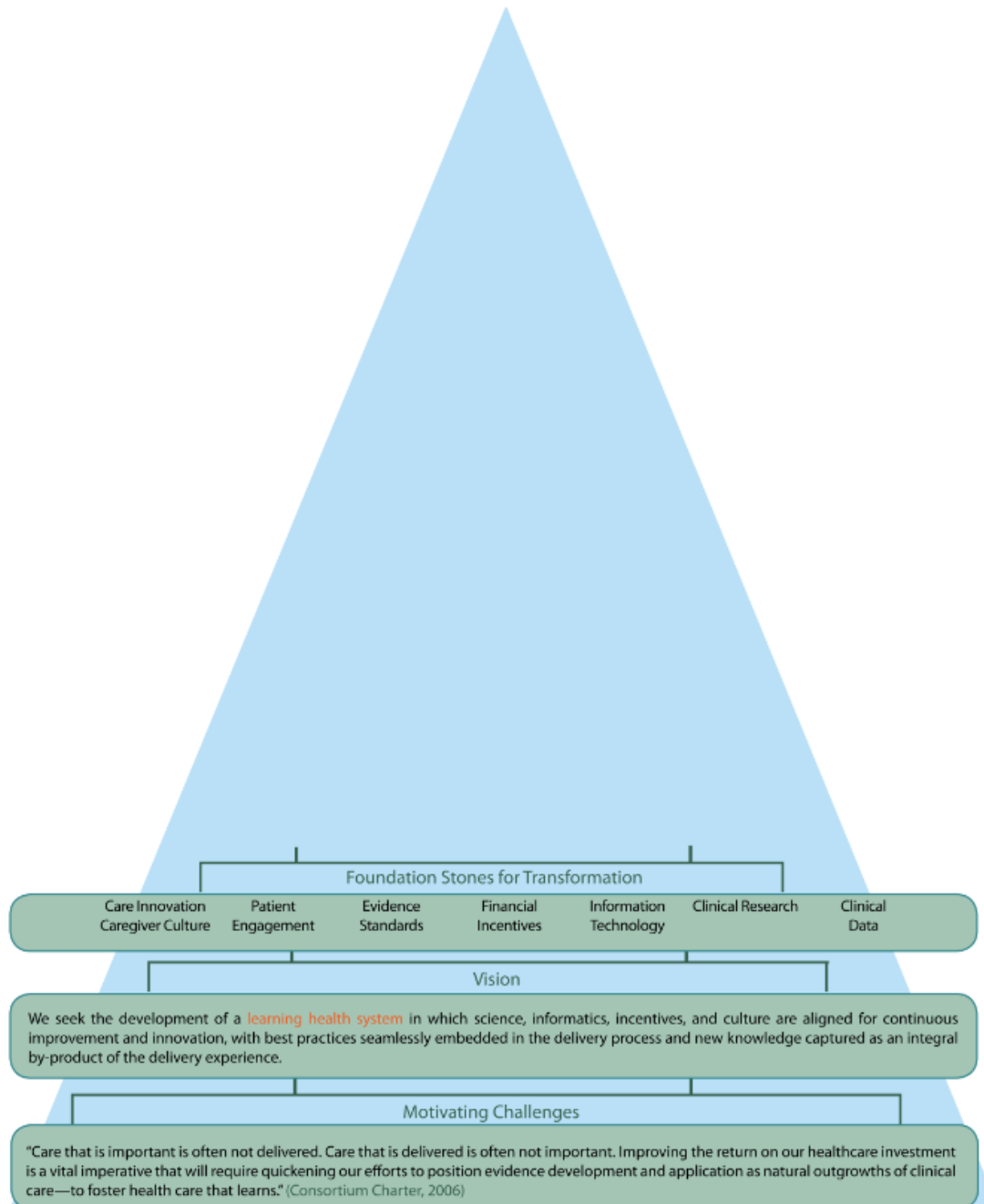
## Making a Difference ... *in mapping progress*



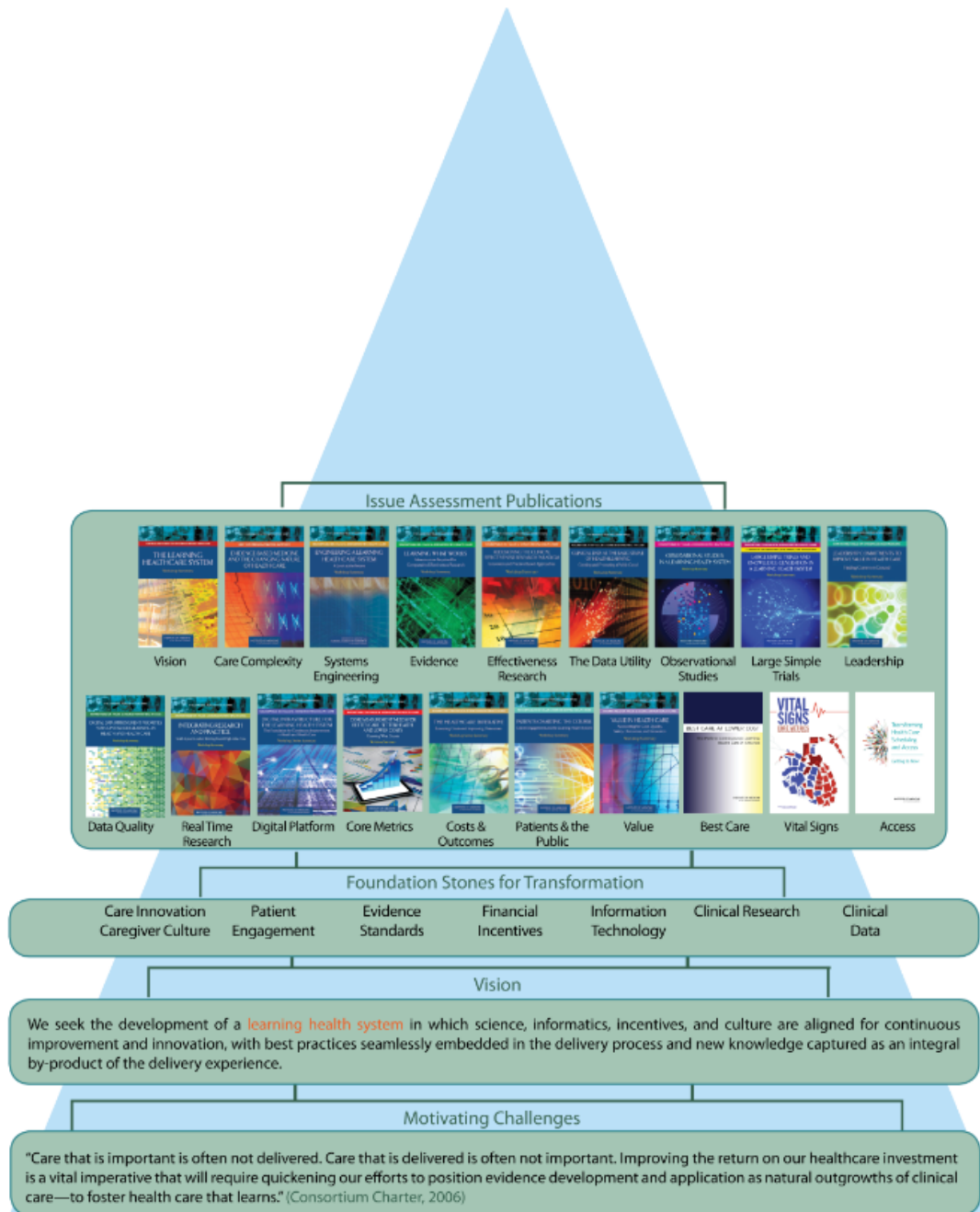
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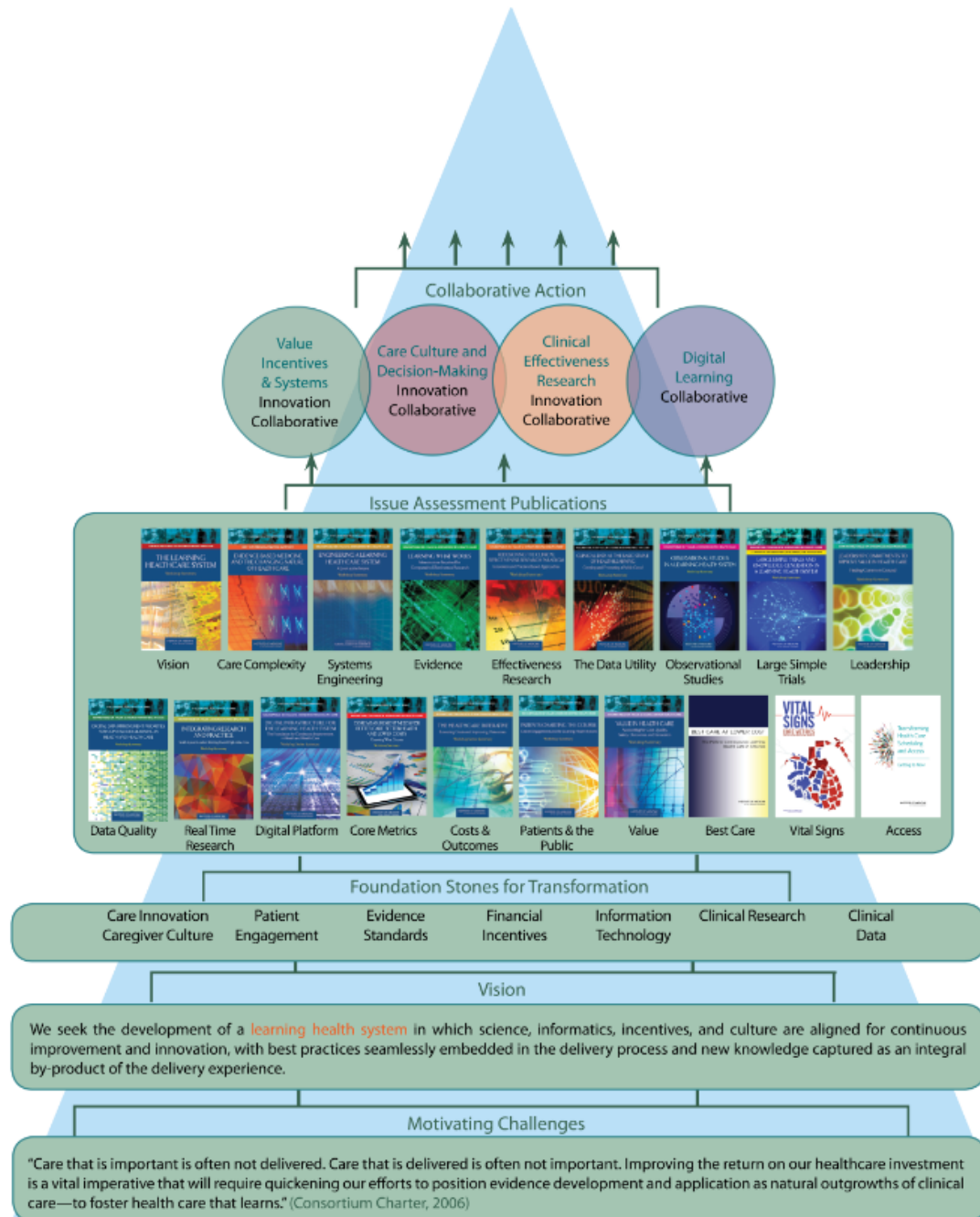
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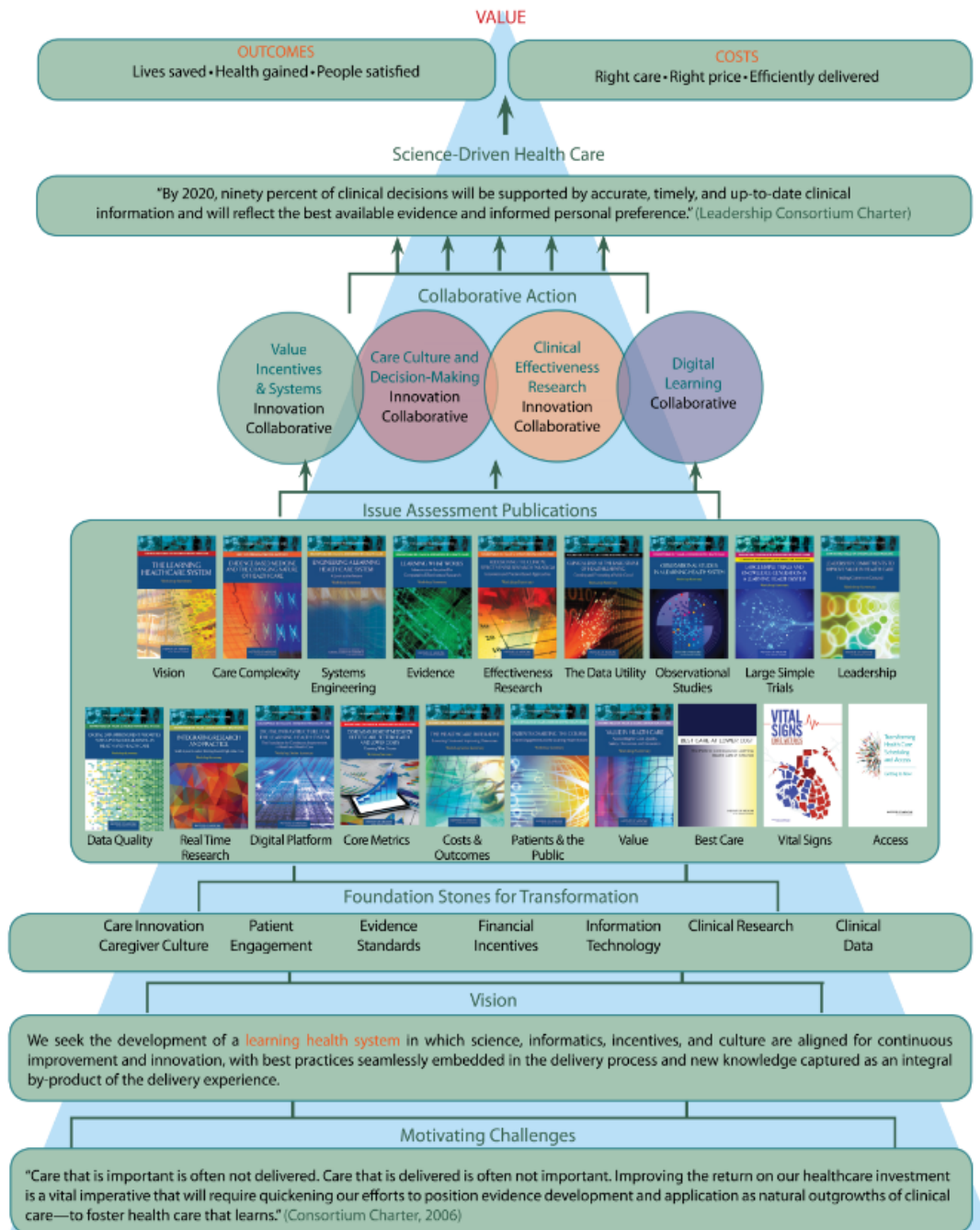
# Making a Difference ... in mapping progress



# Making a Difference ... in mapping progress



# Making a Difference ... in mapping progress



# Where are we now?

- **Digital technology acceleration** (*marginal interoperability*)
- **New research paradigms** (*limited infrastructure*)
- **Lean processing advances** (*culture & incentive limits*)
- **Focus shift from volume to value** (*blurring in blueprint*)
- **Strong measurement capacity** (*duplicative and unfocused*)
- **Democratized access to knowledge** (*uncertain quality*)
- **Patient & family readiness** (*diffuse receptor sites*)





# **Leadership Consortium: a Value & Science-Driven Health System**

**Sectors working together to transform effectiveness and efficiency**

- **Patients and the public**
- **Clinicians**
- **Health care delivery systems**
- **Insurance**
- **Research**
- **Product innovators (pharmaceuticals, devices, biologics)**
- **Regulators**
- **Information technology**
- **Public health**
- **Employers**



# Leadership Consortium

Collaborative action to reduce barriers and facilitate progress

- **Science**
  - **Clinical Effectiveness Research** Innovation Collaborative
  - **Digital Learning** Collaborative
- **Value**
  - **Value Incentives** Learning Collaborative
  - **Systems Approaches** for Health Innovation Collaborative
- **Culture**
  - **Care Culture & Decision-making** Innovation Collaborative
- **Cross-cutting change agents**
  - **Patient & Family Leadership Network**
  - **Health System Executive Leadership Network**

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# Leadership Consortium

## Example projects

- **Science**
  - Open science
  - Purchasing specs for interoperability
  - Patient demand for better evidence
- **Value**
  - Models of Care for High Need Patients
  - Vital Signs: Core measures for health and health care
- **Culture**
  - Shared decision-making
  - Evidence compendium for patient & family engagement
- **Cross-cutting change agents**
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# VA research benefits from....

- **Digital technology progress acceleration**
- **Accelerated, more generalizable research**
- **Lean processing advances**
- **More streamlined, reliable measurement capacity**
- **Synergy among health system leaders**
- **Patient & family readiness participation**



# VA research contributions to...

- **Success models for digital integration**
- **Lessons from new research paradigms**
- **CERIC working group participation**
- **Pilot application of patient/family compendium**
- **Pilot participation on Vital Signs**
- **Advances in bidirectional patient portals**



