Investment in research saves lives and money

Today:

- Compared to nonsmokers, smokers are 25 times more likely to develop lung cancer and 22 times more likely to develop chronic obstructive pulmonary disease (COPD).
- In the U.S., 1 in 3 children and 2 in 3 adults are overweight or obese.
- An estimated 795,000 obesity-related strokes occur annually.
- One-third of all deaths from cancer are related to poor nutrition, physical inactivity or obesity.
- Physical inactivity is responsible for nearly 7% of the total disease burden associated with chronic heart disease, and over 10% of the all-cause mortality burden.
- It is estimated that 93% of cervical cancers are preventable through Papanicolaou (Pap) screening and the human papillomavirus (HPV) vaccine.

The Cost:

- Nearly 9% of all U.S. health care costs are attributed to cigarette smoking, totaling $170 billion per year. Publicly funded programs, like Medicare and Medicaid, are responsible for more than 60% of this cost.
- The total economic burden of obesity-related illnesses is estimated to be more than $190 billion annually.
- Absent effective interventions, it is estimated that by 2030 over 40% of Americans will have cardiovascular disease, which can be brought on by poor nutrition, physical inactivity and smoking. This upward trend will result in an economic burden that surpasses $1.2 trillion annually.
- As many as 1 in 20 U.S. school children have fetal alcohol spectrum disorders (FASDs). Drinking alcohol during pregnancy is attributed to $5.5 billion in preventable costs annually.

HOW RESEARCH IMPROVES LIVES:

- Smallpox is the only infectious disease to be eradicated globally. Due to the success of vaccine and prevention programs, the eradication of smallpox has saved an estimated 540 million lives worldwide as of 2014.
- An estimated 8 million American have been saved due to tobacco control efforts.
- Research has found that taking folic acid supplements before and during pregnancy reduces the likelihood of several major birth defects, including spina bifida and anencephaly, by 50 to 70%.
- The National Institutes of Health’s Safe to Sleep campaign resulted in a 62% drop in fatalities caused by sudden infant death syndrome (SIDS).
- On average, a 10% increase in public health spending results in a 3.2% decrease in deaths caused by cardiovascular disease, 1.4% decrease in deaths caused by diabetes, a 1.1% decrease in deaths caused by cancer and a nearly 7% decrease in infant mortality.

HOW RESEARCH SAVES MONEY:

- Vaccinations among Americans born in the last 20 years will prevent 322 million illnesses, 21 million hospitalizations, 732,000 fatalities and $1.4 trillion in direct and indirect costs. Furthermore, if every American received the recommended vaccinations, 33,000 deaths, 14 million illnesses and $43.3 billion in direct and indirect costs would be avoided annually.
- Research has shown that for every $1 invested in fluoridation of water, up to $38 is saved in avoided dental costs.
- Approximately 90% of all Americans 2 years or older consume too much sodium. Research indicates that if Americans reduced the sodium in their diet by 1,200 mg per day, $20 billion would be saved annually in avoided medical costs.
- If all Americans 50 and older received just four recommended vaccinations--flu, shingles, pneumonia and whooping cough--$26.5 billion could be saved annually.

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perspectives:

Linda C. Degutis, DrPH, MSN
Co-chair of the Policy and Advocacy Committee for the Society for the Advancement of Violence and Injury Research (SAVIR)

“Injury prevention researchers work on developing early interventions to avert the consequences of risk. This is especially true in the area of violence prevention, where researchers are exploring ways to prevent children from being exposed to violent events, to prevent teen dating violence that can lead to a pattern of violence in relationships, to prevent violence in youth who need support in developing strategies for forming healthy relationships and in resolving conflicts peacefully, to identify risk for suicide and intervene. Injury prevention research continues to contribute to keeping people safe, and preventing death and disability from injury. With continued support, injury prevention research can be a success story of the decade.”

Thomas Frieden, M.D., M.P.H.
Director of the Centers for Disease Control and Prevention (CDC)

“Thousands of doctors, researchers, nurses and others in the U.S. and around the world dedicate their lives to protecting the public’s health from infections and diseases. Because of their determination to stop the spread of life-threatening viruses and bacteria, to conduct disease prevention research, and to help people make healthier personal choices, we can all live healthier and safer lives.”
Hope for the Future:

Through a partnership between Harvard University’s School of Public Health, Columbia University, and Deakin and Queensland University in Australia, researchers aim to identify the most successful and impactful interventions to combat childhood obesity. CHOICES (Childhood Obesity Intervention Cost-Effectiveness Study) is comparing evidence-based interventions to identify those that will produce the best results relative to the resources required to implement them. Communities will then be able to utilize this information to ensure they are maximizing the return on their prevention investment.*

Several promising vaccine candidates will soon enter into clinical trials. Researchers believe an Ebola vaccine, a universal flu vaccine, and a vaccine to protect against HIV will be available within the next decade.^

Over the last five years, metrics associated with patient safety have improved by an average of 3.6% per year due, in part to Agency for Healthcare Research and Quality (AHRQ) initiatives focused on addressing healthcare acquired infections (HAIs) and other safety threats. AHRQ-funded researchers are exploring additional ways to prevent unintentional harm in the healthcare setting, preventing costly and harmful adverse events from occurring.‡

The Bottom Line:

Prevention of deadly and debilitating conditions is the gold standard of healthcare. For medical care to become more proactive, rather than reactive, sufficient funding must be dedicated to exploring new and innovative prevention techniques including vaccines, healthy living, evidence-based community support, and risk-reduction programs. These investments can have a profound and lasting effect on America’s health.

Children ages 19–35 months who received all recommended doses of seven key vaccines, 2014

SOURCE: COMMONWEALTH FUND

*DTaP/DT/DTaP Vaccine (diphtheria, tetanus, and acellular pertussis), poliovirus vaccine, measles-containing vaccine (including mumps rubella (MMR) vaccine), Haemophilus influenza type b (Hib) vaccine, hepatitis B vaccine, varicella vaccine, pneumococcal conjugate vaccine