



# Best Care at Lower Cost

The Path to Continuously Learning Health  
Care in America



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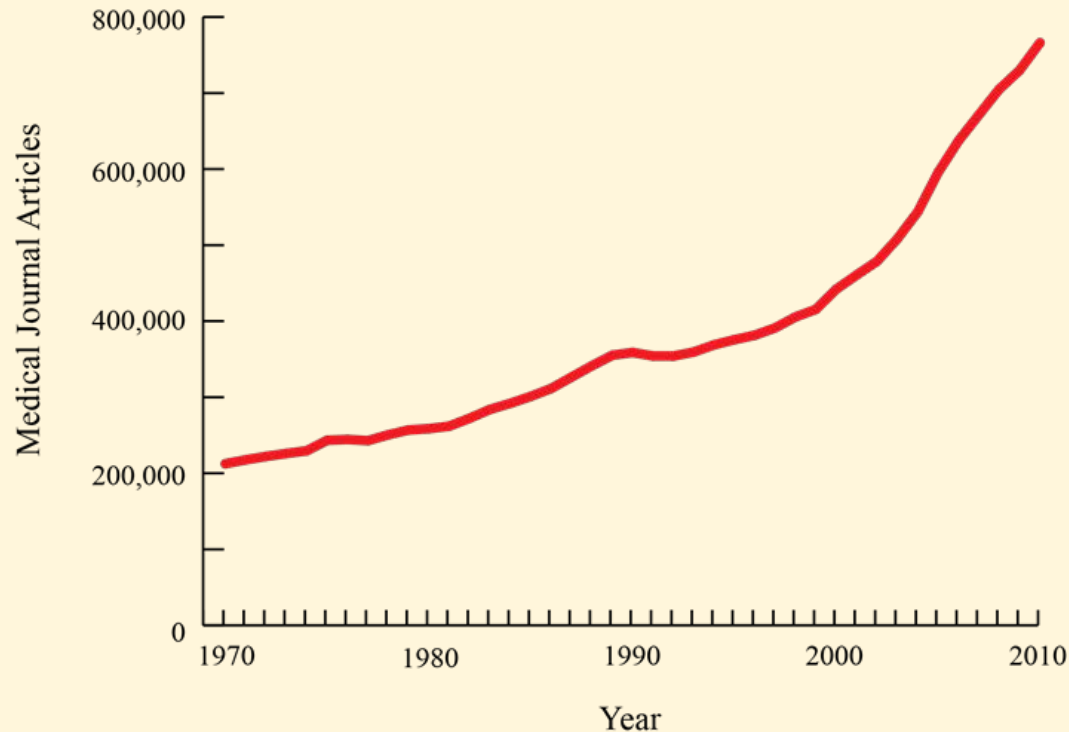
## **Paul C. Tang**

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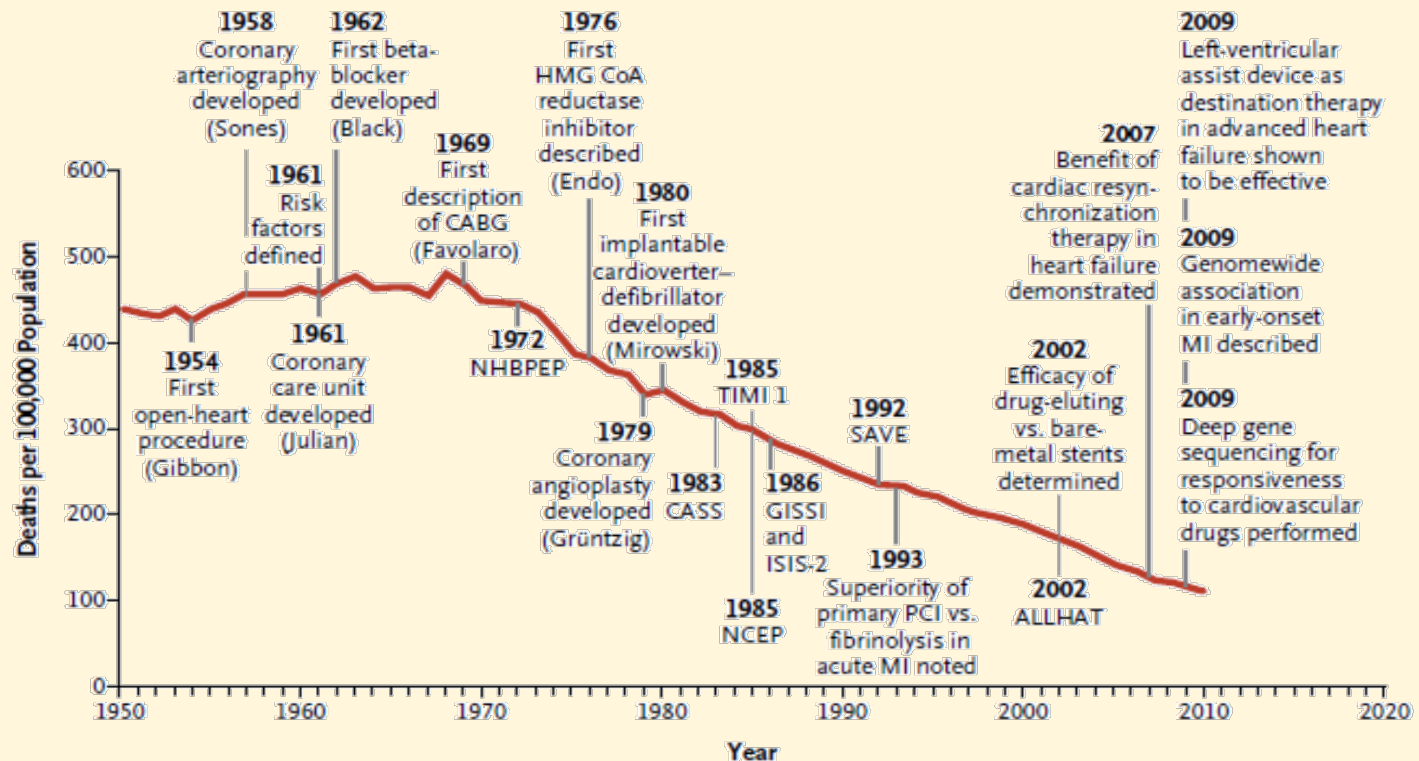
# The quantity of medical evidence is growing rapidly.



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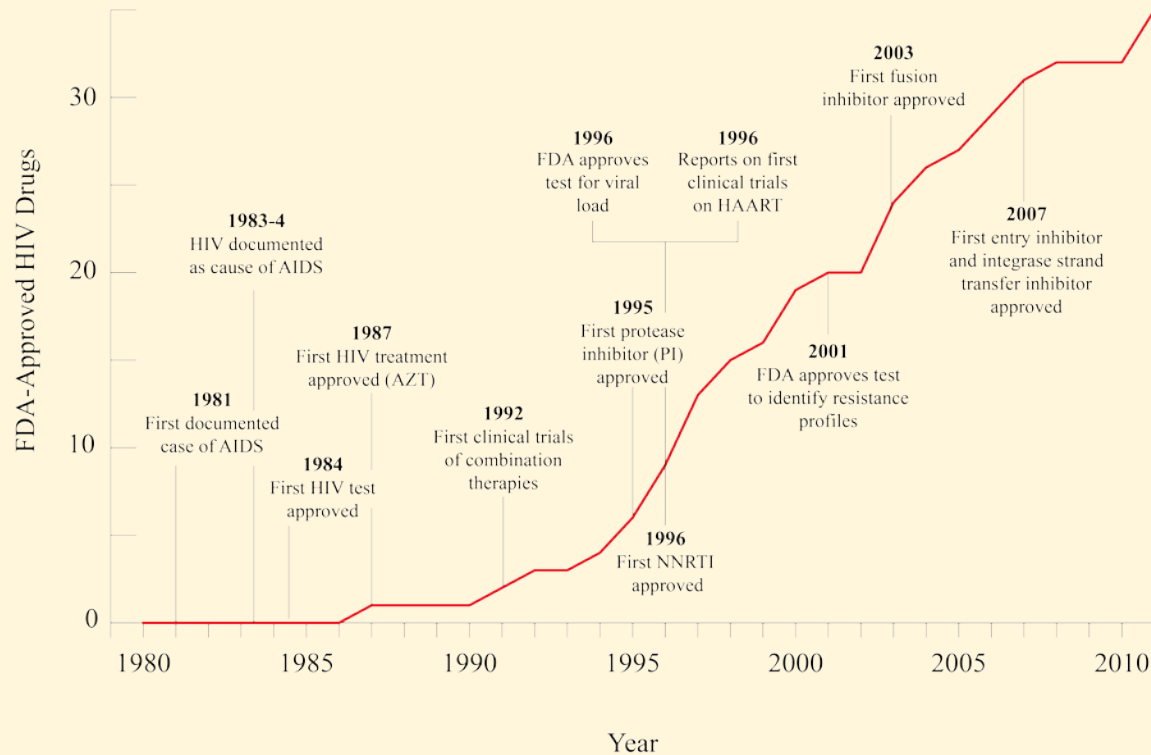
# Research has led to an increasing number of treatments and diagnostics for cardiac care.



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# Research has led to an increasing number of treatments and diagnostics for HIV care.



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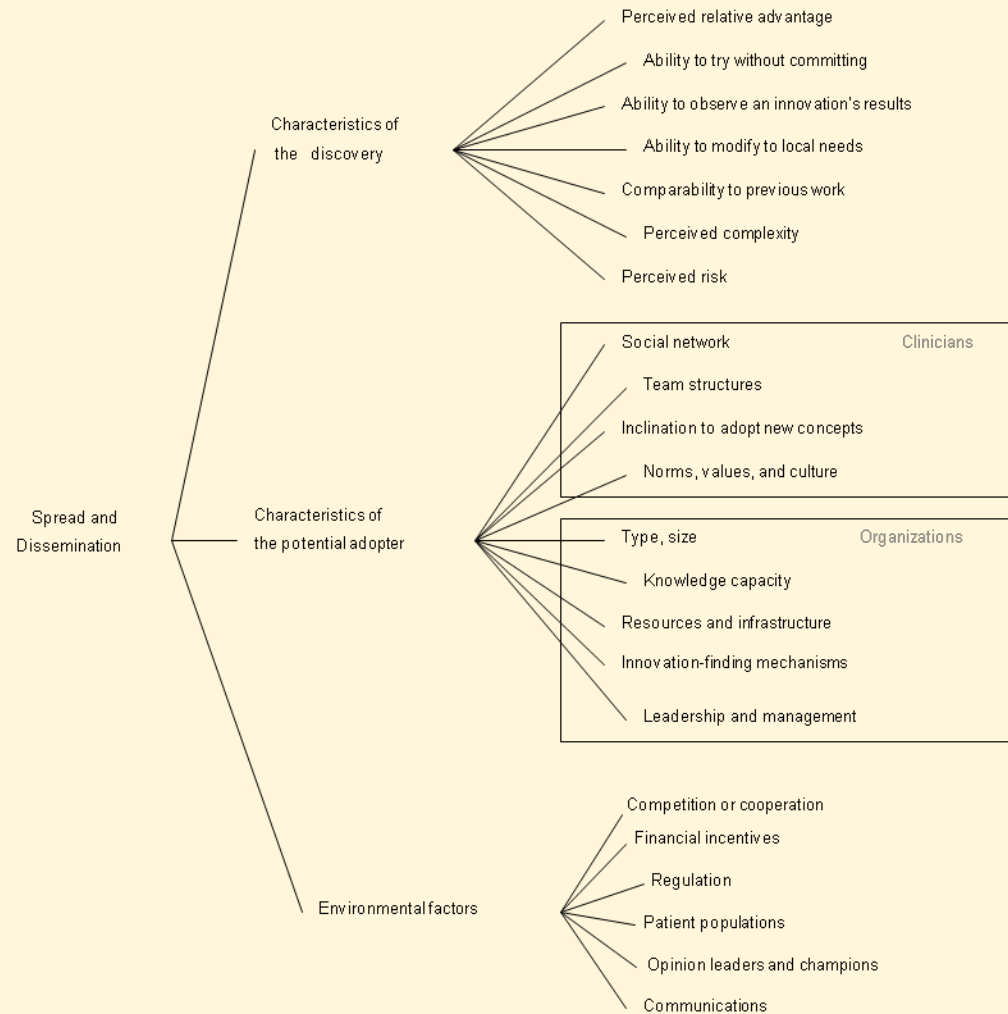
# Yet, the evidence base may often be inadequate for many clinical decisions.

- **Insufficient evidence for clinical guidelines**— In some cases, 40 to 50 percent of clinical guideline recommendations are based on expert opinion, case studies, or standard of care, rather than multiple clinical trials or meta analyses.
- **Challenges in ensuring evidence is high quality**— One recent paper found that reversals are common, with 13 percent of articles about medical practice in one high profile journal contradicting the evidence for existing practices.
- **Research does not generalize to many patients**—While many patients have multiple chronic conditions, a study of clinical practice guidelines for the most common chronic conditions found that fewer than half included guidance on treating patients managing multiple chronic diseases.

# Recent evidence is not routinely applied to health care.

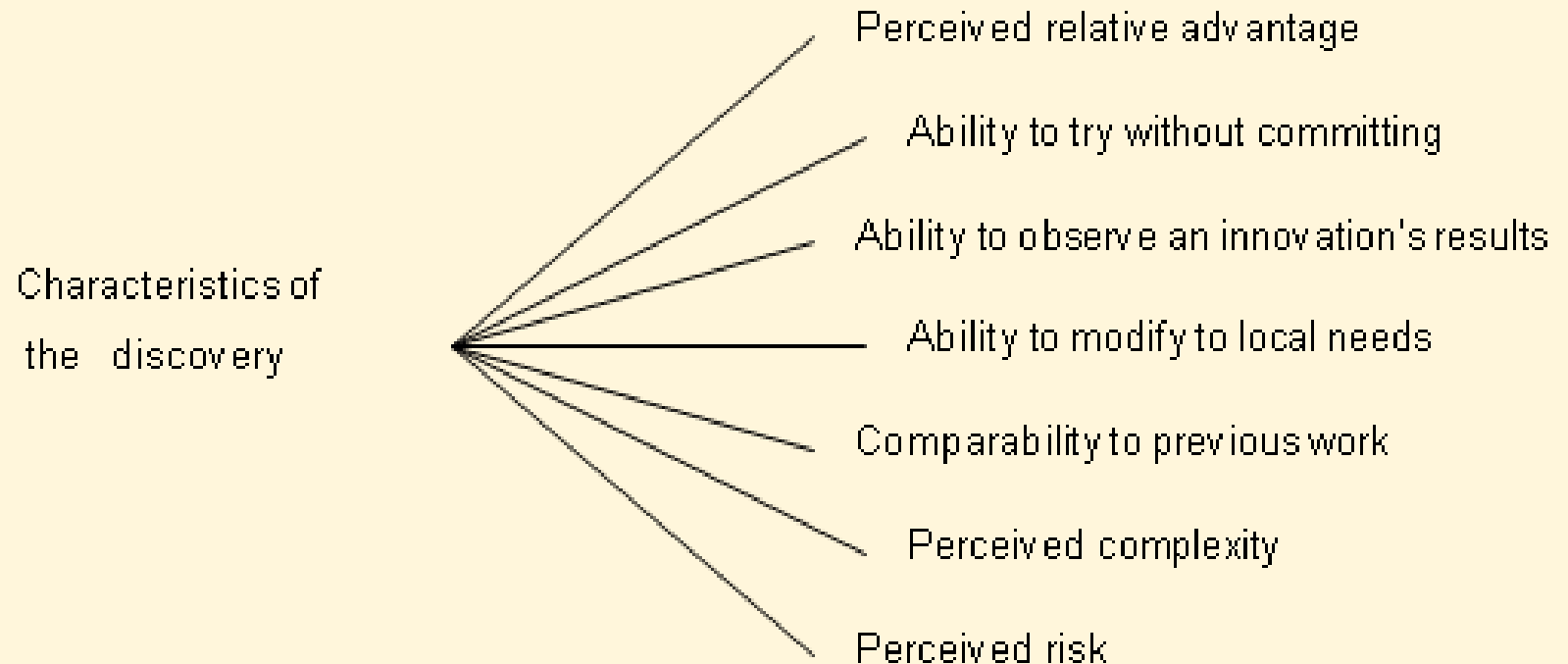
- **Evidence-recommended care not routinely done**— Americans receive only about half of the preventive, acute, and chronic care recommended by current research and guidelines.
- **Slow pace of dissemination**— For example, it took 13 years for most experts to recommend a very promising therapy (thrombolytic drugs) for heart attack care after the first positive clinical trial. Another study suggested that it takes on average 15-16 years for evidence to be routinely applied.
- **Clinical trials fail to change practice**— The results from multiple large scale randomized clinical trials were not implemented in clinical practice, including studies on high blood pressure treatments, timing of coronary angioplasty after heart attacks, or coronary angioplasty versus medical management.

# Multiple factors influence whether innovations spread and scale up in health care.

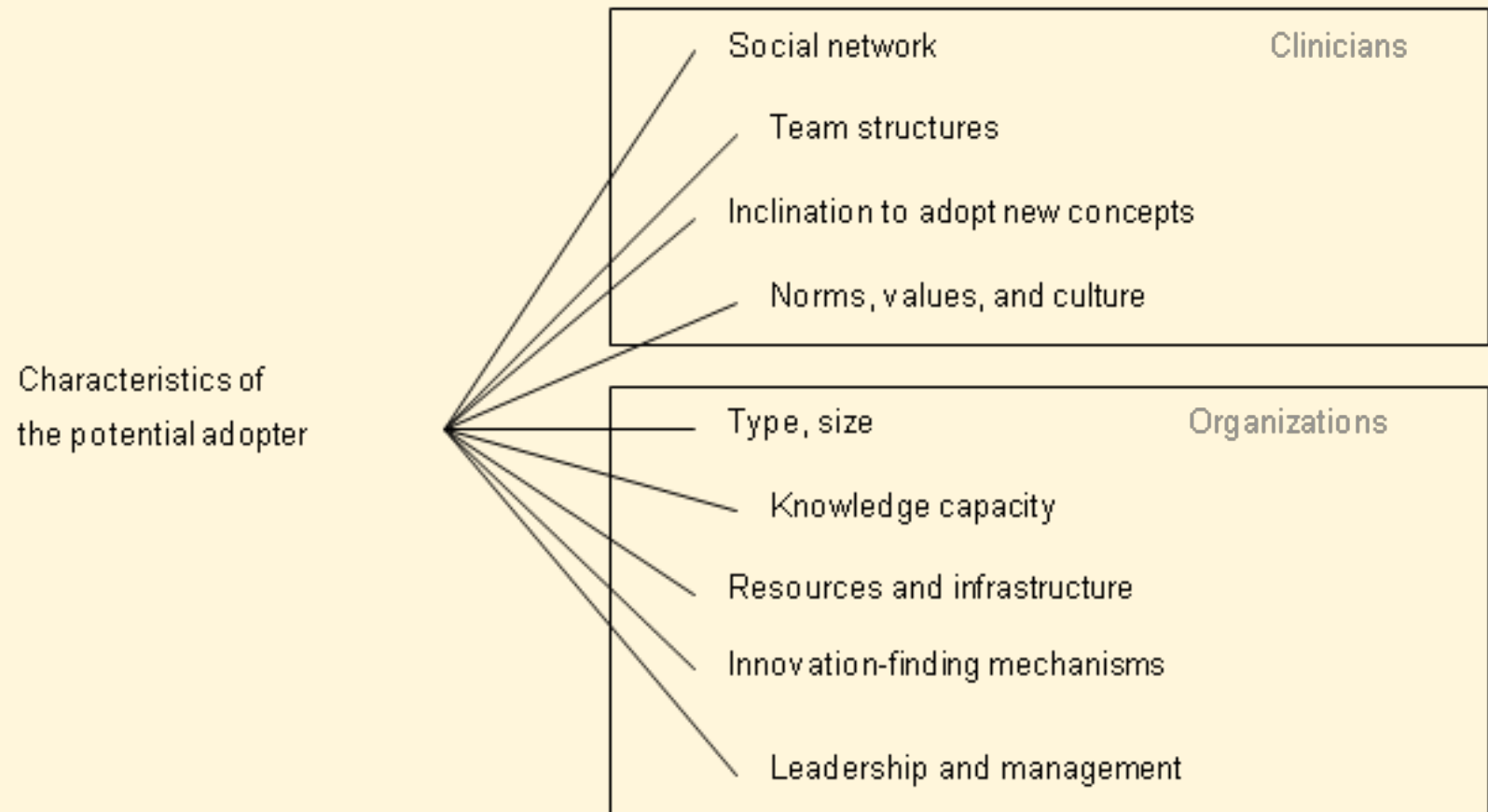




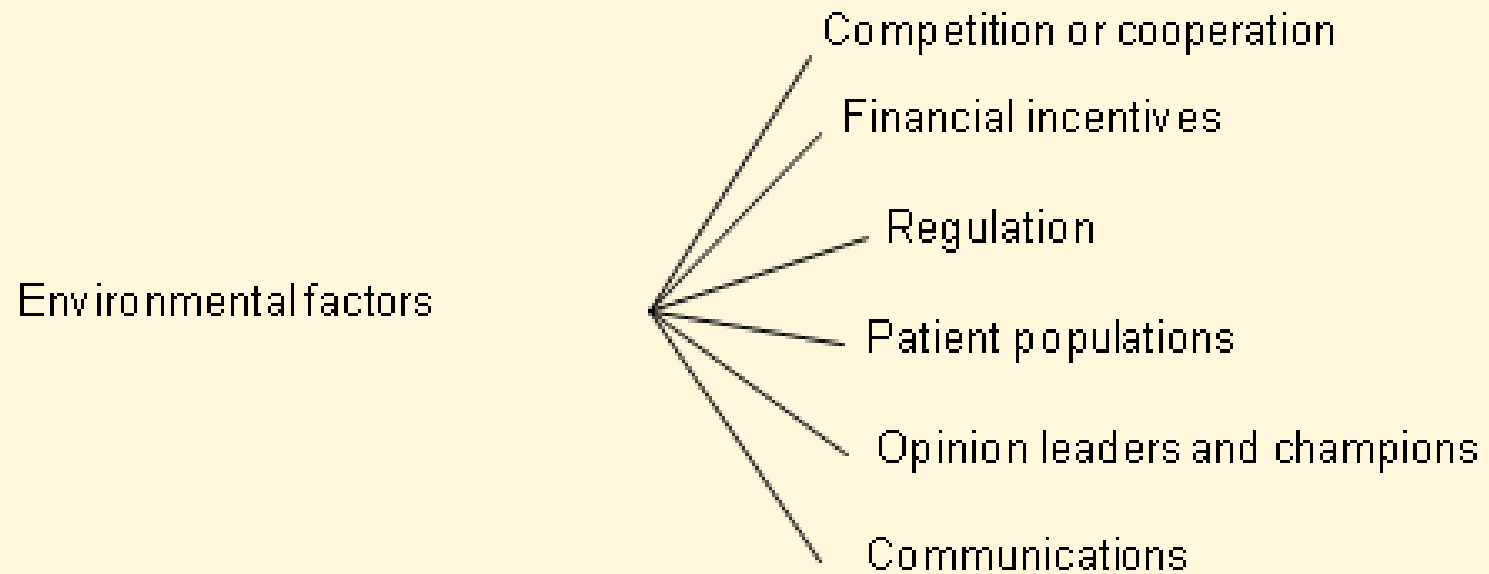
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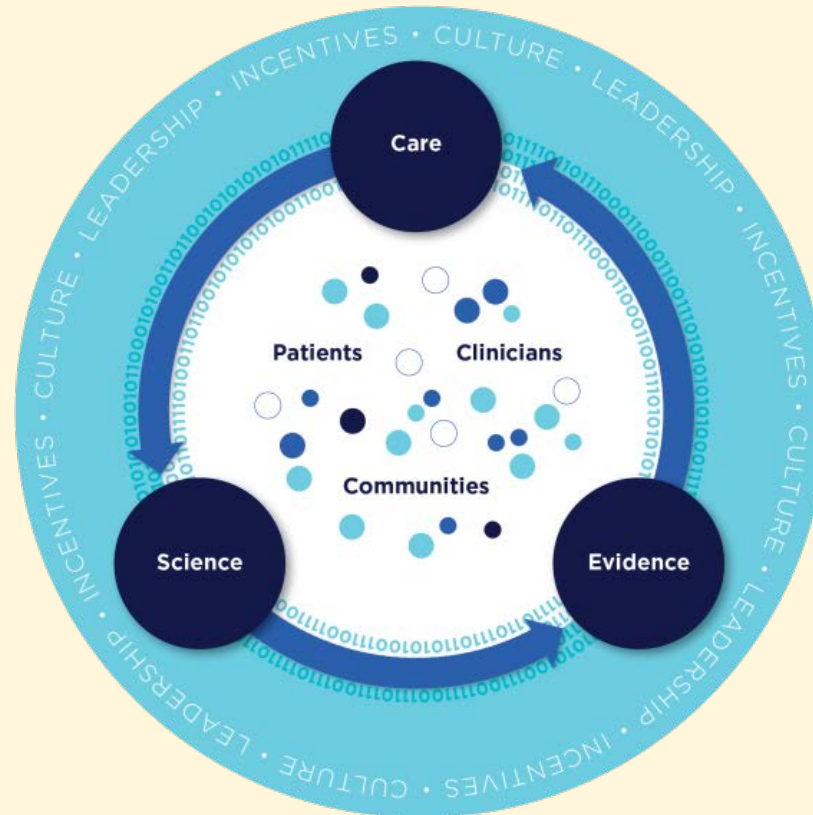
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# The committee proposed a vision for a continuously learning health care system.



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# A continuously learning health care system has the following characteristics.

- **Science and informatics**
  - Real-time access to knowledge
  - Digital capture of the care experience
- **Patient-clinician partnerships**
  - Engaged, empowered patients
- **Incentives**
  - Incentives aligned for value
  - Full transparency
- **Continuous learning culture**
  - Leadership-instilled culture of learning
  - Supportive system competencies

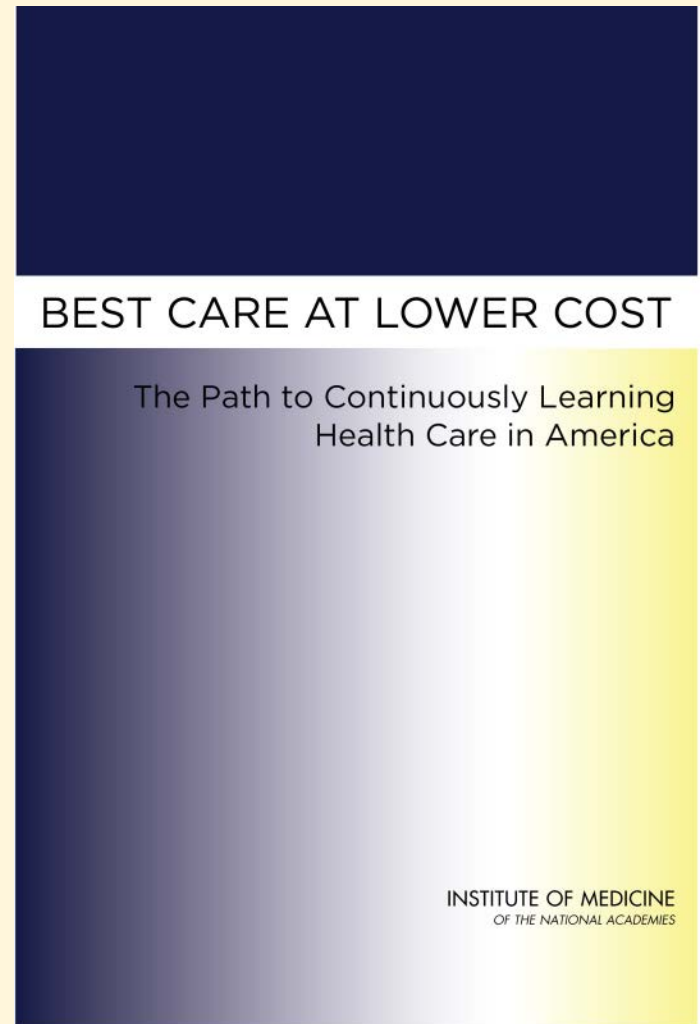


# How can this succeed now, when it hasn't in the past?

- **Computing power**
  - Decision support technologies, analyzing health records for research, managing populations of patients
- **Connectivity**
  - Connecting patients and providers, allow for patients to access health information when and where needed
- **Improvements in organizational capabilities**
  - Systems engineering, patient flow management, modeling and simulation, supply chain management
- **Collaboration among patient-clinician teams**
  - Recognizing the need for teams to deliver care and having the patient be part of that team

Learn more at...

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