Building skills to implement community-based solutions to prevent chronic disease using cost-effectiveness analysis with interdisciplinary partners: Learnings from Boston, MA

Mary Bovenzi, MPH,[1] Sonia Carter, MS LDN,[1] Jaylen Clarke, MS,[1] Jennifer Reiner, MPH,[2] Jessica Barrett, MPH,[2] Amy Bolton, BA,[2] Stephanie McCulloch, MS, MPH,[2] Molly Garrone, MA,[2] Angie L Cradock, ScD MPE,[2] Steven Gortmaker, PhD[2]

[1]Boston Public Health Commission
[2]Harvard T.H. Chan School of Public Health

OVERVIEW

Many health departments have limited resources for addressing chronic disease. In collaboration with local partners, the Boston Public Health Commission applied a cost-effectiveness analysis framework to model potential outcomes of different policies and programs. BPHC used the models to prioritize evidence-based and cost-effective strategies that will improve healthy eating and physical activity among children to prevent chronic disease, childhood obesity, and advance health equity.

KEY THEMES

Community Health Planning and Policy Development (CHPPD) Poster Session 6, 4160

Implementing and Evaluating Community-Based Solutions to Prevent and Manage Chronic Diseases

Improving Community Health through Innovative, Interdisciplinary Partnerships

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Using cost-effectiveness analysis allows Boston to align goals with current resources to prioritize effective and equitable policies and programs that improve healthy eating and physical activity.

KEY FINDINGS

Projections for five policies and programs to improve child health included:

3,320 to 29,400 CHILDREN REACHED

over 10 years, per strategy

$7.60 to $540 AVERAGE ANNUAL COST PER CHILD

over 10 years, per strategy

COST-EFFECTIVE

These strategies have the

POTENTIAL TO IMPROVE HEALTH EQUITY

by reaching settings and children with the greatest needs for improved healthy eating and physical activity.

The Boston Public Health Commission

STRENGTHENED PARTNERSHIPS

with state and local organizations, including early education and care programs, public schools, and afterschool programs.

Scan the QR code to learn more about the five policies and programs that BPHC modeled and their partnership with CHOICES!

WHAT WE FOUND

The models showed that after 10 years of implementation, Boston would see these outcomes.

Policies & Programs	Population Reach Over 10 Years	Cost per Benefiting Child	Health Care Costs Saved
Creating healthier afterschool environments (OSNAP)	**10,800**	**$18.30**	**$34,100**
Movement breaks in the classroom	**29,400**	**$7.58**	**$35,300**
Home visits to reduce screen time	**3,320**	**$540.06**	**$44,600**
More movement program in early child care settings	**18,200**	**$29.70**	**$104,000**
Reducing screen time in early child care settings	**18,200**	**$16.30**	**$138,000**

All five policies & programs are projected to be cost-effective.

All are cost-effective at a threshold of $150,000 per quality-adjusted life year (QALY) gained. Each costs <$150,000 per QALY gained, which is a suggested threshold for how much we are willing to pay as a society for health improvement. A QALY is a measure of both the quantity and quality of life. QALYs measure length of life adjusted for health-related quality of life. Cost per QALY gained is a cost-effectiveness metric to assess whether a strategy is good value for money based on its projected net cost per improvement in population health.

IMPLICATIONS

- Using a cost-effectiveness analysis framework can help BPHC to guide resource planning and the translation of research to practice, improving the equity of healthy eating and physical activity offerings in Boston.
- Opportunities and resources are available to build the capacity of health department staff to understand and use cost-effectiveness analysis to prioritize prevention policies and programs that offer good value for money.

CHOICES
HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH
Prevention Research Center on Nutrition and Physical Activity

BOSTON PUBLIC HEALTH COMMISSION