The Warm Springs Model: A Non-Operative Approach to Children With Caries

JOSEPH CHURCHILL, DDS
CARL T. CURTIS HEALTH EDUCATION CENTER
MACY, NE
Efforts to Control Caries in Young Children

- Serving the Omaha Tribe since 2012
  - Small (solo dentist) practice serving a population of about 5,000 people
- Participation in the ECC Initiative
- Collaboration with Head Start, WIC, Clinic
  - Not using a bottle after year one, Sleeping without bottle
  - Fluoride varnish at well child visits
  - Nutritional counseling
  - Encouraging visits to dental clinic as soon as the 1st tooth erupts
- Dental Clinic Services
  - Prevention – OHI, fluoride varnish, sealants, xylitol products
  - Treatment – ITRs, restorations, SSCs
Efforts to Control Caries in Young Children

- Yet still, many children with dental caries...
  - At least 1 referral to pediatric dentist each month since starting in January 2012 (average of 5.6 referrals a month from August 2012 to July 2015)
  - Many more children identified in Head Start screenings, but no follow-up

- Patterns of caries
  - If child is 1-3 years old, caries is often seen on all erupted teeth except mandibular anterior teeth
  - If caries is experienced in primary teeth, very common for permanent dentition to be affected
Learning about silver nitrate and the Warm Springs model

- Wehnona Stabler, MPH, CEO (February 2015)
- Mike Kanellis (March 2015)
- Visit to Warm Springs (June 2015)
  - Presentation to tribal council for approval
  - Presentation to Head Start staff and families
- Implementation of protocol (August 2015)
  - Primary prevention strategies continue to be utilized...
  - When prevention fails we discuss silver nitrate option to treat caries
Warm Springs Model Protocol

- Parents contact us to begin treatment with silver nitrate
  - Written informed consent attained
  - Treatment Protocol:
    - SN/NaF varnish to applied caries at 0 – 2 – 4 – 8 – 12 weeks
    - Follow-up exams at 3 – 6 – 9 – 12 months (with regular 6 month exam/cleanings afterward)
- Treatment and exam outcomes are kept track of in the BTTF database
  - Allows us to collect standardized data that we can share with the tribe and DOH on the level of safety and efficacy
  - Allows us to keep track of when patients are due for treatment and exams
Warm Springs Model Protocol Experience

- Have been using the Warm Springs model for a little over 1 year (started in July 2015)
- Primarily offered as an option for children 12-72 months old
  - Also used on a few nursing home patients with recurrent caries
- We have treated a total of 23 children
  - 3 month follow-up exams on 11 children
  - 6 month follow-up exams on 7 children
  - 1 year follow-up exams on 2 children
- Variability with treatment...
  - Patient cooperation (age / child demeanor / past dental experience)
  - Type of 5% NaF varnish used
- Some difficulty with follow-up
  - BTTF database is a very helpful organizational tool, but even so...
Warm Springs Model Protocol Experience

Overall Impressions

- For the most part patients and families have been very happy to have the option available. And word is spreading.
  - Some concern about appearance of arrested caries on anterior teeth
- Highly effective at arresting caries
- Less referrals to the specialist for treatment under GA
  - Average of 4.4 referrals per month from August 2015 to present (down from 5.6 from July 2012-2015)
- No complications or adverse effects
Warm Springs Model Protocol Experience

The Good

- Many children are excited to come in to “get my teeth painted”
- Parents are relieved to not have to make the trip to Omaha for surgery
  - Especially parents who have experienced this for other children
- The appointments are typically very short (win for everybody)
Warm Springs Model Protocol Experience

The bad

- Some children can still be very uncooperative (difficult to get isolation for treatment)
- We have had 3 children leave the protocol:
  - Mom requested referral after color change of arrested caries on anterior teeth
  - Grandpa requested referral after one treatment... no explanation given.
  - One child with very aggressive caries completed the protocol 3 times.
Overall Services to Children in the Warm Springs Model Project

- 0 amalgam restorations
- 1 child had a glass ionomer restoration
  - 0 were cosmetic
  - 1 was functional (food trap)
  - 0 were because of progressive caries
- 1 child had composite restorations
  - Cosmetic for #D-G per parent request
- More restorations indicated, but procedures have not been completed yet
Overall Services to Children in the Warm Springs Model Project

- 26 children enrolled in the project
- 0 extractions for pathology
- 3 children dropped out of the protocol
- 1 child in protocol required restorations and extractions under general anesthesia for progressive caries
Who is still requiring treatment under general anesthesia?

- Too late (dental caries within the first 2 years, common not to seek care until there is pain)
- Parents choice even after considering silver nitrate option
- Children who have dropped out of the protocol (2 due to esthetics, 1 due to progressive caries leading to abscess)
How do we reach children early enough?

- Working with Well Child visits in clinic
- Working with prenatal educators
- Letters to new mothers
- Getting the word out into the community
- Screenings: head start, public schools
Conclusions

- Overall has been a valuable treatment option to offer
- Less referrals, less need for traditional restorative procedures = happier visits to the dentist
- Seeing “collateral benefit” on nearby teeth
- Child, family, community, and staff acceptance has been excellent
Thank you

Wibthathaan (Umóňhoňn)