SNAP-Ed Toolkit

LT17: Health Care Cost Savings

Framework Component

Effectiveness and Maintenance – Multi-Sector Impacts

Indicator Description

Reduction in rates of selected chronic diseases and associated impacts on health care costs.

Background and Context

As described by the CDC's National Center for Chronic Disease Prevention and Health Promotion, one in four Americans has multiple chronic conditions, which are also associated with substantial health care costs.[1] Approximately 71% of the total health care spending in the United States is associated with care for Americans with more than one chronic condition.[2] The estimated annual medical cost of obesity in the U.S. was $147 billion in 2008 U.S. dollars; the annual medical costs for people who are obese were $1,429 higher than those of normal weight.[3] The total estimated cost of diagnosed diabetes in 2012 was $245 billion, including $176 billion in direct medical costs and $69 billion in decreased productivity.[4] Decreased productivity includes costs associated with people being absent from work, being less productive while at work, or not being able to work at all because of diabetes. As a result of the multi-sectoral changes initiated in part by SNAP-Ed agencies, public health, health care, and community organizations (see MT11)—especially the community prevention components and improved health care coverage afforded by the Patient Protection and Affordable Care Act (ACA)—we can anticipate associated improvements in low-income persons' health status and impacts in health care cost savings. **Applying the Triple Aim Framework to Health Promotion and Disease Prevention** The Institute for Healthcare Improvement's Triple Aim Framework (http://www.ihi.org/Topics/TripleAim/Pages/default.aspx) identifies three tenets for reforming health systems:

- Improving the patient experience of care (including quality and satisfaction);
- Improving the health of populations; and

- Reducing the per capita cost of health care.

In this indicator, we focus on reducing per capita cost of health care and improving the health of populations. Patient care is important to SNAP-Ed partners, but is outside the scope of SNAP-Ed's influence. Existing studies show that for every $1 spent to implement programs such as EFNEP and SNAP-Ed education programs, up to $10.64 is saved in health care costs.[5] These studies pre-date the provisions of HHFKA and SNAP-Ed's expanded reach through comprehensive scope of services, thus we anticipate potential health care costs savings to be even greater.

Outcome Measures

LT17a.	Total prevalence and reductions in prevalence of persons told by a medical professional they have high blood pressure, or as reported in an electronic medical registry
LT17b.	Total prevalence and reductions in prevalence of persons told by a medical professional they have type 2 diabetes or pre-diabetes or as reported in an electronic medical registry • Hemoglobin A1c
LT17c.	Total prevalence and reductions in prevalence of persons told by a medical professional they have high blood cholesterol or as reported in an electronic medical registry • Total cholesterol • Triglycerides
LT17d.	Total prevalence and reductions in prevalence of persons told by a medical professional they have obesity or as reported in an electronic medical registry • Height, weight, Body Mass Index (BMI), BMI z-score • Waist circumference
LT17e.	Total prevalence and reductions in prevalence of persons told by a medical professional they have asthma or as reported in an electronic medical registry
Developmental	
LT14f.	Health benefits in quality adjusted life years (QALYs)
LT14g.	Benefit-cost ratio for nutrition education and obesity prevention services

What to Measure

LT17a-e: Track rates of diseases and conditions among SNAP-Ed eligible persons; prioritize Medicaid recipients and other low-income health plans administered by states, counties, territories, or tribes. Use the Health Resources Services Administration (HRSA) data warehouse and other existing electronic medical registries from Federally-Qualified Health Centers to track changes in the prevalence of chronic conditions, including those listed above. Other conditions may be of relevance, too. Calculate the year-to-year changes in prevalence and associated reductions by priority populations based on gender, race or ethnicity, or ZIP code.

> Comply with all applicable Health Insurance Portability and Accountability Act (HIPAA) rules and human subjects' protections. Institutional Review Board review and approval may be necessary. **As a reminder, clinical health assessments of the SNAP-Ed target audience are not allowable.** Therefore, it will be incumbent on SNAP-Ed agencies to enter into data sharing agreements with health care systems, or to use publically available data sources, to identify disease prevalence rates. The WIC program and programs funded through the CDC to maintain disease registries may also be valuable partners for evaluation.

LT14f. For SNAP-Ed agencies seeking to develop a more robust assessment on health care cost effectiveness of nutrition education and obesity prevention services, a good place to start is measuring quality-adjusted life year (QALYs), which is an outcome measure that considers both the quality and the quantity of life lived. The QALY is based on the number of years of life added by interventions. **LT14g**. Measuring the cost-benefit ratio of SNAP-Ed community-wide programs or the health care cost savings associated with community-wide SNAP-Ed interventions is an emerging area that practitioners will have the opportunity to develop over time. Some states, such as California, Michigan, South Carolina, and Washington, are working on these types of analyses for SNAP-Ed. These types of projects assume partnerships are in place with researchers working on SNAP-Ed related evaluations. Here, we measure lost productivity from morbidity (i.e., earnings foregone from lost workdays) related to diet-related diseases and the benefit of delaying the health care costs associated with treating diet-related diseases. A good place to start in understanding health care costs is using the CDC's Chronic Disease Cost Calculator version 2, which is a downloadable tool that provides state-level estimates of medical expenditures and absenteeism costs for:

- Arthritis
- Asthma
- Cancer
- Cardiovascular diseases (congestive heart failure, coronary heart disease, hypertension, stroke, and other cerebrovascular disease)
- Depression
- Diabetes

Specifically, the Cost Calculator provides the following estimates for each chronic condition:

- Medical expenditures for the entire state population (all payers and the uninsured) and separately for Medicaid, Medicare, and privately insured.
- Absenteeism costs and estimates of missing work days
- Projections of medical costs until 2020

Another example of a cost effectiveness simulation tool is the Prevention Impacts Simulation Model (PRISM), which was used to measure the cost-effectiveness of CDC-funded Communities Putting Prevention to Work grants. The researchers found that when community-based health promotion programs are sustained at their 2013 levels through 2020, there is potential to avert 14,000 premature deaths, $2.4 billion in medical costs, and

$9.5 billion in productivity losses.[6] States may also develop approaches to measure changes in actual health care costs and charges for SNAP-Ed eligible populations; this would require data sharing agreements with insurers and state Medicaid agencies.

Population

N/A

Surveys and Data Collection Tools

[collapse title="The Health Resources Services Administration (HRSA) Data Warehouse"] The enterprise repository for HRSA data, with data reported by states, territories, and county or service areas), population (e.g. low income or Medicaid eligible) or facilities (e.g. federally qualified health center). http://datawarehouse.hrsa.gov [/collapse] [collapse title="CDC's Chronic Disease Cost Calculator"] The Chronic Disease Cost Calculator version 2 is a downloadable tool that provides state-level estimates of medical expenditures and absenteeism costs for a variety of diet-related and other chronic diseases. https://www.cdc.gov/pcd/issues/2015/15_0131.htm [/collapse] [collapse title="Qualify adjusted life year Prevention Impacts Simulation Model (PRISM) for Chronic Disease Policymaking"] https://snaped.fns.usda.gov/library/materials/prevention-impacts-simulation-model-prism-chronic-disease-policymaking [/collapse] Additional evaluation tools to measure LT17 can be found in the SNAP-Ed Library.

Key Glossary Terms

[glossary]Quality-adjusted life year (QALY)[/glossary]

Additional Resources or Supporting Citations

[1]Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. Prev Chronic Dis. 2014;11:130389. DOI: http://dx.doi.org/10.5888/pcd11.130389. [2]Centers for Disease Control and Prevention. Death and Mortality. NCHS FastStats Web site. http://www.cdc.gov/nchs/fastats/deaths.htm. Accessed December 20, 2013. [3]Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer- and service-specific estimates. Health Aff. 2009;28(5):w822-31. http://content.healthaffairs.org/content/28/5/w822.full.html. Accessed December 23, 2013. [4]American Diabetes Association. The Cost of Diabetes. https://www.diabetes.org/resources/statistics/cost-diabetes. Accessed December 23, 2013. [5]Applying Cost Benefit Analysis to Nutrition Education Programs: Focus on the Virginia Expanded Food and Nutrition Education Program https://vtechworks.lib.vt.edu/bitstream/handle/10919/24691/VCE490_403_1999.pdf?sequence=1&isAllowed=y [6]Soler R, Orenstein D, Honeycutt A, Bradley C, Trogdon J, Kent CK, et al. Community-Based Interventions to Decrease Obesity and Tobacco Exposure and Reduce Health Care Costs: Outcome Estimates From Communities Putting Prevention to Work for 2010–2020. Prev Chronic Dis 2016;13:150272. DOI: http://dx.doi.org/10.5888/pcd13.150272 CDC HIV Cost-Effectiveness: http://www.cdc.gov/hiv/programresources/guidance/costeffectiveness/index.html