Clinical Effectiveness of Glass Ionomer Sealants in the Primary Dentition of American Indian Children

JOHN ZIMMER, DDS
IHS PEDIATRIC DENTIST
SISSETON, SD
What Does the Literature Say?

- **GIS**: Simonsen, Beiruti, Frencken, Poulsen
  - Two published reports and one on-going clinical trial with GIS on primary molars.

- **IHS**: No systematic review for outcome
Observation Bias

2010 Basic Screening Survey: 57% of our 3-5 y/o children had decay
Internal Audit of My Patients

- User population of about 900 children between age 1.5 - 6.5 y/o
- 183 children received follow-up exams after the placement of GIS
- 1,282 GIS placed on primary molars of the 183 children
- Selection criteria: Fully visible molars without cavitated lesions.
- Age: Mean of 3.8 y/o, Range of 1.5 - 6.7 y/o
- Follow up: Mean of 298 days; Range of 5 - 1,257 days
Results

- 57% retention rate at the first follow-up visit

- 75% did not have molar decay at the first follow-up visit.
Results

- Of the children that retained all of their sealants, 7 percent had decay at follow-up.

- Of the children that retained 75-100% of their sealants, 15 percent had decay at follow-up.
Comparison with 2010 BSS

- 65% of 3-5 y/o AI/AN had molar decay.
- **Sisseton**: 57% 3-5 y/o had molar decay.
- **Sisseton**: 3-5 y/o with GIS 30% of children at follow-up had decay.
My Opinion vs Fact

- Was the technique incorporated 2010-2014? Why?
- Degree of benefit?
- Does GIS delay GA-ECC?