

LEED Health Process - School Project Teams

Monitoring Outcomes Guide



This Monitoring Outcomes Guide contains recommendations for the development of a monitoring and evaluation plan for a school construction or renovation project. This guidance tool is designed to help the Health Process Coordinator, health partners, and design team create a draft plan to measure and observe the impact that their school project health, well-being and equity strategies have on the school occupants and community throughout the project life cycle (design, construction and operation).

Importance of Monitoring and Evaluation

Developing a draft plan during the design and construction phase prepares the school district and Health Process Coordinator for future monitoring and evaluation efforts.* Although the design and construction teams won't necessarily be involved in future monitoring efforts, their perspectives are valuable inputs into the creation of a monitoring plan. Helping schools devise a plan for monitoring also shows the design team's commitment to health and well-being promotion for their projects and may help showcase leadership in the field.

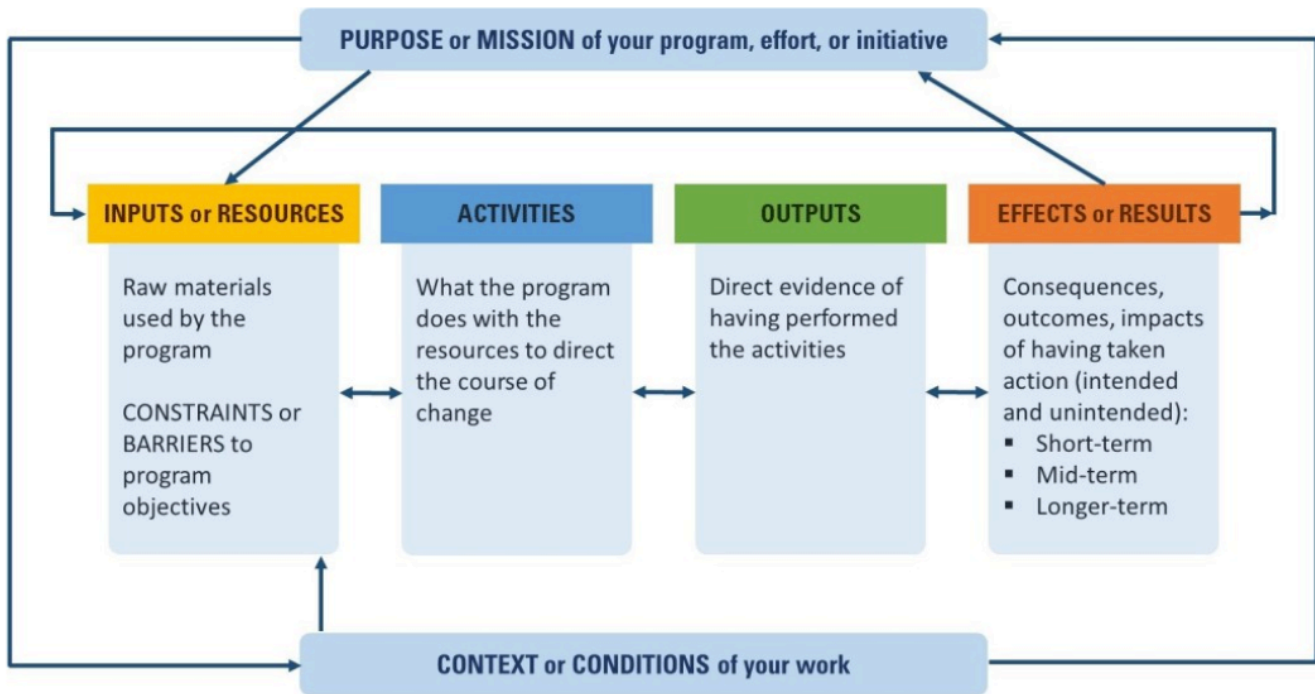
During the LEED Health Process, the full project team prioritizes specific strategies that are intended to have specific outcomes. Creating a draft monitoring plan at this stage allows the design and construction teams an opportunity to influence how the impact of those prioritized strategies might be evaluated during project operations.

*Note: The project team is not required to implement the monitoring and evaluation plan in order to achieve formal certification of the LEED Health Process pilot credit.

Performance Data and Metrics

Project monitoring and evaluation efforts can serve two distinct purposes: 1) assess the impact of specific strategies and/or 2) inform ongoing operations. These two distinct purposes should be kept in mind when drafting the monitoring and evaluation plan.

For the purpose of assessing impact, the Health Process Coordinator will guide development of the monitoring and evaluation plan according to the health goals identified during the *Engage Communities* step of the LEED Health Process. The provided example monitoring and evaluation plan (available as a template below) guides design and project teams to document the specified population health goal, the prioritized health strategy and potential performance metrics to assess impact. In some cases, design strategies and interventions may intend to address multiple health and well-being goals at once.



Planning your evaluation: Key components of a logic model. Peers for Progress, UNC Gillings School of Global Public Health. 2021. Available from: <http://peersforprogress.org/resource-guide/planning-your-evaluation/>

Consider using a public health logic model (above) to guide consideration of specific performance metrics. Influencing public health takes time, the team should not expect to see immediate changes in population health. Rather, a logic model approach helps teams consider more mutable, proxy metrics that highlight the impact that the school’s design and construction has first on the school environment, then on population health attitudes, health behaviors and ultimately health outcomes. The school facilities team is not responsible for monitoring changes to population health. Rather, this team should focus on monitoring changes to the school environment and work in partnership with school health staff to understand the impact of any changes in the school environment on school community health.

To evaluate the project’s impact on the school community throughout the project life-cycle, relevant metrics could include quantitative and qualitative data and information on air quality, energy efficiency, absenteeism, childhood obesity rates, incidence rates of asthma, use and funding of community resources, community outreach for health and equity education, student and staff perspectives and many more. Below is an example of a draft monitoring and evaluation plan based on one of the health goals of a school project. Additional information on developing a draft monitoring and evaluation plan may be found in the LEED Health Process pilot credit resources section.

For the purpose of informing ongoing operations, the Health Process Coordinator should convene a discussion between the design and construction teams and the project’s facility manager(s) to discuss the ramifications of the prioritized health strategies during building operations. Design and construction practitioners may be able to share thoughts and ideas on how to make adjustments during the operations phase should any health design strategies not perform as expected.

Example Monitoring and Evaluation Plan:

Health Need	Intervention	Strategy	Performance Metrics	Responsible Parties	Frequency
Decreasing incidence of childhood asthma in schools.	Eliminate or reduce the use of potential asthmagens.	Design strategy specifies linoleum, wood or cork flooring for classrooms/ common areas.	<p><u>Design Metrics:</u> No carpet flooring included in project plan. Only hard surfaces are used.</p> <p><u>Operations Metrics:</u> Screen indoor air for presence of asthmagens.</p> <p><u>Health Metrics:</u> Track incidence rate of acute asthma events.</p>	<p><u>Design Metrics:</u> Architect to certify no carpets used in design.</p> <p><u>Operations Metrics:</u> Facilities manager will engage an IEQ consultant to measure levels of formaldehyde.</p> <p><u>Health Metrics:</u> Nursing staff will collect rates of asthma incidents among students.)</p>	<p><u>Design:</u> Verified plan prior to construction.</p> <p><u>Operations:</u> To be measured once per quarter.</p> <p><u>Health:</u> Annual survey or data collection.</p>

Collecting Performance Data

Population health and well-being performance data can be collected through a variety of mechanisms including:

- Building information management systems
- Direct measurement (such as of air, water, lighting, acoustics, etc.)
- Community surveys

Community Surveys

Surveys can be used to monitor the impact of chosen health strategies. Gathering qualitative information from the school community can reveal the community’s attitudes toward sustainability, health and equity as well as behaviors related to the school’s health goals.

Surveys should be administered at multiple points throughout the design, construction and operation process. Before construction begins, responses will help project teams establish a health and well-being baseline. Administering the same survey once the new school facility is occupied will reveal changes in population health and well-being that can be associated with the new school project. An important note regarding correlation vs causation: information gathered through surveys cannot substantiate any claims of causation. The team is not able to definitively say that a specific health design strategy caused a specific population health impact. However, survey data can be used to support claims of correlation.

Below are some example questions from a high school pre- and post-occupancy health and well-being survey. These surveys should be short and simple - ask basic, but revealing questions about health and equity indicators related to the school's health goals. The Health Process Coordinator should work with school health staff to develop different surveys for different student levels and staff members.

Example Occupancy Survey Questions:

High School Student Survey (9-12th Grade)

Thank you for participating in this important school survey.

1. When you feel anxious, nervous or stressed at school, do you have a "safe place" to retreat to? (A "safe place" means a school area/room that makes you feel calm or soothed.)
 1. Yes
 2. No
 3. I don't get anxious or nervous at school.
2. Do you feel more engaged when your classroom has more views of the outside?
 1. Yes
 2. No
3. Do you know where the following health services are located in your school building? Choose all that apply.
 1. Nurse's Suite
 2. School Counselor's Office
 3. Social Worker's Office
 4. Physical and Occupational Therapy
 5. Speech Therapy
4. Do you think that the noise level in your classroom affects your concentration or ability to work?
 1. Yes
 2. No
 3. Sometimes
5. Do you use the community resources that your school provides (activities/programs/workshops) outside of school hours?
 1. Yes
 2. No
 3. My school doesn't provide these resources.
6. At school, I experience physical activity in the following spaces: Choose all that apply.
 1. Gymnasium
 2. Green spaces
 3. Sports fields
 4. Biking and walking paths around the school
 5. Classrooms
 6. Throughout the building

Additional Resources for Monitoring Outcomes:

Arc Skoru. A sustainability performance tracking platform helping to empower project teams and recognize operational performance leaders. Arc evaluates and scores energy, water, waste, transportation and human experience data.

Getting Started Guide: Using Arc in PreK-12 Schools. This guide from USGBC's Center for Green Schools gives districts an overview of the Arc platform and guides teams through project setup, data management and connecting sustainability lessons back to the classroom.

Impacts of Active School Design on School-Time Sedentary Behavior and Physical Activity: A Pilot Natural Experiment. This pilot natural experiment evaluated whether an elementary school designed to promote movement impacted students' school-time sedentary behavior and physical activity.

Enterprise Community Partners and Success Measures, Healthy Housing Outcomes Survey. This survey was developed to enable affordable housing owners to measure changes in resident health outcomes most likely to be influenced by healthy housing development. Many of the survey questions can be tailored to a school-specific modernization project to assess student and staff health.

This Monitoring Outcomes Guide is part of the series “Green Schools for Health: A Project Team’s Roadmap to the LEED Health Process.” To find the main guidance document, or to access the other supplemental guides, visit this [webpage](#).

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