IMPLICATIONS OF EVIDENCE BASED DENTISTRY FOR MEDICAID AND SCHIP

MAX ANDERSON, DDS, MS, MEd
WHERE ARE WE GOING?

HOW DO WE LEVERAGE EVIDENCE BASED DENTISTRY TO IMPROVE ORAL HEALTH?
WHERE ARE WE GOING?

- EVIDENCE BASED MODELS
- DEFINE TREATED POPULATIONS
- BEST CURRENT EVIDENCE
  - HEALTH OUTCOMES
  - COST TO BENEFIT
- CONCLUSIONS
EVIDENCE BASED APPROACHES

EVIDENCE BASED GUIDELINES
POLICIES

EVIDENCE BASED DECISION MAKING
EVIDENCE BASED CARE

ADA DEFINITION

“...an approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.”
EVIDENCE BASED APPROACHES

EVIDENCE BASED GUIDELINES

EVIDENCE BASED POLICIES

EVIDENCE BASED DECISION MAKING
EVIDENCE BASED GUIDELINES

- EXPLICIT PROCESS (GUIDELINES FOR GUIDELINES)
  - QUESTION FORMULATION (PICO)
  - INCLUSION EXCLUSION CRITERIA
  - QUALITY ASSESSMENT
  - HETEROGENEITY OF DATA
- BALANCE HARMs AND BENEFITS
- COST TO BENEFIT – COMPARED
- RECOMMENDATION PRACTICAL
- POPULATION/GROUP BASED
“Evidence based dentistry is a set of principles and methods intended to insure to the greatest extent possible, clinical decisions, guidelines and other types of policies are based on and consistent with good evidence of effectiveness and benefit.”

DAVID M EDDY, HEALTH AFFAIRS 24:9-17, 2005
WHERE ARE WE GOING?

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  - HEALTH OUTCOMES
  - COST TO BENEFIT
- CONCLUSIONS
SCHIP & MEDICAID CONDITIONS

- AGES 0-20
- HIGH TURN-OVER – IMPLIES
  - FAST ROI AND
  - LOW MAINTENANCE / HARMs
- PREGNANT WOMAN COVERAGE
WHERE ARE WE GOING?

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GOALS

- IDENTIFY BEST EVIDENCE BASED SERVICES FOR FINITE BUDGETS IN THESE POPULATIONS
- COMPARE CARE DELIVERY MODELS; NON-DENTAL; COMMUNITY BASED PREVENTION; SCHOOL BASED
0-20 YRS OLD - TURNOVER

CORE STRATEGIES

- SEALANTS
- FLUORIDE
- XYLITOL
EVIDENCE BASIS FOR SEALANTS


- META ANALYSIS - 24 STUDIES
- CARIES REDUCTION AVE. = 71.36%
- CONCLUSIONS - FISSURE SEALANTS ARE EFFECTIVE IN PREVENTING DENTAL CARIES
CARIES REDUCTION

BRAVO ET AL.

- Sealant: -68, -87
- Varnish: -38, -66

Legend:
- SMOOTH
- PITS
DELTA DENTAL STUDY (DAC)

- 239,443 CHILDREN WITH SEALANTS
- 272,872 CHILDREN WITHOUT SEALANTS
- 85% REDUCTION IN ALL CARIES IN SEALED GROUP
- SEALING UNSEALED WOULD SAVE $31M OVER 4 YEARS
DURPHAT CARIES REDUCTION

AFTER TEWARI ET AL.

% CARIES REDUCTION

-80 -70 -60 -50 -40 -30 -20 -10 0

NaF

-22

-32

APF

-34

-36

Duraphat

-73

-76

Original  New Eruption
XYLITOL EFFECTS


PACIFIER STUDY IN ONE YEAR OLD CHILDREN

- REDUCED MUTANS STREP. INFECTION BY 16%
- REDUCED CARIES TO ZERO IN TEST GROUP ($p<0.001$)
- REDUCED OTITIS MEDIA BY 19% - 38%
XYLITOL

1,227 10 - 12 year olds with supervised gum chewing for a 28-month period

REMINERALIZATION
28 MONTH MEAN DMFS SCORES

- **Control**: 2.9
- **Sucrose**: 3.3
- **Sorbitol**: 1.3
- **Xylitol**: -1.6
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SCHIP & MEDICAID CONDITIONS

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MATERNAL CONSUMPTION

169 MOTHER-CHILD PAIRS - TWO YEAR STUDY
JDR 79:1885-9, 2000

PERCENT

- XYLITOL
- CHX
- FLUORIDE

MS DETECTED

48.5

45 40 35 30 25 20 15 10 5 0

9.7

28.6
MATERNAL CONSUMPTION

169 MOTHER-CHILD PAIRS – AT 6 YEARS
Caries Research, 2001 35: p. 173-177

PERCENT

MS DETECTED

XYLITOL: 51.6%
CHX: 83.9%
FLUORIDE: 86.4%
WHERE ARE WE GOING?

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NEED CASH
FOR ALCOHOL
RESEARCH