

Community Water Fluoridation

New Mexico Legislative Health and Human Services Committee

September 5, 2013

Las Cruces, New Mexico

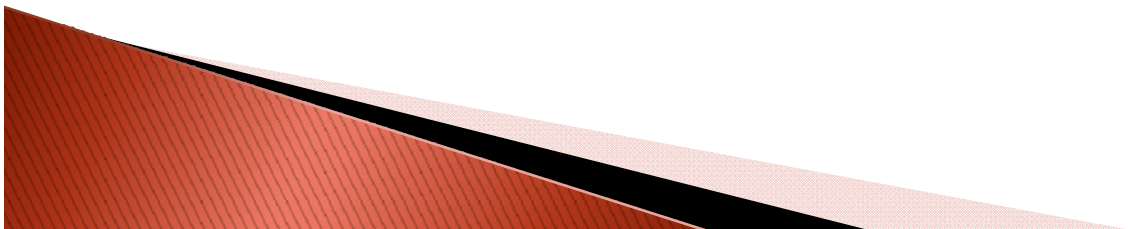


Public Health Division
Health Systems Bureau
Office of Oral Health
Rudy Blea, Program Director

rudy.blea@state.nm.us

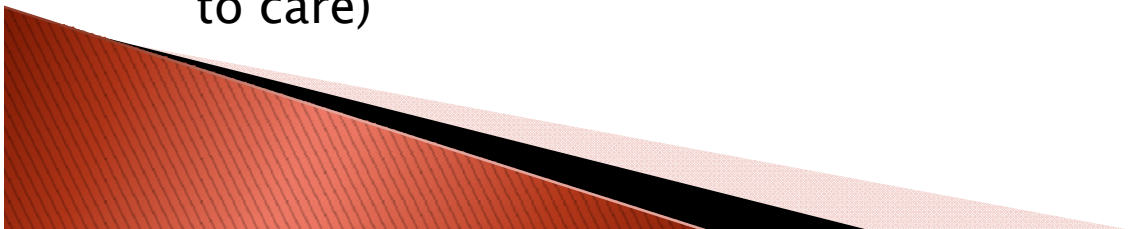
What is Oral Disease?

- **Tooth decay (cavities)** : a demineralization of the tooth enamel – a common, preventable problem for people of all ages
- **Periodontal (gum) disease**: an infection caused by bacteria that gets under gum tissue, destroying gums and bone
- **Oral Cancer**: a subtype of head and neck cancer, is any cancerous tissue growth located in the oral cavity
- **Other Diseases**: Gingivitis, Temporomandibular joint dysfunction and muscle disorders (TMJ) and, etc.



Oral Diseases Continued...

- ▶ For children, untreated cavities can cause pain, dysfunction, school absences, difficulty concentrating, and poor appearance—problems that greatly affect a child's quality of life and ability to succeed
- ▶ Many children and adults still go without simple measures that have been proven to be effective in preventing oral diseases and reducing dental care costs, i. e. water fluoridation
- ▶ Recent studies link oral infections with diabetes, heart disease, stroke, and premature and low-weight births
- ▶ Tooth decay is also a problem for many adults; individuals from some racial and ethnic groups young and old (experience more untreated decay due to socio economic status and/or lack of access to care)



Oral Disease Impact

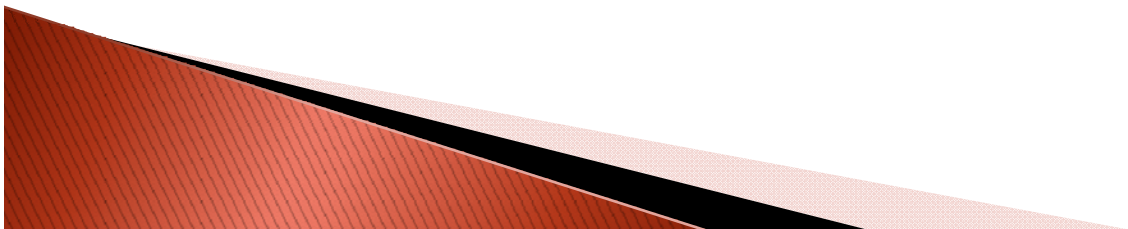
- ▶ Tooth decay is the most common chronic childhood disease in America, affecting 50 percent of first graders and 80 percent of 17 year olds
- ▶ Over 51 million school hours are lost each year due to dental related problems. Untreated tooth decay and disease can affect a child health, well being, growth, and achievement
- ▶ Children with serious oral disease health problems can have difficulty eating, sleeping, and concentrating in school
- ▶ Children with serious oral disease will a communication and social issues with p

United Surgeon General Report: Oral Health In



Social Determinants and Barriers

- Socioeconomic position
- Race and Ethnicity
- Social Networks and Social Support
- Work Conditions
- Travel Time
- Rural New Mexico
- Few Medicaid Dentists



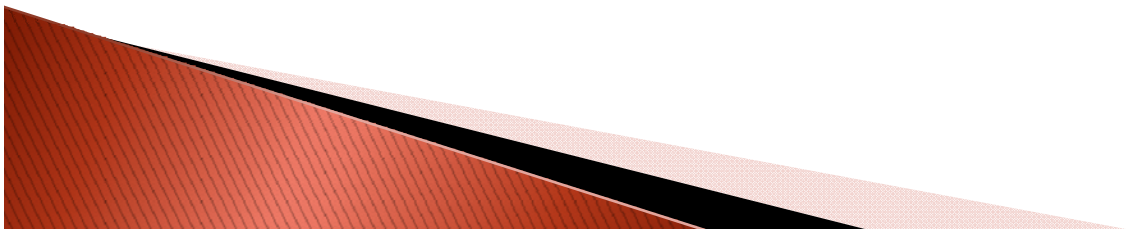
Good Oral Health Habits

- ▶ Drink plenty of Fluoridated Water
 - ▶ Brush twice a day
 - ▶ Eat Healthy Foods
 - ▶ Consume less sugar
 - ▶ Visit a dentist twice a year
- ▶ Use mouth guards when playing sports



What is Community Water Fluoridation?

- ▶ Community water fluoridation is the adjustment of the natural fluoride level in public water systems to an optimal level to prevent tooth decay
 - The U.S. Department of Health and Human Services and the Environmental Protection Agency
- Fluoride levels are adjusted in the public water supply (tap water) by a water engineer
- ▶ Nearly all naturally occurring water sources contain fluoride—a mineral that has been proven to prevent and reverse tooth decay



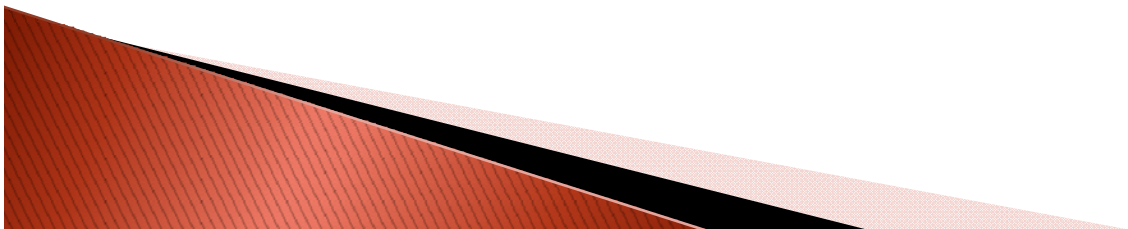
Why Community Water Fluoridation?

- ▶ Fluoride when present in the mouth can become concentrated in plaque and saliva, which helps prevent the breakdown of tooth enamel
- ▶ Studies have found that in communities with more than 20,000 residents, every \$1 invested in community water fluoridation yields about \$38 person in savings each year from fewer cavities treated



Benefits of Fluoridation

- ▶ Community access to fluoridated water
- ▶ Safe and effective and benefits everyone
- ▶ Cost effective (inexpensive way to get fluoride)
- ▶ Tooth decay is preventable in conjunction with other oral health preventive measures
- ▶ Reduced emergency room visits
- ▶ Personal oral health awareness increases



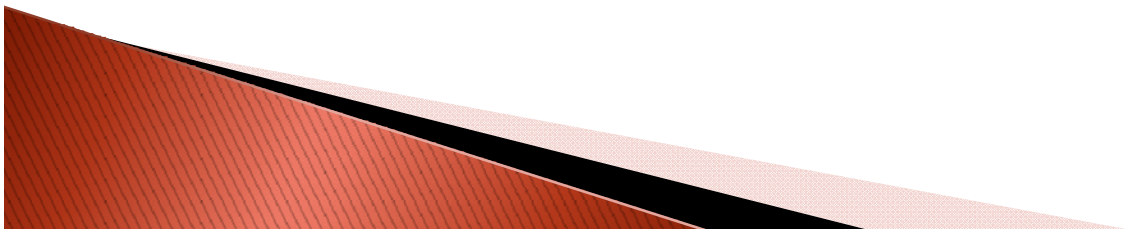
History of Fluoridation

- ▶ In the 1930s, dental scientists documented that the occurrence and severity of tooth decay was lower among people whose water supplies contained higher levels of natural fluoride.
- ▶ Grand Rapids Michigan began water fluoridation in 1945
- ▶ US Public Health Services establishes Community Water Fluoridation policy 1951
- ▶ 2013 Centers for Disease Control and Prevention report Fluoridation used by 204 million people in the United States and approximately 100 million do not have access
- ▶ 2000 US Surgeon General Report: Oral Health in America
 - Declares Community Water Fluoridation as one of the ten great public health achievements of the 20th century



History Continued...

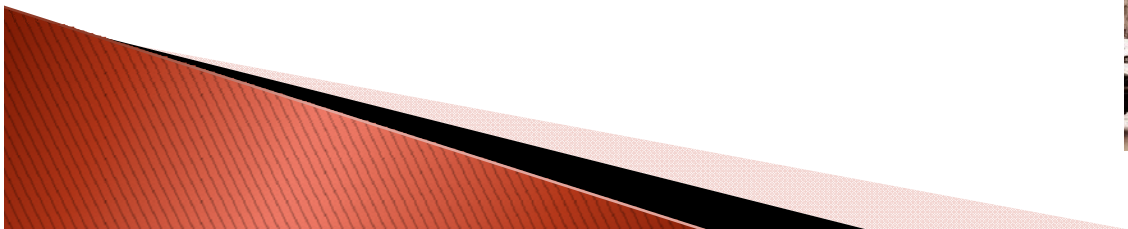
- ▶ Community Water Fluoridation Policy adopted by Center for Disease and Prevention 1951
- ▶ 2013 Policy continues by the Center for Disease Control and Prevention
- ▶ Policy adapted by the Association of State and Territorial Dental Director, American Dental Association, and the American Pediatric Association
- ▶ Policy adopted by the American Medical Association



Fluoridated Communities

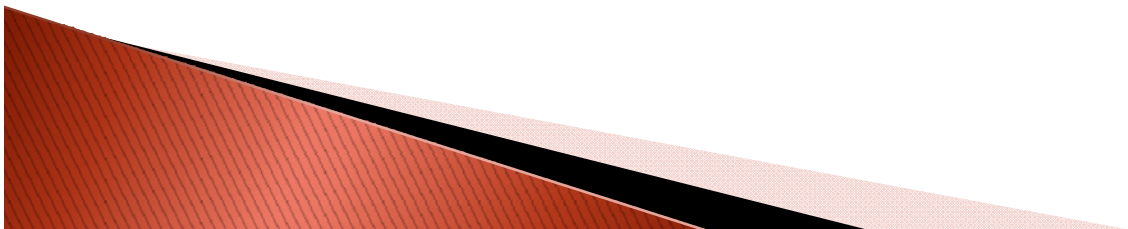
Over 50 of the largest cities in the US provide fluoridated water

- City and County of Los Angeles California
- City and County of San Diego, California
- Sacramento, California
- Houston, Texas
- Denver, Colorado
- Tucson, Arizona
- Mesa, Arizona
- Colorado Springs, Colorado



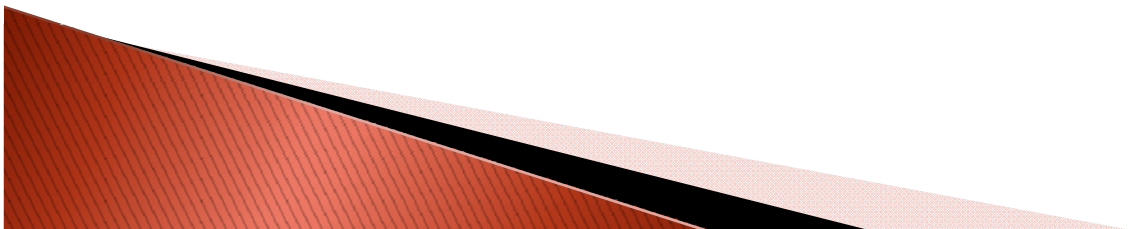
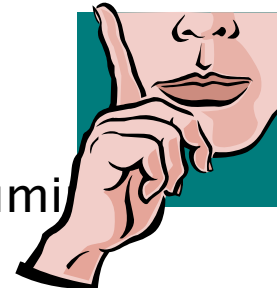
Community Water Fluoridation Safety

- ▶ 2012 Updated Federal Recommendation of 0.7 Parts Per Million (PPM)
- ▶ Local water systems monitor the levels of fluoride and report their findings to the Center for Disease Control and Prevention
- ▶ Studies have shown the efficacy of fluoride reduces the incidence of tooth decay
- ▶ Studies have identified a non-medical side affect to the over exposure to fluoride, which is Flurosis
 - causes a visible white spot on a tooth and occurs during the formative years



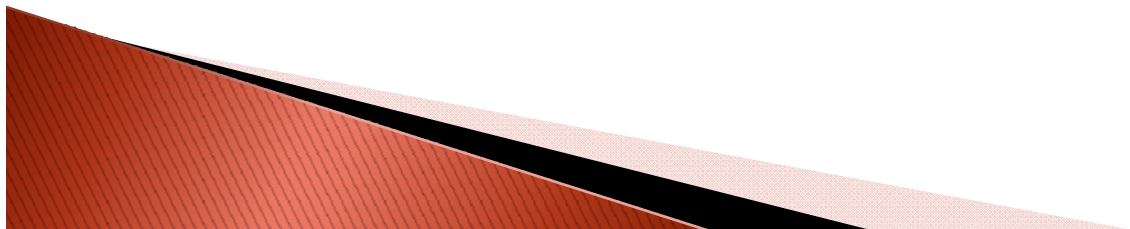
Community Water Fluoridation Misconceptions

- ▶ Fluoride is a medication
- ▶ All citizens are aware of the importance of consuming fluoridated water from the tap
- ▶ All citizens know that their water contains fluoride
- ▶ Oral health care is not as important as medical care
- ▶ All bottled water contains fluoride



New Mexico Community Water Fluoridation

- **New Mexico Legislature introduces House Joint Memorial 7**
Memorial directs the New Mexico Department of Health and Department of Environment to prepare a report to fluoridate
- **Current New Mexico Fluoridation**
 - City of Albuquerque, Albuquerque Water Authority partial compliance
 - City of Santa Fe continues to receive fluoridated water
 - 2013 city proposed cessation of fluoridation – advocated by fluoride opponents
 - 2013 Santa Fe Oral Health Coalition overturned the proposal
 - City of Farmington continues fluoridation
 - City of Raton continues fluoridation



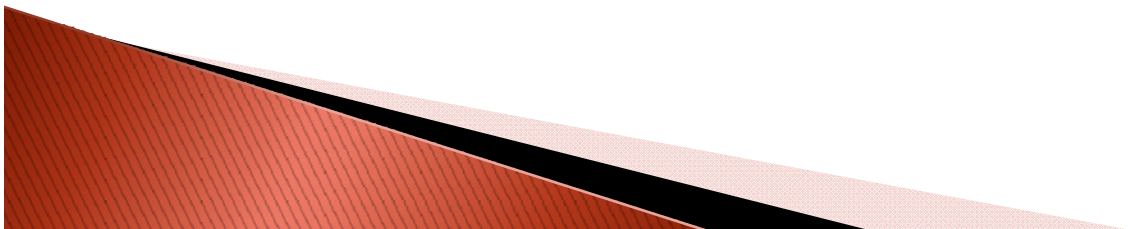
Community Water Fluoridation Impact on New Mexico

DATA TO BE ENTERED

- ▶ Emergency room visits (ER)
 - Uninsured individuals will go to the local ER
 - ER costs are high and covered by indigent care
 - 2010 11,686 ER Visits 2011 10,961 ER Visits

- ▶ Extensive oral disease
 - Individuals without follow-up by a dentist will experience other forms of oral disease and will need additional emergency care

- ▶ Medicaid costs increase
 - Preventive measures can reduce Medicaid costs (child/adult)



Oral Health Status of New Mexicans

Behavioral Risk Factor Surveillance Survey (BRFSS) found:

- In 2010 66.9% adults visited a dentist
- In 2010 65.4% adults reported having their teeth cleaned
- In 2012 40.0% adults reported having six or more teeth extracted

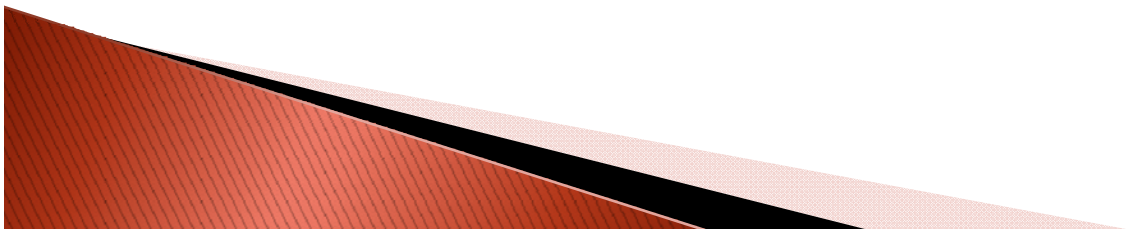
2000 New Mexico Oral Health Survey found:

- 43.2% 2nd and 3rd graders had one or more permanent molar sealed
- 64.6% 2nd and 3rd graders experienced dental caries
- 37.0% 2nd and 3rd graders experienced *untreated* decay

Cancer Registry

- 2003 oral health surveillance data reveals that the proportion of oral or pharyngeal cancers detected at the earliest stage was 50%

30% of NM population served by public water systems received fluoridation according to the 2006 NM Oral Health Surveillance Survey, however, only 18% received optimum levels [NM State of Health, 2009]



Factors Affecting Oral Health in New Mexico



2010 New Mexico population 2,059,180

Metro Cities: Albuquerque, Las Cruces, Santa Fe, Farmington
1,370,526 Metro residents 688,655 Non-Metro Residents

2010 21% of New Mexicans did not have health insurance

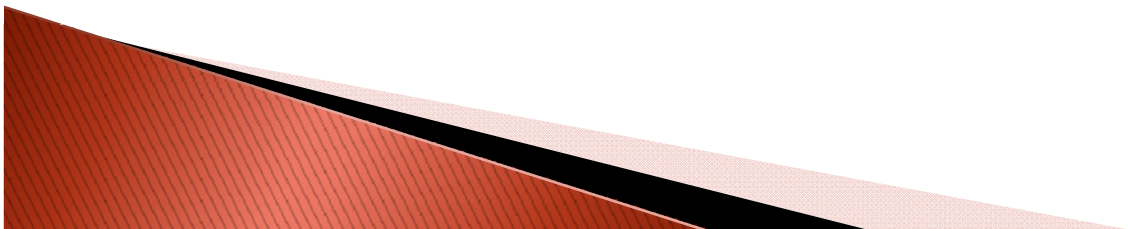
Largest number of uninsured are those aged 30 – 49

2011 28% of children live in poor families.

2013 6% Unemployment rate

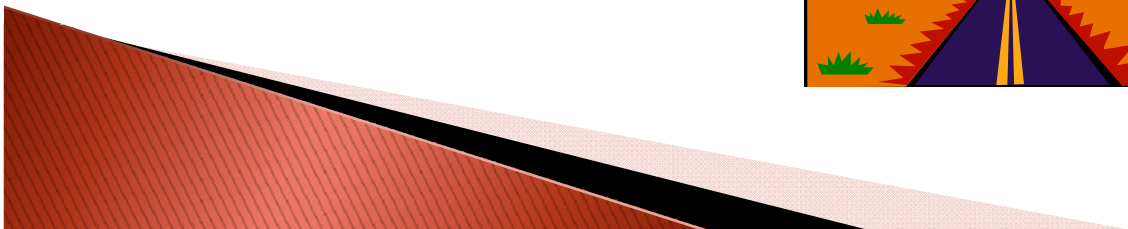
2011 Per capital income in the past twelve month \$23,537

US Average \$27,915



General New Mexico Information

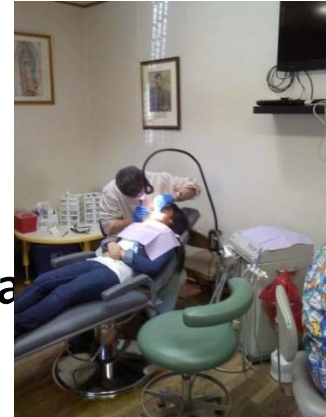
- ▶ 30 out of 33 counties in New Mexico are considered Health Professional Shortage Areas (HPSAs)
- ▶ 26 are considered dental HPSA
- ▶ Harding and Quay counties do not have dentists



Factors Continued...

Fiscal Year 2013

Services Provide by Department of Health, Office of Oral Health
Oral Health Services Provided to New Mexico Residents



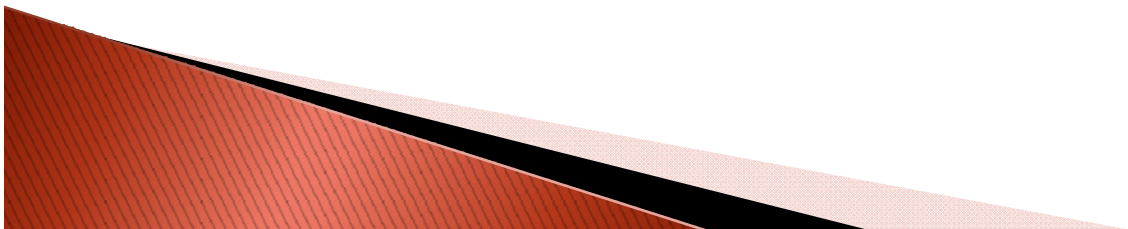
12,369 New Mexico Residents

7,194 uninsured adults received preventive and treatment services

5,175 uninsured/insured children received preventive/treatment services

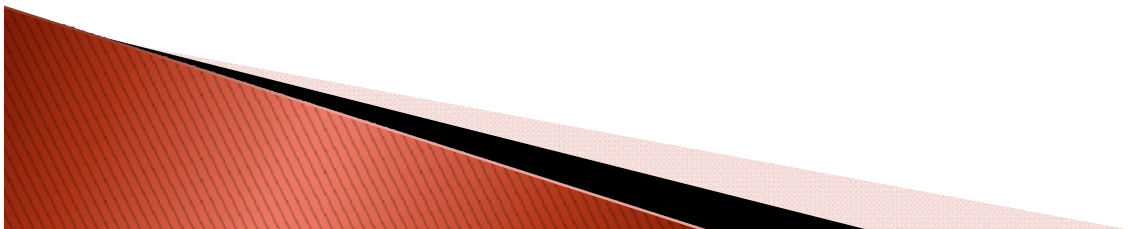
Preventive Services: application of fluoride varnish or dental sealants

Treatment Services: various dental procedures, i.e. extractions, fillings



Supportive Organizations and Resources

- ▶ **Government Agencies**
- ▶ National Cancer Institute's [Fluoridated Water: Questions and Answers](#)
- ▶ National Institute of Dental and Craniofacial Research's [Water Fluoridation](#)
- ▶ **Non-Governmental Organizations and International Agencies**
- ▶ Australian Dental Association's Fluoride: [Smile, It's Natural](#)
- ▶ [British Fluoridation Society](#)
- ▶ FDI World Dental Federation's [FDI Supports Efforts to Promote Fluoride for Oral Health](#)
- ▶ Voices for America's Children's [ILikeMyTeeth.org](#)
- ▶ **World Health Professional Organizations**
- ▶ American Academy of Family Physicians' [Fluoridation of Public Water Supplies](#)
- ▶ [American Academy of Pediatric Dentistry](#)
- ▶ American Dental Association's [Fluoridation Facts \[PDF-795KB\]](#)
- ▶ American Dental Association's [Fluoride & Fluoridation](#)
- ▶ American Dental Hygienist Association's [Fluoride Facts](#)
- ▶ American Dietetic Association's [The Impact of Fluoride on Health](#) American Heart Association's [Minerals, Inorganic Substances](#) Organization's [Water Fluoridation](#)
- ▶ American Water Works Association's [Fluoridation of Public Water Supplies](#)



Supportive Organizations and Resources Continued...

- ▶ **Government Agencies**
- ▶ National Cancer Institute's [Fluoridated Water: Questions and Answers](#)
- ▶ National Institute of Dental and Craniofacial Research's [Water Fluoridation](#)
- ▶ **Non-Governmental Organizations and International Agencies**
- ▶ Australian Dental Association's Fluoride: [Smile, It's Natural](#)
- ▶ [British Fluoridation Society](#)
- ▶ FDI World Dental Federation's [FDI Supports Efforts to Promote Fluoride for Oral Health](#)
- ▶ Voices for America's Children's [ILikeMyTeeth.org](#)
- ▶ **World Health Professional Organizations**
- ▶ American Academy of Family Physicians' [Fluoridation of Public Water Supplies](#)
- ▶ [American Academy of Pediatric Dentistry](#)
- ▶ American Dental Association's [Fluoridation Facts \[PDF-795KB\]](#)
- ▶ American Dental Association's [Fluoride & Fluoridation](#)
- ▶ American Dental Hygienist Association's [Fluoride Facts](#)
- ▶ American Dietetic Association's [The Impact of Fluoride on Health](#)
- ▶ American Heart Association's [Minerals, Inorganic Substances](#)
- ▶ Organization's [Water Fluoridation](#)

Supportive Organizations and Resources Continued...

- ▶ **STATE HEALTH DEPARTMENTS**

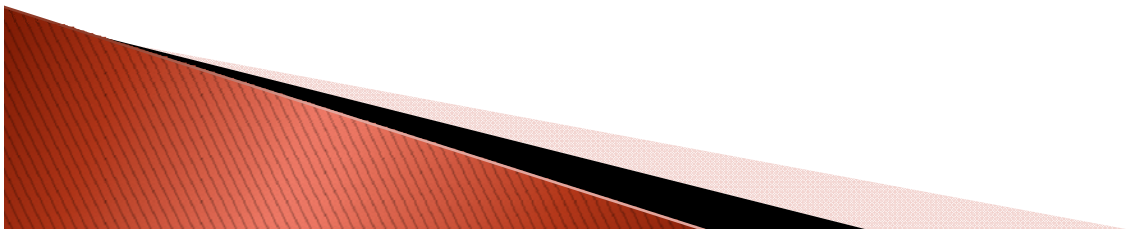
- ▶ New Mexico Department of Health, Letter to the Editor, Santa Fe New Mexican
- ▶ Arkansas Department of Health's [Oral Health in Arkansas: A Fact Sheet \[PDF-237KB\]](#)
- ▶ California Department of Public Health's [Fluoridation: Facts or Fiction](#)
- ▶ Florida Department of Health's [Policy Statement on Community Water Fluoridation \[PDF-37KB\]](#)
- ▶ Mississippi Department of Health's [Fluoride Topics](#)
- ▶ Nebraska Dental Health Division's [Fluoride](#)
- ▶ Texas Department of State Health Services' [Oral Health Program](#)
- ▶ Utah Department of Health's [Oral Health Program](#)
- ▶ Wisconsin's [Public Water Supply Fluoridation Census \[PDF-72KB\]](#)



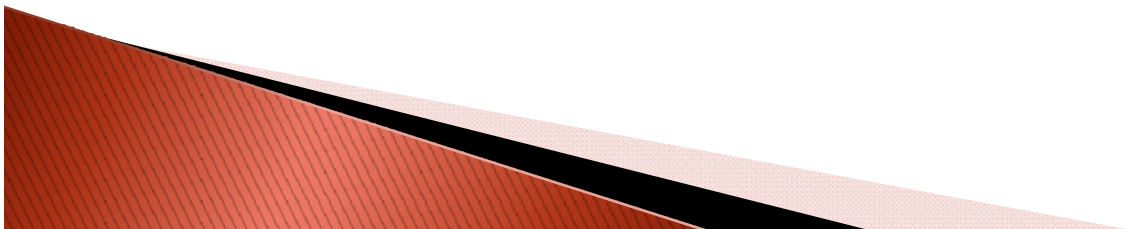
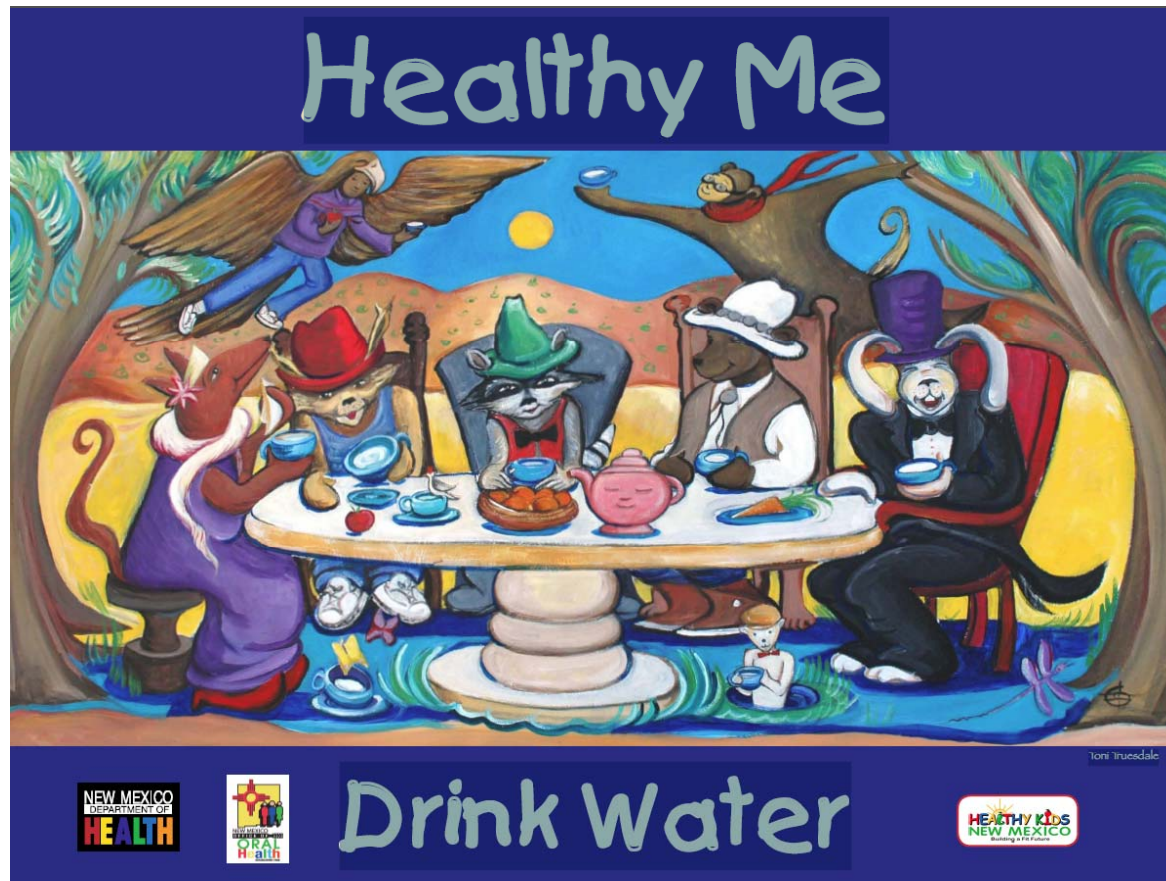
New Mexico Community Water Fluoridation Proposed Policy

- ▶ Promotes oral health
- ▶ Promotes preventive services for all residents
- ▶ Promotes services to low-income, uninsured adults and seniors who have limited dental coverage
- ▶ Expanded preventive services for rural and frontier communities

Oral Health is Essential to Overall Health



Community Water Fluoridation



Additional RESOURCES

- ▶ National Center for Children Poverty
- ▶ http://www.nccp.org/profiles/NM_profile_7.html
- ▶ NM Quick Facts Kaiser
- ▶ <http://quickfacts.census.gov/qfd/states/35000.html>
- ▶ The Henry Kaiser Family Health Foundation
- ▶ <http://www.kff.org/other/state-indicator/total-population/?sate=NM>
- ▶ UNM Bureau of Business Research
- ▶ <http://bber.unm.edu/demograp2.htm>

