

Altarum Institute Center for Sustainable Health Spending

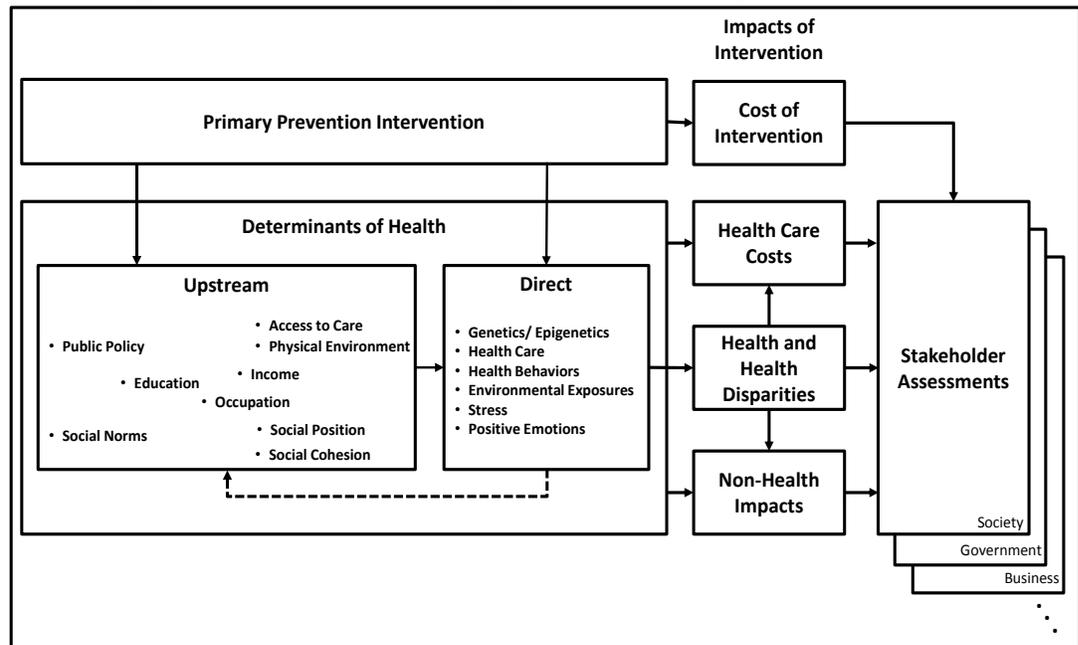
Assessing the Value of Investments in Primary Prevention

With funding from the Robert Wood Johnson Foundation, [Altarum Institute’s Center for Sustainable Health Spending](#) is creating a structure to demonstrate the value of investments in nonclinical primary prevention—interventions outside of the medical system that reduce the incidence of injury and illness—and their impact on health care costs. In this context, primary prevention is defined very broadly to include investments in the social determinants of health, such as education and the physical environment. One important feature of the analytical structure is its ability to show the benefits and costs of an investment that accrue to those people and organizations that can influence the investment.

To provide a foundation for this structure, Altarum has developed a depiction of the process (Exhibit 1) by which an investment in primary prevention acts through the determinants of health to produce impacts on health, costs, and other outcomes of interest.

Altarum has also developed a valuation tool to characterize results describing the financial and health impacts of an investment in prevention from the perspectives of alternative stakeholders (i.e., to produce the stakeholder assessments depicted in Exhibit 1). Stakeholder groups currently represented include federal and

Exhibit 1. High-Level Framework for Assessing the Value of Primary Prevention



state governments. A societal perspective is also included. Future enhancements include extending the tool to include other stakeholders, such as the business community, the provider community, and the insurance industry.

Consider an investment in one or more of the determinants of health (the details of the nature and cost of the investment are external to the valuation tool). Assume that we can predict the annual impact of the investment on mortality, measured in life years; morbidity, measured in quality-adjusted life years (QALYs); health care spending by payer (e.g., Medicare, Medicaid/Children’s Health Insurance Program, private insurance, out of pocket); worker productivity, measured in earnings; and, where relevant, incarceration costs. Assume further that we can partition this impact into pre-longevity and longevity components, where a longevity impact occurs if the intervention extends life.

As shown in Exhibit 2, the valuation tool accepts these annual impacts and other parameter values as input and converts them to an overall (positive or negative) dollar impact—and the portion of this impact that consists of health care

spending—for society, the federal budget, and state budgets. It also produces measures of value from the standpoint of each of these three stakeholder groups. The valuation options include increases in health-adjusted life expectancy and the maximum investment that produces the input impacts while achieving a desired return on investment (ROI) or a desired cost-effectiveness level (cost per QALY). Alternative scenarios for a given investment can be defined by varying the discount rate, the time horizon of interest, or other stakeholder-specific parameters.

From a societal perspective, interventions that improve health have multiple benefits, including increased longevity and more years of good health; greater productivity and longer labor force participation, leading to higher gross domestic product (GDP); and lower health care costs until the longevity years begin. Increased longevity brings additional societal impacts, including additional health care costs; costs of food, shelter, and other essentials of living; and, if life is extended during the working years, higher GDP. The tool captures all these effects.

These results are also aggregated into

measures of overall societal value, including cost per QALY or, if a dollar-value is placed on QALYs, ROI. In addition, some interventions that improve health can have other direct societal benefits or costs, such as reduced costs of incarceration. If these can be monetized, they should be included in the calculations; if not, they should be described separately outside the tool.

From a federal or state budget perspective, better health leads to lower health care spending (pre-longevity period), which leads to lower Medicare and Medicaid costs. As noted above, better health also drives up GDP, which leads to greater tax revenues and lower safety net spending. Greater longevity leads to higher Medicare, Medicaid, and Social Security costs and, if life is extended during working years, greater tax revenues. The tool incorporates these effects.

Two completed demonstration applications of the tool assess the value of a smoking prevention investment and an investment to address childhood obesity from various stakeholder perspectives. Work is ongoing on a third set of applications involving prenatal and early childhood interventions.

About the Center for Sustainable Health Spending

The Center for Sustainable Health Spending informs and guides the nation as it makes a critical transition to a sustainable rate of growth in health spending. Working with policymakers, researchers, and economists, the Center analyzes and tracks health spending, researches and develops new approaches to defining and achieving sustainable rates of spending growth, and advocates for evidence-based policy changes that will improve the nation's financial and population health status.

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Exhibit 2. Valuation Tool Inputs and Outputs

