

Institute of Medicine Reports

Composite Summary

Prepared by the ACMQ Medical Informatics Forum

This summary aims to provide an overview of the reports published by the Institute of Medicine (IOM) over the past three years.

The relevant IOM reports are:

- **To Err is Human: Building a Safer Health System**¹
- **Crossing the Quality Chasm: A New Health System for the 21st Century**²
- **Envisioning a National Healthcare Quality Report**³
- **Leadership by Example: Coordinating Government Roles in Improving Health Care Quality**⁴
- **Priority Area for National Action: Transforming Health Care Quality**⁵

TO ERR IS HUMAN

This report deals with system errors and adverse events

The report's recommendations include:

- Establish a mandatory system for reporting errors and adverse events;
- Designate the National Forum for Health Care Quality Measurement and Reporting (National Quality Forum) to set reporting standards;
- Require health care organizations to report;
- Require states to establish reporting systems and set performance standards and expectations for safety.

These recommendations are directed at health care organizations, health care professionals and professional licensure boards, regulators, accreditors and purchasers, professional societies and the FDA.

Additional recommendations include:

- Encourage regulatory and accreditation organizations to require patient safety programs;
- Encourage private and public purchasers to provide incentives to health care organizations;
- Require licensing bodies to implement re-examination and re-licensure of professionals;
- Develop curriculum for patient safety;
- Disseminate information on patient safety and incorporate the data into clinical practice guidelines;
- Establish community-based collaborative initiatives;
- Redesign drug packaging and labeling;
- Modify drug naming;
- Establish post-marketing surveillance;
- Provide visible attention;
- Implement non-punitive systems;
- Establish team-training programs;
- Incorporate well-understood safety principles;
- Implement proven medication safety practices.

CROSSING THE QUALITY CHASM

This report identifies gaps in the delivery of patient care services

An agenda to “cross the chasm” includes the need for leadership to facilitate change, the need to commit to a statement of purpose and the adoption of a new set of principles. A strong case is made to identify a set of priority conditions that should be the focus of attention. The need to design and implement organizational support for changes is tied to the efforts that are needed to foster and reward improvement. The recommendations recognize the requirement to prepare the workforce for a world of expanding knowledge and rapid change. The report recommends the creation of an information infrastructure to support evidenced-based decision-making by patients and members of the healthcare delivery team.

Six “aims for improvement” are articulated and these are:

- A system that is safe;
- A system that is designed to avoid injury;
- Services that are effective, i.e. based on scientific knowledge and patient centered;
- Services that are timely;
- Services that are delivered efficiently;
- Services that are delivered in an equitable manner.

New principles and rules for design of care are described, with the centerpiece being a commitment to care that is evidence-based, patient centered, and systems-based.

Some principles and framework for effecting change include an understanding of complex adaptive systems integrated with the characteristics of a learning organization. The concept that access to information and the transfer of knowledge can be defined as “care” drive many of the recommendations. It is recognized that rules will occasionally conflict and should not be taken to the extreme.

ENVISIONING A NATIONAL HEALTH CARE QUALITY REPORT

This report addresses the collection, measurement and analysis of quality data

The new principles and rules for design of care include the establishment of a continuous healing relationship, with a 24 hours a day/7 days week/365 days a year commitment. These design features require customization based on patient needs and values, with the patient as the source of control. Such relationships will be facilitated by sharing knowledge, by the free flow of information, and by the use of evidence-based decision-making.

New principles and rules for design of care have the following features:

- Safety as a system property;
- Transparency;
- Anticipation of needs;
- Decrease of waste;
- Cooperation among practitioners.

There is a need to focus on the 80/20 rule. The report notes that 20 percent of patients account for 80 percent of work in delivering care and account for a similar percentage of the costs of care. Similarly, 20 percent of diagnoses account for 80 percent of the health problems of the population. A concentration on usual care while planning for contingencies will serve the population well.

Steps toward systems improvement:

- Focus on the fifteen priority conditions: cancer, diabetes, emphysema, high cholesterol, HIV/AIDS, hypertension, ischemic heart disease, stroke, arthritis, asthma, gall bladder disease, stomach ulcers, back problems, Alzheimer's, other dementias, depression and anxiety;
- Organize processes around these conditions, basing processes on evidence-based best practices;
- Create the necessary information infrastructure to support provision of care;
- Practice ongoing measurement of care processes;
- Align the incentives of the various stakeholders.

Organizational challenges included the need to redesign care processes and the steps that must be taken to facilitate the effective use of information technologies. A critical success factor will be the recognition of the growing knowledge gap and ways to manage it, including the application of new tools and the provision of training of healthcare professionals in the new skills required. Changes in licensure and continuous professional development, including fostering life-long learning, are integral components of the changes needed.

Changes to the payment policy and workforce mix must occur.

Coordination across patient conditions, services and settings is an essential component of the new system, as are efforts to advance the effectiveness of teams delivering care.

The report:

- Provides a framework for the content of a data set needed to support the measurement of quality;
- Outlines a process for selecting the measurements;
- Provides an analysis of data sources;
- Defines report formats.

Two dimensions of quality are highlighted, one being the "medical" model and the second being from the patient's perspective.

The Medical Model

The dimensions of the medical model include safety, effectiveness, "patient centeredness," and timelines, as well as equity and effectiveness.

Patient centeredness encompasses the relationship between the patient and clinicians, implies a partnership between patient and healthcare professionals, and requires ensuring that decisions respect the patient's needs and preferences. Further attributes include taking into account the patient's experience with care, and embedding into the relationship caring, a commitment to open communication and efforts to understand the patient's needs. An effective partnership includes shared decision-making, with the incorporation of opportunities for self-monitoring, goal setting and the accrual of skills and knowledge to provide for self-management.

The Patient's Perspective

This section, for the purposes of describing a measurement set, identifies patients into four areas:

- Staying healthy;
- Getting better;
- Living with illness/disability; and
- Coping with end of life.

Selection of Measures

- The criteria for selecting the measures should include overall importance, impact on health, and meaningfulness.
- The measures should be influenced by the systems or the entities being measured.
- The selected measures should be scientifically sound, valid, reliable and based on evidence.
- Collection of data must have feasibility, which means availability of data across sources and systems, at reasonable costs, without a significant data collection burden.
- The measures should have the capacity to support subgroup analysis.
- Prototypes for these measures should exist.
- Summary measures are not encouraged, but when used should be within the same dimension.
- An appropriate balance between outcome-validated process measures and conditions/procedure specific

outcome measures, strongly linked by evidence, is recommended.

- Structural measures should be avoided

Report Design

The report comments extensively on the design needs of a national report:

- The need to tailor the reports to different users;
- The need to limit the number of key findings and measures that should be included in the report because of the evidence of the limited ability of end users to process information.
- The use of benchmarks;
- Inclusion of findings with strong statistical evidence and those that are actionable;
- Regular updates;
- The use of sidebars to highlight stories and engage the reader emotionally.
- Pre-testing and assessing how the report can be used by the public.

LEADERSHIP BY EXAMPLE

This report addresses the duplication and disparate approaches to performance measures by government agencies

Obstacles to a successful system:

- Lack of consistency in performance measures because of multiple existing efforts;
- Increased data collections burden because of multiple existing efforts;
- Lack of a conceptual framework to guide performance measure selection;
- Lack of access to computerized clinical data;
- Lack of a commitment to transparency;
- Lack of availability of comparative quality data in the public domain;
- Absence of a systematic approach for assessing the impact of QI projects conducted in various settings.

“Big picture” recommendations include:

- Collaboration between the six federal programs – Medicare, Medicaid, DOD, VA, Tricare and the Indian Health Service – in their efforts to develop standardized sets of performance measures;
- Collaboration in the federal programs’ collection of clinical data to support the performance measures;
- Provision of incentives, including financial incentives, to encourage the collection of the necessary data;
- A commitment to building the IT infrastructure needed to support measurement and decision-making;
- The creation of a performance measure data repository;
- A commitment for federal entities such as the VA and DOD to serve as laboratories;
- The creation of conduits through which to disseminate information;

- Collaboration with the private sector;
- Support for the conduct of research.

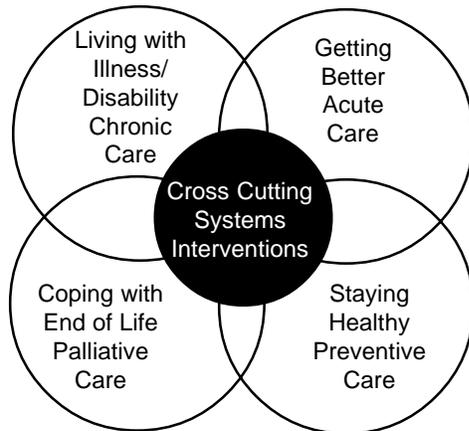
Additional recommendations (expanded) include:

- Establishment of quality expectations;
- Consumer participation: raise awareness of quality gap, facilitate input into measurement design, secure assessments of care, facilitate selection, including selection of treatment options;
- Establishment of clinical data reporting requirements;
- Purchasing strategies;
- Identification of best practices;
- Release of public domain comparative quality data;
- Establishment of public programs to act as delivery system models and dissemination of the findings;
- Creation of public domain IT products;
- Requirement that AHRQ and others pursue applied research, develop new knowledge and tools to support quality enhancement;
- Requirement that QuIC promulgate standardized performance measures for five conditions by 2003 and ten conditions by 2004;
- Coordination with the six federal programs for roll-out by 2008;
- Private sector providers to be informed of the need to submit audited patient level data (Medicare, Medicaid, SCHIP and portions of Tricare);
- Government providers (VA, DOD and portions of Tricare) to be required to prepare immediately;
- IT infrastructure to be developed for quality enhancement, bioterrorism surveillance, public health and research;
- Congressional consideration to rapid development IT infrastructure by tax incentives, (loans and grants);
- Adoption of regulatory and market driven approaches to encourage investment (rapid payment, COP);
- Reliance on web-based technology;
- Requirement that software and intellectual property be in the public domain.

PRIORITY AREAS FOR NATIONAL ACTION

This report identifies priorities from the earlier reports and suggests a framework for action

Four stages of life and health are described in the four circles, connected by the need for co-ordination across time and healthcare delivery settings.



The criteria used for the conditions and topics selected for highest priority focus included:

- **Impact**
Considerations were degree of disability, mortality and economic consequences.
- **Improvability**
Considerations focused on supporting literature (evidence) concerning the likelihood for improvement, and on the likelihood of achieving the previously stated six national aims: safety, effectiveness, patient-centeredness, timeliness, efficiency and equity.
- **Inclusiveness**
Considerations were activities across populations and settings.

The twenty priority areas recommended are (in no particular order):

- Asthma
- Cancer screening (colorectal and cervical)
- Diabetes
- Hypertension
- Ischemic heart disease
- Major depression
- Stroke
- Medication management (errors and overuse antibiotics)
- Nosocomial infections
- Pregnancy and childbirth
- Mental illness
- End of life organ failure
- Immunizations
- Frailty associated with old age
- Pain control
- Care coordination
- Tobacco dependence
- Self-management / health literacy
- Children with special needs
- Obesity

References:

1. Committee on Quality of Health Care in America, Institute of Medicine. Kohn LT, Corrigan JM, Donaldson MS (eds.). (2000). *To err is human: building a safer health system*. Washington, DC: National Academy Press.
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5. Committee on Identifying Areas for Quality Improvement, Institute of Medicine, Board on Health Care Services. Adams K, Corrigan JM (eds.). (2003). *Priority areas for national action: transforming health care quality*. Washington, DC: National Academy Press
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