

# MEASUREMENT OF DIAGNOSTIC ERRORS IS THE FIRST STEP TO IMPROVEMENT

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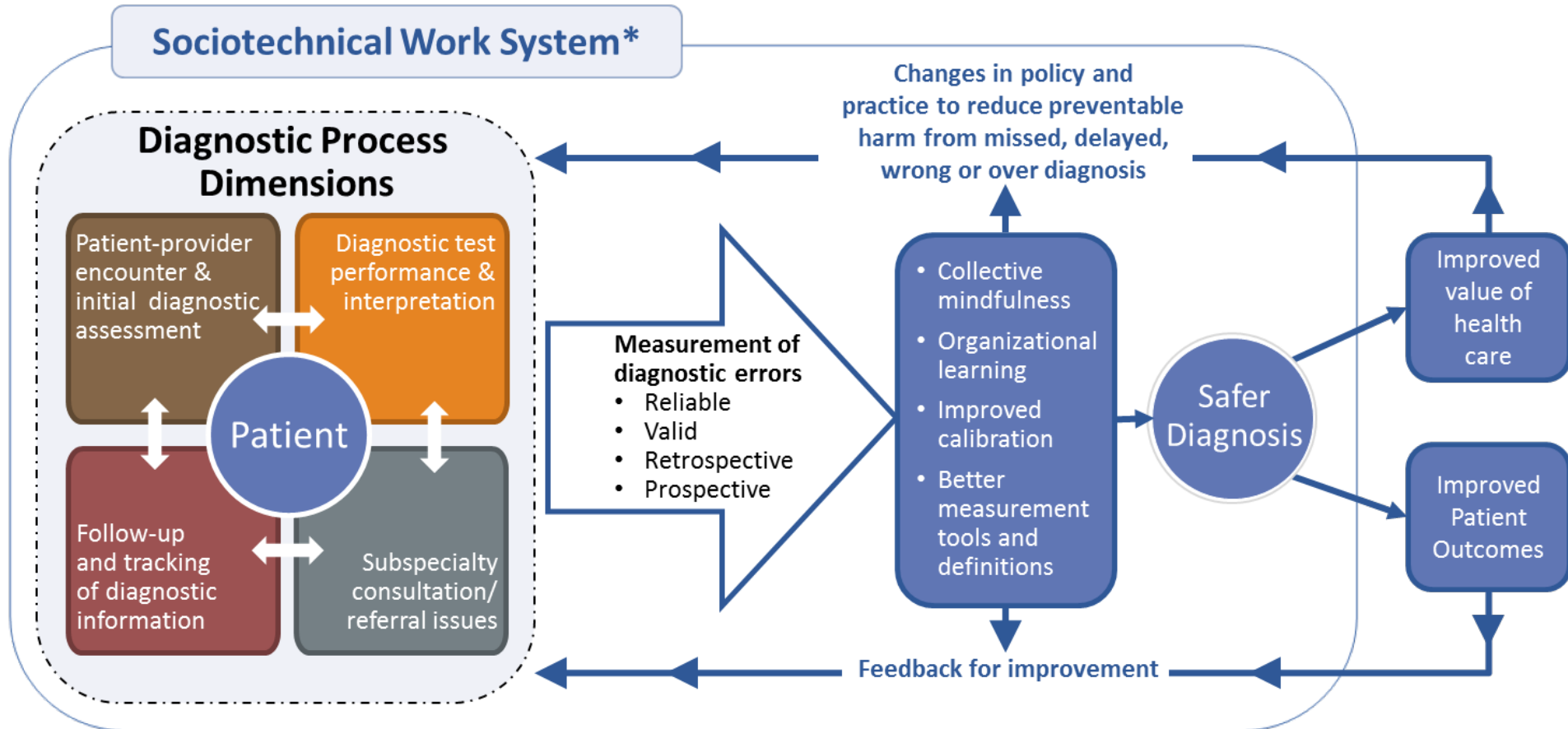
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# Current Landscape & Why Little Progress

- “Basic Science” at the confluence of cognitive science, informatics, human factors, social science, & the ‘art’ of medicine
- Experts still debating definition of “diagnosis”
  - ▣ lack of standards for most “diagnosis” concepts
- Operational definitions of diagnostic error harder & especially with evolving diagnosis
  - ▣ Uncertainty at play; not always black & white

# Safer Dx Measurement Framework

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\* Includes 8 technological and non-technological dimensions

# Time Ripe for Retrospective Measurements

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- Signals from administrative data are weaker
  - ▣ If validated, could provide clues on possible missed opportunities that warrant additional clinical evaluation
- Stronger signals to bolster error measurement
  - ▣ Review high-risk cohorts (cancer ~ 1/3rd delays)
  - ▣ Triggered record reviews (e.g. unexpected hospitalization post PCP/ED visit)
  - ▣ Reports from providers or patients

# Approach Diagnostic “Error” as Diagnostic “Safety”

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ORIGINAL ARTICLE

OPEN

## Measures to Improve Diagnostic Safety in Clinical Practice

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**TABLE 1.** Candidate Set of Measurement Concepts to Consider for Evaluation of Diagnostic Safety

Measurement Concept	Rationale
Structure	
Web-based decision support tools and online reference materials are available to all providers to aid differential diagnosis.	80% of diagnostic errors in one study had no documented differential diagnosis. <sup>26</sup>
Process	
Proportion of laboratory test results or diagnostic imaging not performed within the expected turnaround time	Delays in diagnostic testing lead to delays in diagnosis and increased chances for iatrogenic injury in the interim. <sup>41</sup>
Outcomes	
Proportion of patients with newly diagnosed colorectal cancer diagnosed within 60 days of first presentation of known red-flags	Nearly a third of patients with colorectal cancer have missed opportunities for an earlier diagnosis. <sup>48,51–53</sup>

# Being Realistic About Future Progress

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- Measurement ready for QI, learning & research purpose but not for public reporting, performance measurement or penalties
- Push 'basic science' ahead in next 10 years
  - ▣ Engage providers & patients
  - ▣ Health care organizations must step up efforts
  - ▣ Good data, standards and operational definitions
  - ▣ Measure 'harm', 'safety', 'reliability', 'uncertainty'
  - ▣ Measurement ---> feedback & learning

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