Defining Quality
The Need to Look Inside

2012 National Primary Oral Health Conference

La Jolla, CA
10/1/2012
Mark Koday DDS
Dental Director- Yakima Valley Farm Workers Clinic
Objectives

- Define QA, QI and Risk Management and how they are used in dental CHC programs
- Gain knowledge in the shortcomings of a QA program
- Learn the components of a CHC Dental Quality Plan
- Learn ways to collect and manage quality data to enhance the standard of care at your CHC
Your quality assessment will be dependent on the depth of your focus.
QA vs QI

Quality Assurance (QA) measures compliance against certain necessary standards.

Quality Improvement is a continuous improvement process. QA is required and normally focuses on individuals, while QI is a proactive approach to improve processes and systems. Standards and measures developed for quality assurance, however, can inform the quality improvement process.

Defined by HRSA
Risk Management

Definition:
A function designed to identify, evaluate, and correction of potential risks that could result in damage to patients, staff or property.
How Do We Currently Measure and Improve Quality?
HRSA Requirements

- QI Committee
- QI Plan and Health Care Plan
- Clinical Practice Guidelines
- Policies and procedures
- Peer review
- Chart audits
- Pt satisfaction surveys
- Tracking systems
- Credentialing and privileging
- Data sources
- Require one oral health measure
Basic Items That Can Be Measured in Dentistry

- The technical excellence of restorations/Root canals etc (Peer review)
- Patient satisfaction
- Evaluation of the use of services: risk assessment and preventative services
- How we chart our patients’ care (peer review)
- Compliance with laws and regulations
Why Peer Review? Risk Issues in Dental

- Most providers do not fully understand risk management
- Not all providers know what quality is all about
- Some providers are not concerned about quality
Chart Audits: Retrospective Review

- Limited due to the low # of charts possible to review
- Can pick up some radiograph diagnosis issues
- Can identify basic charting risk issues: i.e. BPs, periodontal charting
- Raises overall awareness to QA issues
- All dentists/ residents need to participate
Question: Does the documentation support the diagnosis

This question covers diagnosis and what is needed for an appropriate and accurate diagnosis.

No Issues Found:
- There were enough clinical tests listed to make a reasonable diagnosis. Remember that a radiograph that shows a large apical lesion and a destroyed crown may need no other diagnostic tests but a tooth with decay close to the nerve and no periapical lesions may need a full array of tests.

Needs Improvement (examples):
- There are not enough diagnostic tests listed to arrive at a reasonable diagnosis.
- The symptoms do not match the diagnosis?
- There is an emergency encounter with no listed diagnosis
Chart Review

- General chart audit
  - Easier to do
  - Must have protocols set up to guide the reviews
  - More general risk management oriented

- Aspect of Care (specific procedure)
  - Draws attention to specific issues your dentists have
  - More quality of care oriented
Aspect of Care (example)

ASPECT OF CARE: ENDODONTIC, NON-SURGICAL OBTURATION

INDICATOR STATEMENT:
There is radiographic evidence of adequate obturation of canal(s)

DEFINITION OF TERMS:

Obturation: The three-dimensional filling of the pulp chamber and root canal system with a YVFWC program approved filing material (usually gutta percha and sealer).

Adequate obturation of the canal: There is general agreement that the ideal location of the apical determination of the root canal filling materials at the dentinoenamel junction, which is just short of the radiographic apex, so as not to impinge on the periapical tissue. The most desirable presenting root canal obturation is a homogeneously dense filling extending 0.5 to 1 mm short of the radiographic apex. Ideally, the entire root canal space should be obturated with uniform density without voids as potential areas of recontamination and infection. Underextension of the root canal filling material can result by failure to fit the master gutta percha point accurately or from, a poorly prepared canal. Gross overextension can lead to symptoms and treatment failure.

RATIONAL:
This indicator is useful to measure success in the non-surgical treatment of root canals. Outcomes will be monitored by periapical radiographs following treatment, clinical examination and the absence or presence of symptoms at the recall exams. Unless a dense, well-adapted root canal filling is achieved, the prognosis may be in jeopardy.


DESCRIPTION OF INDICATOR POPULATION:

N = Records of completed non-surgical endodontic treatment presenting with unacceptable root canal obturation
D = Records of completed non-surgical endodontic treatment reviewed
Threshold = no more than 20% of the # of D will be recorded as N

UNDERLYING FACTORS:

Patient factors: Patient’s inability to cooperate; severe debilitating disease; calcified or unnegotiable canals; canals with severe curvatures or dilacerations

Equipment factors: malfunctioning x-ray equipment; malfunctioning radiographic developing equipment;
Clinical Peer Review: Concurrent Review

- Very limited by the # of patients possible to review
- Can pick up clinical diagnosis issues
- Can identify basic charting issues and more clinical care issues
- Raises overall awareness to QA issues
- Should have dentist’s data reviewed ahead of time to ID potential problems
Patient Satisfaction Surveys

- Can hire an outside company
Standard of Care/ Guidelines Manual

- Defines the quality you want for your program
- Critical for both retrospective and concurrent reviews
- Reduces the subjectivity of these types of reviews
- Difficult to put together

DEPARTMENT OF THE NAVY
STANDARDS OF ORAL HEALTH CARE
Clinical Privileging

Core privileges in Dentistry include diagnosis, evaluation, management and treatment of dental patients who present with general dental problems, including emergency dental care and preventative care.

<table>
<thead>
<tr>
<th>PRIVILEGE LIST:</th>
<th>√</th>
<th>Performed in the past 24 months? (Yes or No)</th>
<th>Relevant CDE</th>
<th>Had Training &amp; Experience</th>
<th>Corporate Dental Director Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Dental Core Privilege Package</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(includes all procedures listed below)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Diagnosis, Prevention and Adjunct Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restorative Dentistry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endodontics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosthodontics (removable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implant Restorative Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosthodontics (Fixed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral and Maxillofacial Surgery and Periodontics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodontics Level 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedation: minimal sedation-nitrous oxide/oxygen only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Procedures (requested separately)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral and Maxillofacial Surgery Level 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral and Maxillofacial Surgery Level 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodontics Level 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implant placement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedation: minimal sedation N2O with one oral medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedation: moderate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Orthodontic appliances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Specify CDT code)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Educational Requirements:

- Providers that can demonstrate sufficient proof of post-graduate training in this category to the dental Director will be granted privileges automatically without the need to have any cases mentored. Education programs like, but not limited to, Oral & Maxillofacial Surgery or Periodontal Residencies will serve as proof of training.

Requirements for Full Privileging:

- Each applicant must be able to demonstrate that he/she have done at least 5 successful procedures within the past year.
- If proof of formal training does not exist, the YVFWC Dental Director will review the informal training the provider can demonstrate. If deemed sufficient, the YVFWC Dental director will assign the provider a mentor. The provider will need to demonstrate the successful completion of 5 procedures within this category.
- There can be no more than one Peer Review Level 2 and no Peer Review Level 3 incidence in the past year.
Quality Improvement in Dentistry
OPPE/ FPPE

Ongoing Professional Practice Evaluation
Focused Professional Practice Evaluation

- A process of periodic (or focused) review to determine if clinical privileges should be continued, added or revoked
- Can be just a way to fulfill a regulatory requirement
- Can be a way to actually get control of the quality of care going on at your program
- Not required by the Joint Commission for ambulatory care clinics but many medical insurance plans and grants CHCs deal with require it
Problems with Measuring Dental Quality

- Measuring the technical excellence: Very little proof that this makes any long term difference Jokstod et al *Quality of dental restorations*; FDI Commission Project, 2-95; Int Dent J; 51 (3): 117-158
- No standard measures for evaluating tx have been established
- Patient satisfaction: what they want isn’t always good care
- Service use: no diagnosis codes
- Other: No proof that any of these actually make any difference in the quality of care Bader; Assessment in Dental Care; JADA, Vol.140 Dec 2009 1456-1464
What Are the Issues With the Processes We Use

- Credentialing/privileging: very labor intensive to do it the right way
- Chart Reviews:
  - Sample too few charts
  - Need to set standards for review
  - Not enough time to do a complete review
  - Difficult to discover real issues
- Patient Peer review:
  - Too subjective
  - Dentists on best behavior
  - Time intensive
What Are the Issues With the Processes We Use

- Clinical Practice Guidelines: Few exist in dentistry
- Patient Satisfaction: costly
- Data collection and tracking:
  - Difficult to set up a meaningful comprehensive format to present data in
  - Little national agreement what outcome data means for quality
Why Do Dental QI At All?

- It's required
- We have to do something
- Need to start to gather the data and establish base lines for comparison
- Opens up the system for all to see
- Makes people think about quality
- It does work
The Electronic Dental Record

![Diagram of dental chart and data entry form](image-url)

### Chart Details

<table>
<thead>
<tr>
<th>Teeth</th>
<th>Surfaces</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Date User Grp Prov Code Description Tooth Surface Type Amount
|       |       |    |     |  |     |  |     |  |
|-------|-------|----------------|------|--------|--------|--------|--------|
| 01/20/12 | KIH | 2394 | D7500 | CROWN/BRIDGE HIGH METAL | 13 | Planned | 900.00 |
| 01/20/12 | KIH | 2394 | D7500 | CROWN/BRIDGE HIGH METAL | 14 | Planned | 900.00 |
| 01/20/12 | KIH | 2394 | D7500 | CROWN/BRIDGE HIGH METAL | 15 | Planned | 900.00 |
| 01/20/12 | KIH | 3 | 2394 | D3330 | RCT (MOLAR) | 14 | Planned | 863.00 |
| 01/20/12 | KIH | 2394 | D2790 | CROWN HIGH METAL | 14 | Planned | 900.00 |
| 01/20/12 | KIH | 2394 | D7240 | EXTRACTION (Surgical) | 14 | Planned | 250.00 |

### Notes:
- **Legend**:
  - P: Perm.
  - F: Prim.
- **Services...**
  - Time Out
  - Re-entry
  - Anesthetic
  - Restoration
  - Oral Surg
  - Rx
  - PD Notes
  - Consent
  - Approval

### Conditions...
Quality Indicators

When you define, collect and examine quantifiable information with a purpose in mind, you are involved with establishing quality indicators.

By collecting and tracking quality indicators over time, you are establishing a baseline for that indicator.

Quality Indicators

- **Conclusions:** Monitoring health care quality is impossible without the use of clinical indicators. They create the basis for quality improvement and prioritization in the health care system. To ensure that reliable and valid clinical indicators are used, they must be designed, defined, and implemented with scientific rigor.

Mainz *Defining and Classifying Clinical indicators for Quality Improvement* International J for Quality in Health Care) 2003
Advantages of Quality Indicators in the EDR

- All charts can be reviewed
- Less time/ less costs (not including set up)
- Less subjectivity
- Takes out the emotion factor of a quality review
- Establishment of baselines and comparisons over time
- They aren’t always definitive but they do give you direction in what to concentrate on for a review
- Ability to set and assess goals
- Can spend saved time concentrating on other quality areas
Problems with Dental Indicators

- Procedural orientation of dentistry has led to a short term vs. long term outcome emphasis
- Very little evidenced based dental procedures: ADA Clinical Recommendations (8)
- You get what you ask for
- Limited ability to capture data nation-wide for the establishment of oral health benchmarks
- Limited ability to access insurance data
Quality Indicator Usage

- To identify **underuse** - the failure to recommend clinically necessary care.

- To identify **overuse** - the delivery of clinically inappropriate care. Appropriate care refers to the expected health benefits relative to the expected negative consequences of a particular health care strategy. A health care strategy where the expected negative consequences outweigh the expected benefits is clinically inappropriate and constitutes overuse of health care services.

- To identify **misuse** - is the failure of a planned action to be completed as intended.

Baylor Health Care System
What Can We Measure with Quality Indicators

- Anything where a formula’s numerator and denominator can be assigned a specific data point entry
- Data entered as free text can be mined but with difficulty: Example - Blood pressures
What Can’t Be Measured by Quality Indicators

- Specific radiograph diagnosis
- Specific clinical diagnosis
- Restoration evaluation
- RCT evaluation
- Surgical technique
- Chair-side manner
Given the Issues in Dentistry- What Should Our Indicators Do?

- Guide our programs in a positive direction (know where you want to go)
- Be evidenced based when possible
- Follow your problem areas and help to resolve them
- Use to develop a risk based model for care
- Design the Indicator process as a tool for identification and not a definitive measure of quality
What Organizations Are Creating Indicators?
NNOHA Indicators

- Percentage of patients who had at least one dental visit during the measurement year
- The percentage of children 2-21 years of age who had at least one dental visit during the measurement year
- Percentage of children age 1-17 years have had tooth decay or cavities in the past 6 months
- Percentage of patients who had a periodontal exam at least once during the measurement year
- Oral Cancer Risk Assessment & Counseling—Percentage of all patients who receive soft tissue screening, oral cancer exam and counseling
NNOHA Indicators

- Percentage of patients for whom a Phase I treatment plan is completed within 12-months of the exam visit
- Percentage of children who received preventive dental care during the previous 12 months
- Percentage of children with at least one topical fluoride treatment or fluoride varnish treatment during the measurement year
- Percentage of children ages 6 to 21 years who received at least a single sealant treatment during the measurement year
- Percentage of children who received primary caries prevention intervention as part of well/ill child care as offered by primary care medical providers
Why Develop Your Own?

- Almost all the agencies I researched are developing program indicators to assess how well the health care dollar is spent.
- Dental Directors need quality indicators that assess the quality of the care their programs deliver.
Four Areas That Can Be Tracked by Quality Indicators

- PATIENT INDICATORS (Health Outcomes of the Individual Patient)
  - Risk of patient to # of preventative procedures
  - DFS data comparison: track individual pt progress
  - Perio risk comparison: track individual pt progress

- PATIENT INDICATORS (Risk Management Outcomes)
  - Teeth with one surface restorations tx planned- to look at over treatment
  - Redo of restorations
  - Pt who have had periodontal charting
  - Percent of posterior RCTed teeth that have had crowns within 3 months
  - Pulp tx or RCT following SSCs or permanent crowns (need time period)
Four Areas That Can Be Tracked by Quality Indicators

PROGRAM INDICATORS- (Quality of Care)
- sealants
- fluoride tx
- risk classification by dentist
- DMFS
- Tx plan completion:

PROGRAM INDICATORS- (Operational Efficiencies- MU)
- access metrics
- recall metric: # of recall exams/ # of Initial exams + # of recall exams provided 6 months previously
- encounters
- Production
- new patients: children/ adults
- MU indicators
The results from subgroup analysis show that sealing children at high risk for caries appears to be highly cost effective. In contrast, sealing children at low risk for caries would be much less cost effective. Sealing the FPMs of infrequent utilizers of preventive care appears to be more cost effective than frequent utilizers of preventive care.
WACMHC data

Combined State total for practices reporting Q4, 2009 – Q3, 2011
YVFWC Data: Dental Sealants

TOTAL SEALANT RATE BY AGE GROUP FOR ALL DENTAL SERVICE

- 6-21YRS
- 0-5YRS

Graph showing the total sealant rate by age group for all dental services from September 2011 to August 2012.
Sealants vs Occlusal Restorations

- Pediatric dentists: .81
- General dentists: .43
- Range in general dentist group: .001 to .68
- Clinic patterns
- Questions to ask to determine aggravating and mitigating factors
Radiographs/ exams

- Average ratio: 1.35
- Range: .65 to 1.88
- Clinic patterns: very evident
  - Clinic A: .93, .92, .94
  - Clinic B: 1.50, 1.60,
  - Clinic C: 1.26, 1.29
  - Clinic D: 1.50, 1.55
Recall Percent

- Clinic A 1.08
- Clinic B 1.03
- Clinic C 1.03
- Clinic D 1.02
- Clinic E 0.94
- Clinic F 0.84
- Clinic G 0.83
- Clinic H 0.77
- Clinic I 0.64
Diagnosis Trends Utilizing Data Ratios:

- Under diagnosis
- Overtreatment
- Preventative Practice vs Drill & Fill
Dentist Diagnosis Profiler (In Development)
Missed Opportunity Reports

- Periodontal charting
Reporting Out the Data

- Create Dashboards
- Increases provider buy-in
- Sets parameters
- Plan- Do- Study- Act
- Change up the Indicators

Sets up a culture of transparency to foster personal growth and quality improvement
## DENTAL QA QUALITY CHART REVIEW SUMMARY

**2012 Quarter 2 (Apr - Jun)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
<td>20</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90</td>
<td>10</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90</td>
<td>10</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90</td>
<td>10</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**Identifiers:**
- 06028L0997
- 16448H1111
- 25598L0505
- 2870FK0707
- 3432BJ1108
- 3645FW0509
- 4916BN0112
- 4923BP0806
- 4946FS0810
- 5876BC0501
- 6341BW0504
- 7295BR1107
- 7411FS0709
- 7501BD1111
- 7641FS0610
- 8394BM0210
- 8804BM300
- 9509BM0706
- 9541FF0810
- 9795FW0111
- R0101
- R0122
- R0302
- R0312
- R0315
- R0410
- R1303
- R1804
Dash Boards: Graphic Displays of the Data

- % Overtime: Jul 2012
- Enc/Dent Assist Hr: Jul 2012
- Dental Encounters: Jul 2012

% No Show
- DUs Per Encounter
- Dental Units Per FTE
Collecting and Reporting on Data Without Acting on the Data is a Useless Exercise
Indicators Can Help You Develop the Direction You Want Your Program To Go In and Then Steer It That Way