Moving Forward in Research, Practice and Policy to Implement Promising ECC Strategies

Based upon
Concluding Paper of
Proceedings of ECC Conference
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Next Steps -- Research

- Since 1997, substantial research to better understand ECC disease process, risk factors and management.
- Many of these trials regarding management of ECC have shown equivocal results.
- Knowledge gaps in microbiological interventions, remineralizing approaches, & restorative care.
- Studies are needed regarding efficacy of sealants, interim therapeutic restorations, & silver fluoride in primary teeth.
- There needs to be more effectiveness studies of treatment with chronic disease management approached

Issues with Conducting Intervention Studies of ECC

- Children under age three are difficult to recruit
- Longitudinal studies have high drop-out rates
- Difficulty complying with interventions
- IRBs require that children with caries be referred for care
- Untreated control groups unacceptable
- Large sample size is needed to achieve significance

Next Steps – Clinical Guidelines

- Clinical guidelines have the potential to standardize decision making for appropriate levels of preventive and restorative care
- Clinical guidelines should be based on caries risk, as well as literature and best judgment of expert panels
- Protocols for medical management have demonstrated better and more cost effective outcomes.
- Clinical management guidelines have not been widely adopted in dentistry

Next Steps -- Policy

- The cost of treating ECC is enormous
- Payment models in dentistry have been slow to adapt to advances in science
- Dental providers usually only get paid for clinical procedures, not for talking with patients and listening to them -- required for motivational interviewing and effective patient/caregiver education
- In the medical arena, there are successes with adopting evidence-based practice with financial rewards

Next Steps -- Policy

- Oral health policies need to be more evidence-based
- Alignment of financial reward with outcomes has challenges associated with measuring quality & avoiding high-risk patients.
- Barriers to changing the payment system include:
  - Purchasers of insurance programs
  - Providers
  - Patients

  all of whom may base their health care beliefs and desires on factors OTHER than current evidence.

Example of a Caries Protocol for a 0-2 Year-Old

	Diagnostic	Fluoride	Sealants	Diet Counseling	Restorative
Low Risk	--Recall every year --Baseline MS	--Twice daily brushing with F toothpaste	NA	Yes	Surveillance
Moderate Risk parent engaged	--Recall every six mo. -- Baseline MS	--Twice daily brushing with F toothpaste --Fluoride supplements* -- Prof. topical F every 6 mo.	NA	Yes	Active surveillance **
Moderate Risk parent not engaged	--Recall every six mo. --Baseline MS	--Twice daily brushing with F toothpaste --Prof. topical F every 6 mo.	NA	Limit expectations	Active surveillance
High Risk parent engaged	--Recall every three mo. -- Baseline & followup MS	--Twice daily brushing with F toothpaste --Fluoride supplements* --Prof. topical F every 3 mo.	NA	Yes	--Active surveillance -- Restore cavitated lesions in posterior with ITR
High Risk parent not engaged	--Recall every three mo. --Baseline & followup MS	--Twice daily brushing with F toothpaste --Prof. topical F every 3 mo.	NA	Limit expectations	--Active surveillance -- Restore cavitated lesions in posterior with ITR

* Need to consider fluoride levels in drinking water

Example of a Caries Protocol for a 3-5 Year-Old

	Diagnostic	Fluoride	Sealants	Diet Counseling	Restorative
Low Risk	--Recall every year --Radiographs every two years --Baseline MS	--Twice daily brushing with F	No	No	Surveillance
Moderate Risk parent engaged	--Recall every six mo. --Radiographs yearly -- Baseline MS	--Twice daily brushing with F --Fluoride supplements* --Prof. topical F every 6 mo.	Yes	Yes	Active surveillance of incipient lesions
Moderate Risk parent not engaged	--Recall every six mo. --Radiographs yearly --Baseline MS	--Twice daily brushing with F --Prof. topical F every 6 mo.	Yes	Limit expectations	--Active surveillance --restore cavitated or enlarging lesions
High Risk parent engaged	--Recall every three mo. --Radiographs , six mo. --Baseline & followup MS	--Brushing with high potency F gel (with caution) --Fluoride supplements* --Prof. topical F every 3 mo.	Yes	Yes	--Active surveillance --restore cavitated or enlarging lesions
High Risk parent not engaged	--Recall every three mo. --Radiographs, six mo. --Baseline & followup MS	--Brushing with high potency F gel (with caution) --Prof. topical F every 3 mo.	Yes	Limit expectations	Restore, incipient, cavitated or enlarging lesions

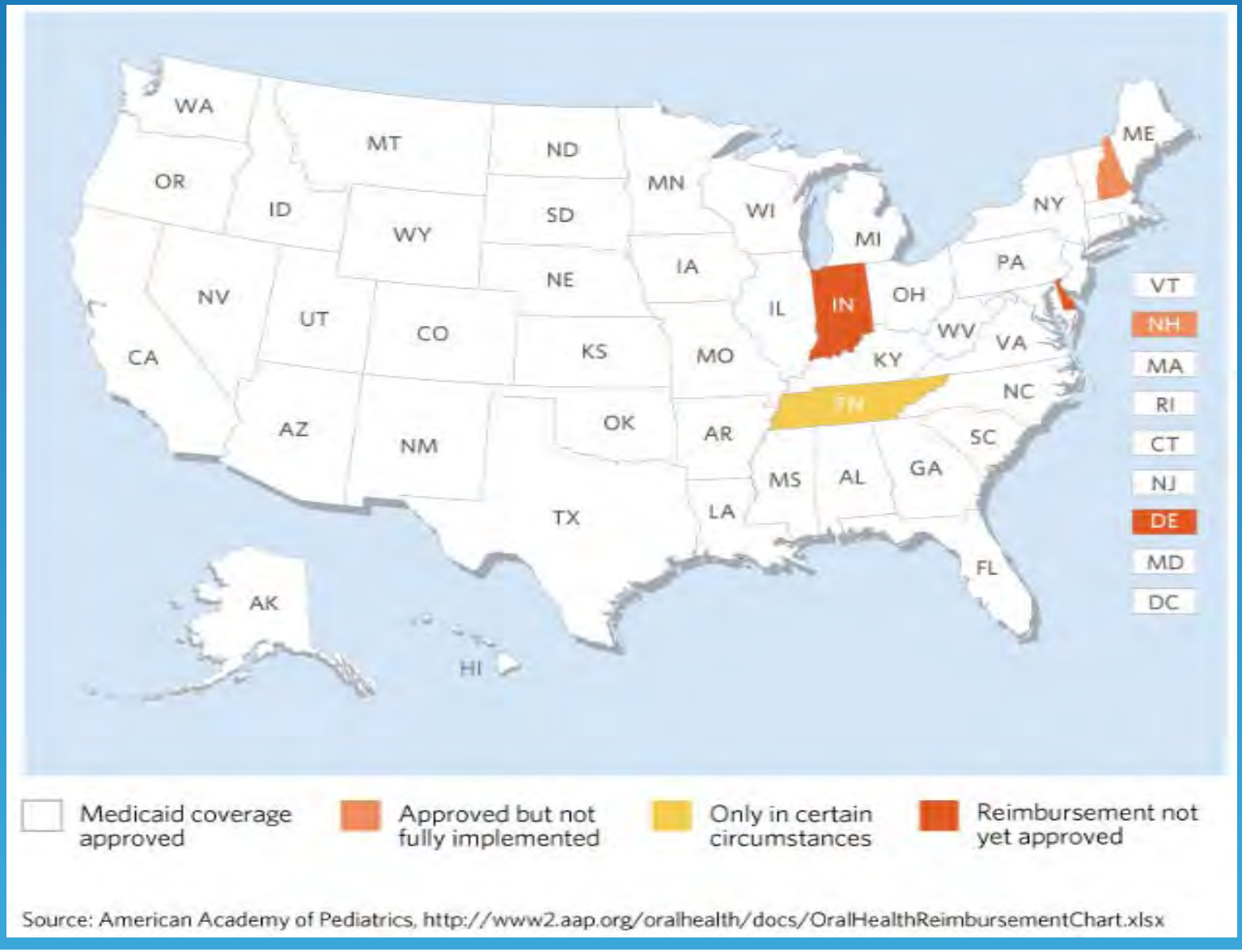
* Need to consider fluoride levels in drinking water

Why Physicians and Oral Health?

There have been some success with inter-professional care for ECC:

- Children typically see a medical provider 7 times between ages 9 months & 3 years.
- Counseling caregivers about dietary practices & other routines that promote safe child development are integral to each of these visits.
- Most children still do NOT see a dentist before age 3.

States with Medicaid funding for physician oral health screening & fluoride varnish



Source: American Academy of Pediatrics, http://www2.aap.org/oralhealth/docs/OralHealthReimbursementChart.xlsx

Challenges for Physicians & Oral Health

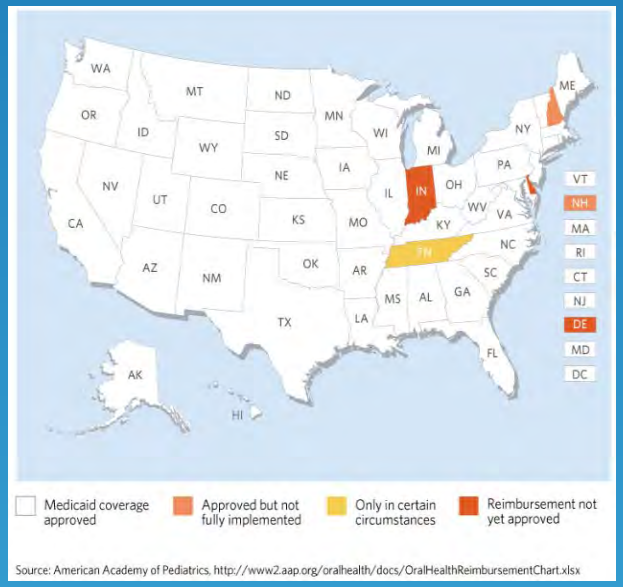
- Early childhood caries has been significantly under-addressed by dentists.
- Similarly, until recently ECC and OH was also under-addressed in the training of physicians.
- 35% of pediatricians receive no oral health training in medical school.*
- Of those with training, 75% had <3 hours of instruction.*
- Most physicians haven't been taught how to integrate OH into routine counseling about dietary practices and safe development.

*AAP, 2007

North Carolina's Experience

- Since 2000, NC Medicaid has reimbursed physician-based (Primary Care Provider) preventive oral health services.
- PCP preventive services have expanded the geographic availability of preventive oral health services.
- PCP provide triage where dental workforce is limited to assure successful referral of high risk kids.
- Preventive OH service provide by PCPs may lead to greater reduction in caries-related treatment $ than dental visits alone

Effective Policy Change Requires Significant Practice Change, and Vice Versa



These policy changes were necessary. Were they sufficient?

Next Steps?

- We need research to fill gaps in knowledge of clinical preventive interventions.
- We need strong efforts (like in North Carolina) to help medical providers integrate OH into their practices for 0-3 year olds.
- We also need efforts (like ABCD program in Washington) to increase # of dentists accepting referrals from medical providers.
- We need to confirm and refine the Chronic Disease Management approach, so that more dental practices can understand and use it.

Is There a Role for You?

We need to encourage science-based policies to support promising strategies, which may yield better quality of care and improved outcomes for ECC at lower cost (the “Triple Aim”).

EACH of us needs to become current with findings reported at the Maryland ECC Conference and apply them through OUR personal opportunities to shape clinical practice and health policy.

Breakthrough Strategies for Preventing Early Childhood Caries

2015 NOHC, April 29, 2015

Presenters: Jane Koppelman, Norman Tinanoff, Man Wai Ng, Bill Maas

Resources

American Academy of Pediatric Dentistry. Guideline on Caries-risk Assessment and Management for Infants, Children, and Adolescents. Available at: http://www.aapd.org/policies.

DentaQuest Institute. Early Childhood Caries (ECC) Collaborative. Available at https://www.dentaquestinstitute.org/learn/quality-improvement-initiatives/early-childhood-caries-ecc-collaborative.

Ng M, Ramos Gomez F, Lieberman M, et al. Disease management of Early Childhood Caries: ECC collaborative project. Int J Dent 2014 doi:10.1155/2014/327801

Tinanoff N. Proceedings of the Symposium, “Innovations in the Prevention and Management of Early Childhood Caries”. Pediatric Dentistry (May/June 2015)

Tinanoff N and Tillis T. Early Childhood Caries Resource Center, Elsevier Publishing. http://earlychildhoodcariesresourcecenter.elsevier.com/