Quality Assessment, Quality Assurance and Quality Improvement in Dentistry
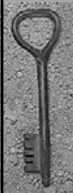
November 18, 2003

With thanks to Drs. Georgina Zabos and James Crall
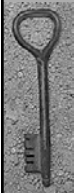
Objectives

- **Become familiar with the social, economic and political forces underlying efforts to assess and improve the quality of health care**
- **Become familiar with general elements and dimensions of quality health care**
- **Understand the basic features and goals of quality assessment, quality assurance and quality improvement programs**
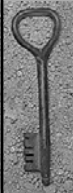- **Become familiar with "real-world" examples of dental quality assessment and quality improvement programs**

Preventing Medical Errors : A Call to Action

- In U. S. hospitals , Between 44,000 and 98,000 people die each year due to medical errors. (Institute of Medicine report , Dec. 1999)
- To Err is Human: Building a Safer Health System - Medication errors are estimated to account for 7,000 death annually.
- "Most people view medical mistakes as an `individual provider issue` rather than a failure in the process of delivering care in a complex delivery system."

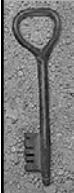## Definitions of Quality

- Transcendent definition: excellence
- Product-based definition: quantities of product attributes
- User-based definition: fitness for intended use
- Value-based definition: quality vs. price
- Manufacturing-based definition: conformance to specifications

Quality of Care

- Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes.
(Lohr , 1990)

Background of the Quality Movement

- Self-regulation by professions
- Cost Containment
- Protection of the public / Safety
- Emphasis on value
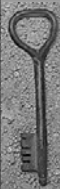
Fundamental Issues Concerning Health Care Quality

♦ How would you know quality health care if you saw it? Or experienced it?

♦ Can the quality of health care be measured? Differentiated?

♦ What are the most important attributes of health care quality from the perspective of professionals and consumers?

"Essential Elements of Quality*

♦**Produces optimal improvement in a patient's physiological status, physical function, emotional and intellectual performance, and comfort at the earliest time possible consistent with the best interests of the patient**

♦**Emphasizes the promotion of health, the prevention of disease or disability, and the early detection and treatment of such conditions**

♦**Provided in a timely manner, without undue delay in initiation of care,**

"Essential Elements of Quality (Cont'd)

♦**Seeks to achieve informed cooperation and participation of the patient in the care process and decisions concerning that process**

♦**Based on accepted principles of science and the proficient use of appropriate technological and professional resources**

♦**Provided with sensitivity to the stress and anxiety that illness can generate and with concern for the patient's overall welfare**

♦**Makes efficient use of technology and other health care system resources to achieve desired treatment goals**

♦**Sufficiently documented in the patient's record to enable continuity of care and peer evaluation**
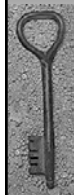
Dimensions of Quality

♦ **Effectiveness: the power of a particular practice to improve health status**

♦ **Efficiency: the delivery of a maximum of comparable units of health benefit for a given unit of health resources used**

♦ **Accessibility: the ease with which health care can be reached in the face of financial, organizational, cultural and emotional barriers**

♦ **Acceptability: the degree to which health care satisfies patients**

♦ **Provider Competence: the provider's ability to use the best available knowledge and judgment to improve the health and**
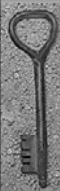
Quality Assessment

♦ **Definition: Measurements of or judgment about the quality of care provided**

♦ **Dimensions of care commonly assessed:**

♦ **Structure: resources used for health care**
    (e.g., facilities, equipment, personnel, qualifications and experience, organizations)

♦ **Process: the content of care**
    (e.g., how patients move into, through and out of the health care system; services
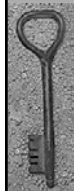
Quality Assurance

♦ Definition: the assessment or measurement of, or judgment about, the quality of care and the implementation of any necessary changes to either maintain or improve the quality of care rendered

♦ Attempts to assure quality in dentistry:
  – Licensing / accreditation / certification
  – Peer review
  – Review by third parties (UR, profiles, audits)
  – Malpractice litigation
  – Formal office assessments

Quality Improvement

- Majority of "sub-optimal" performance is due to system problems (design, operations)
- Improving systems reduces variation and increases desired outcomes
- "Special" (individual) problems dealt with separately after system is optimized
- Focus is on improving performance of all participants, thereby "shifting the curve", rather than on search for "bad apples"
- Team approach involving "line personnel" to understand and re-design processes

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Major Aspects of Dental Practice Examined in in Professionally Administered Office Assessment Instruments

Structure	Process	Outcomes
Facilities	Practice mgt.	Pt. satisfaction
Equipment	Radiograph Q	Pt. oral hygiene
Personnel / Staff	Data collection	Pt. education
Administration	Diagnosis	Pt. disability
Access	Tx. planning	Perio. disease
Record system	Tx. (service Q)	Completion of tx.
	Sterilization / I.C.	Maintenance care
Emerg. readiness	Pt. care mgt.	
Radiological safety	Service outputs	
Mercury hygiene	Dentist/Staff Demeanor	
Office policies	Appropriateness	
	of tx. & prevention	

What do patients value most?

Structure	Process	Outcomes
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A Comprehensive Q.A. System for Practicing Dentists

- Clinical Outcomes Management Approach

Dental Q. A. Criteria Synopsis Example

- Restoration acceptable: serviceable, caries free healthy gingiva
- Not acceptable: deficiency-1mm or > overhang, plaque retention

Dental Office Assessments

- Facilities
- Equipment
- Personnel
- Administration
- Practice Mgt.

- Sterilization/Inf. Control
- Radiographic Evaluation
- Data Collection
- Diagnosis
- Treatment Plan
- Treatment

Quality Resource Guides

- Radiographic techniques
- Blood pressure
- Documentation (record keeping)
- Informed consent
- Chronic adult periodontitis
- Oral Cancer

Consumer Assessments of Health Plans

- Dental office / clinic
  - Finding a provider
  - Explanations of care
  - Continuity of care

- Getting care from dental specialists
  - Getting a referral
  - Provider rating

- Calling dentists' offices
  - Questions answered

- Dental care in the last 12 months
  - Able to get appointments
  - Timely care
  - Waiting times
  - Staff helpful and courteous
  - Dentist helpful, courteous & thorough

- Experience with the dental plan
  - Information, paperwork & customer service

Summary

- Efforts to monitor, assure and improve the quality of health care have been sporadic, but remain important to policy makers, payers and the public
- Methods for assessing the quality of dental care have been limited by data collection technologies and costs
- Emerging technologies and information systems have the potential to provide useful data for internal and external assessments of dental practice

Donabedian`s Definition of the Ideal Physician

- **Selects and implements the strategy of care that maximizes health status improvement without wasting resources.**
  - **Efficiency of the strategy of care is termed clinical efficiency (Example: Order of care, exam, radiographs, hygiene visit, periodontal re-evaluation, restorative treatment, prosthetic treatment)**
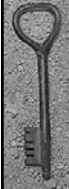   - **Production efficiency - The manner in which the services are produced**

Definition of Quality

- Individual Optimum
- Social Optimum

Donabedian`s Conclusions

♦ Considering social costs and individual costs society will allocate less resources to health care then what individuals would want
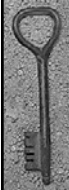
Continuous Quality Improvement

♦ Edward Deming and Joseph Juran 1930-s Western Electric Laboratories (AT&T)

Problems

♦ Built into a complex production process
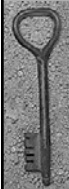♦ Poor job design
♦ Failure of leadership
♦ Unclear purpose

Improving Quality

♦ Understand process
♦ Revise
♦ Monitor
♦ Feedback
♦ Measurable data

Kaizen

♦ Continuous search for making things better

– " Every defect is a treasure. "

Teamwork

♦ Applicability of Theory of Continuous Quality Improvement to clinical practice: Teamwork is a must

The Basics of Quality Improvement

♦ Mr Deming`s teachings:

– Process : a series of interrelated tasks
– System : a group of related processes
– Project team : people working on a process

Organization

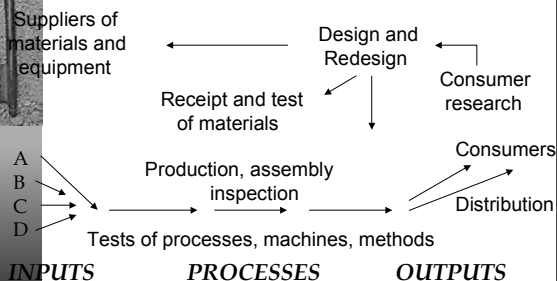♦ Systems designed to serve customers - Systems to be improved continuously

Deming's 14 Points of Quality Management

1. **Create a statement of aims and purposes of the company**
2. **Learn the new philosophy**
3. **Understand the purpose of inspection, for improvement of processes and reduction of cost**
4. **End the practice of awarding business on the basis of price tag alone**
5. **Improve constantly and forever the system of production and service**
6. **Institute training**
7. **Teach and institute leadership**

Deming's 14 Points of Quality Management

8. **Drive out fear**
9. **Optimize towards the aims and purposes of the company**
10. **Eliminate exhortations for the work force**
11. **Eliminate numerical quotas**
12. **Remove barriers that rob people of pride of workmanship**
13. **Encourage education and self-improvement for everyone**
14. **Take action to accomplish the transformation**

Deming's View of a Production System

Suppliers of materials and equipment

Design and Redesign

Consumer research

Receipt and test of materials

A
B
C
D

Production, assembly inspection

Consumers

Distribution

Tests of processes, machines, methods

INPUTS *PROCESSES* *OUTPUTS*

Criteria :

♦ Medical Care criteria are *predetermined elements against which aspects of medical service may be compared.*
♦ They are developed by professional expertise and based on the professional literature.
♦ They are based on attributes of *PROCESS & OUTCOME*
♦ They often include *" STANDARDS "*

Explicit Criteria :

♦ Were set , developed, or predetermined by *Group Consensus* of recognized authorities in the field.

Implicit Criteria :

♦ Rely on the *Subjective Evaluation* of the auditor. They have been internalized by the individual and may differ according to knowledge, training, and experience.