

Silent victories

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I am frequently asked what is meant by the term “public health” and, in turn, what the task of improving the public’s health ultimately entails. The short answer is that public health and its work refer to the totality of actions to protect and advance the health of communities. The long answer, of course, is a bit more complicated.

For many people, “public health” correctly brings to mind the activity local health departments such as the Washoe County Health District – immunization clinics, restaurant and food service inspections, family planning and nutrition services for low income residents, air quality monitoring and associated “burn code” alerts, and the like.

It is certainly the case that the aim of every service and program overseen by the district is to “protect and advance” the health of those who live, work, and recreate in Washoe County. It is also true that the district and thousands of other local health authorities represent the front lines of the public health system in the US as we know it.

A broader conception of “public health” recognizes the wide range of mundane, often unheralded actions taken by communities that have unquestionably improved the health and well-being of millions of Americans. These “silent victories” of public health, as the great American bacteriologist and public health expert C.E.A. Winslow termed it, often get lost in our society’s celebration of heroic medicine and the latest advances in curative measures.

Over the course of the twentieth century, health and life expectancy in the United States have improved dramatically. An American born in 1900 could expect to live to the ripe, old age of 49 years. The average life expectancy of someone born today stands at 79 years.

Most of this nearly thirty year improvement in life expectancy can be attributed to the contribution of public health approaches to infectious diseases generated by an industrializing and increasingly more urban society in the previous century, as well as public health’s evolving response to the chronic health conditions generated by ever-changing dietary habits such as the overconsumption of saturated fats, tobacco use, and sedentary behavior that typify life in our current century.

To be sure, some of the major public health accomplishments of the past century – most notably, vaccination campaigns that resulted in the elimination of entire classes of death sentences such as smallpox, poliomyelitis and other infectious diseases, and improvements in contraception and family planning – reflect the effective intersection of medical science and community-based public health measures.

Nonetheless, progress in life expectancy has been primarily a product of science-based and tested public health practices and policy change, such as improvements in motor vehicle safety, clean water and

sanitation, tobacco prevention and cessation policy, infectious disease surveillance and control, and occupational health and safety measures – efforts, that again, have more to do with community-based interventions in the way we live and work than they do with advances in modern medicine and improved access to health care.

By any measure, one of the major public health achievements over the past fifty years has been the dramatic reduction in tooth loss and decay resulting from the fluoridation of community drinking water. Water fluoridation represents a classic example of a community based intervention and preventive measure leading to widespread improvement in the public's health, not to mention associated reductions in oral health treatment costs.

According to the Centers for Disease Control and Prevention “although other fluoride containing products are available, water fluoridation remains the most equitable and cost-effective method for delivering fluoride to all members of most communities, regardless of age, educational attainment, or income level.” The CDC estimates that fluoridation has been responsible for 40 to 70 percent of the reduction in tooth decay among children and half of the reduction of tooth loss in adults over the last half century.

Nevada was a late comer to community drinking water fluoridation efforts. Nevertheless, with the initiation of water fluoridation by Clark County water suppliers in 2000, the proportion of our state's population receiving fluoridated drinking water jumped from 3 to over 70 percent.

Early evidence produced by researchers at the UNLV School of Dental Medicine already indicates that adolescents living in areas with optimally fluoridated community water systems (Clark County) have lower levels of untreated tooth decay than adolescents living in communities without fluoridated water (Washoe County and rural areas of Nevada). Moreover, these improvements cut across racial and economic lines.

Clark County currently spends \$900,000 per year on fluoridating public drinking water or 47 cents per person per year. Thus, this remarkably cost-effective public health measure benefits every member of the community irrespective of socioeconomic position or employment status – no small matter considering the protection against tooth decay provided by fluoridated drinking water to Nevadans with limited access to preventive dental services and the erosion of dental care benefits for those of us fortunate enough to possess health insurance.

At a time in which it is easy to bemoan our state's sorry track record on a wide range of health indicators and support for health programs, it is important to celebrate where we have progress – particularly those “silent victories” of public health – and to identify where future productive investments in public health lie.

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