Quality Assessment,
Quality Assurance and
Quality Improvement in Dentistry

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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

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

<table>
<thead>
<tr>
<th>Structure</th>
<th>Process</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>Facilities</td>
<td>Practice mg.</td>
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<tr>
<td>Office policies</td>
<td>Appropriateness of tx. &amp; prevention</td>
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What do patients value most?

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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 than what individuals would want.

Continuous Quality Improvement
- Edward Deming and Joseph Juran
- 1930s 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
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
- Receipt and test of materials
- Design and Redesign
- Production, assembly, inspection
- 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.