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Savings from Water Fluoridation: What the Evidence Shows

Research shows that community water fluoridation offers perhaps the greatest return-on-investment of any public health strategy. The reduction in just the costs of filling and extracting diseased teeth and time lost from work to get care—not counting reduction in dental pain and discomfort—more than makes up for the cost of fluoridation. In recent decades, the evidence showing savings has grown:

- For most cities, every \$1 invested in water fluoridation saves \$38 in dental treatment costs.¹
- A **Texas** study confirmed that the state saved \$24 per child, per year in Medicaid expenditures for children because of the cavities that were prevented by drinking fluoridated water.²
- A 2010 study in **New York State** found that Medicaid enrollees in less fluoridated counties needed 33 percent more fillings, root canals, and extractions than those in counties where fluoridated water was much more prevalent.³ As a result, the treatment costs per Medicaid recipient were \$23.65 higher for those living in less fluoridated counties.⁴
- Researchers estimated that in 2003 **Colorado** saved nearly \$149 million in unnecessary treatment costs by fluoridating public water supplies—average savings of roughly \$61 per person.⁵
- A 1999 study compared **Louisiana** parishes (counties) that were fluoridated with those that were not. The study found that low-income children in communities without fluoridated water were three times more likely than those in communities with fluoridated water to need dental treatment in a hospital operating room.⁶
- By reducing the incidence of decay, fluoridation makes it less likely that toothaches or other serious dental problems will drive people to hospital emergency rooms (ERs)—where treatment costs are high. A 2010 survey of hospitals in **Washington State** found that dental disorders were the leading reason why uninsured patients visited ERs.⁷
- Scientists who testified before Congress in 1995 estimated that **national savings** from water fluoridation totaled \$3.84 billion each year.⁸

Sources:

¹ “Cost Savings of Community Water Fluoridation,” U.S. Centers for Disease Control and Prevention, accessed on March 14, 2011 at http://www.cdc.gov/fluoridation/fact_sheets/cost.htm.

² “Water Fluoridation Costs in Texas: Texas Health Steps (EPSDT-Medicaid),” Texas Department of Oral Health Website (2000), www.dshs.state.tx.us/dental/pdf/fluoridation.pdf, accessed on August 1, 2010.

³ Kumar J.V., Adekugbe O., Melnik T.A., “Geographic Variation in Medicaid Claims for Dental Procedures in New York State: Role of Fluoridation Under Contemporary Conditions,” *Public Health Reports*, (September-October 2010) Vol. 125, No. 5, 647-54.

⁴ The original figure (\$23.63) was corrected in a subsequent edition of this journal and clarified to be \$23.65. See: “Letters to the Editor,” *Public Health Reports* (November-December 2010), Vol. 125, 788.

⁵ O’Connell J.M. et al., “Costs and savings associated with community water fluoridation programs in Colorado,” *Preventing Chronic Disease* (November 2005), accessed on March 12, 2011 at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1459459/>.

⁶ “Water Fluoridation and Costs of Medicaid Treatment for Dental Decay – Louisiana, 1995-1996,” *Morbidity and Mortality Weekly Report*, (U.S. Centers for Disease Control and Prevention), September 3, 1999, accessed on March 11, 2011 at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4834a2.htm>.

⁷ Washington State Hospital Association, *Emergency Room Use* (October 2010) 8-12, <http://www.wsha.org/files/127/ERreport.pdf>, accessed February 8, 2011.

⁸ Michael W. Easley, DDS, MP, “Perspectives on the Science Supporting Florida’s Public Health Policy for Community Water Fluoridation,” *Florida Journal of Environmental Health*, Vol. 191, Dec. 2005, accessed on March 16, 2011 at <http://www.doh.state.fl.us/family/dental/perspectives.pdf>.