

# Feasibility of the SWITCH Implementation Framework for Enhancing School Wellness

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## Abstract

**Objective:** There is a need to identify strategies that enhance the implementation of evidence-based school wellness interventions in real-world settings. The present study evaluates the feasibility of empowering school wellness leaders to deliver an evidence-based, childhood obesity prevention initiative called SwitchTM (School Wellness Integration Targeting Child Health). We specifically evaluated the utility of a new implementation process, based on the robust Healthy Youth Places (HYP) framework, to increase capacity of school leaders to lead Switch TM school wellness programming.

**Description:** The implementation process was piloted in a convenience sample of eight Iowa elementary schools. Teams of three leaders from each school attended an in-person school wellness conference, followed by five online webinar sessions delivered by two trained facilitators. The capacity building and quality improvement process was designed to empower schools to lead school wellness change using methods and concepts from the original 12-week Switch TM program. School coordinators completed checklists on two occasions to assess overall school-level implementation as well as setting-level changes in physical education, classrooms, and lunchroom. Student acceptability of SWITCH was evaluated by the degree of behavior tracking within the online SWITCH 'Tracker' system that promoted self-monitoring.

**Evaluation:** All school staff reported satisfaction with the SWITCH implementation process. Reports of school- and setting-level implementation were relatively high (2.0 to 2.8 on a 3.0-point scale) but student engagement (based on use of the online tracking system) varied greatly over time and across schools. Three high-implementation schools had average tracking rates exceeding 70% (range: 72–90%) while three low-implementation schools had rates lower than 30% (range: 0–23%).

**Conclusions and Implications:** This feasibility study supports the utility of the new implementation framework for promoting school and student engagement with SWITCH. Further testing regarding effectiveness and scale-up of this evidence-based school wellness intervention is warranted.

Funding: USDA NIFA Grant (015-68001-23242)

## Background on SWITCH

SWITCH<sup>®</sup> is an evidence-based obesity prevention program designed to help youth to "Switch what they do, view, and chew". Previous studies have demonstrated that the program is effective in engaging students and that the SWITCH Physical Education, Lunchroom and Classroom modules can be implemented feasibly and effectively. The focus of the project now is to develop a training protocol to build school wellness leaders' capacity to implement and manage the program. The hypothesis is that implementation of the SWITCH program can be enhanced, and more readily sustained, when school wellness teams are sufficiently prepared to implement the program and provided support to build school wellness capacity throughout the program. The logic model driving the project is shown in Figure 1.

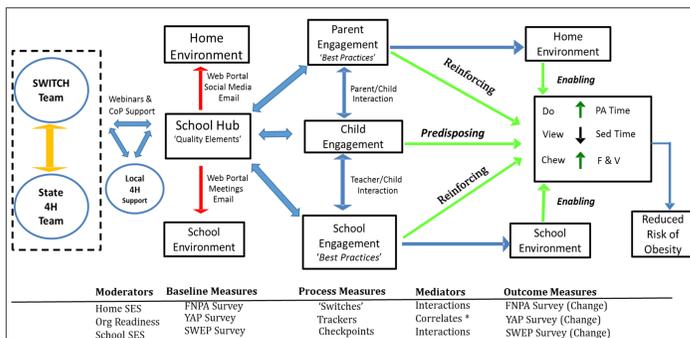


Figure 1. SWITCH Logic Model.

## Rationale for a Feasibility Study

SWITCH was designed to influence the overall school wellness system, and is consistent with recommendations for whole of school approaches to health promotion. Research to date, however, has not adequately explored how to operationalize health and wellness programming models to effectively influence the adoption and implementation of evidence-based programming in schools. Our approach to promoting school wellness change emphasizes the use of equitable community engagement strategies that build school capacity and promote autonomy and ownership of school change. However, before we initiated broader use of these methods, it was important to document the feasibility of this implementation process for enhancing school wellness.

## SWITCH Training and Implementation Process

### SWITCH Training and Implementation Model

The SWITCH initiative is implemented using a standardized process based on the Healthy Youth Places framework to facilitate changes in school wellness programming. Training and support is delivered to school change teams through a collaboration between the SWITCH Expert Team and State 4H Extension and Outreach, which can also direct / connect schools to additional local support. School change teams then carry out the SWITCH programming within their school environment (See Figure 2).

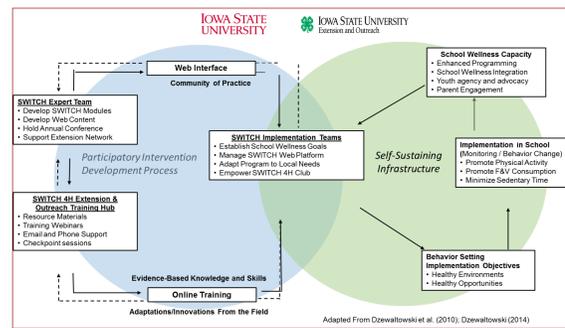


Figure 2. Training & Implementation Model.

### Focus on Continuous Quality Improvement

Emphasis in SWITCH is placed on "continuous quality improvement" so that schools can build capacity to implement and sustain programming over time (see Figure 3). A benefit to this approach (compared to a "packaged" program) is that provides schools with an opportunity to reflect on current and on-going programming to determine what is going well and what could be improved, while providing them with an opportunity to consider develop strategies to enhance programming moving forward. This flexibility and autonomy in how schools implement SWITCH within their system empowers change teams and builds local capacity for delivering wellness programming. It also enhances the potential for sustainability by addressing school-specific needs using resources that are available to schools.



Figure 3. SWITCH Continuous Quality Improvement Cycle.

### Capacity Building Process

The SWITCH capacity-building process was piloted with a sample of 8 schools to evaluate the effectiveness of the training process. Schools were provided with curricular modules and resources to carry out SWITCH in their individual schools. Schools were also provided with a web-based platform to use to have students track their behaviors throughout the SWITCH program.

The SWITCH Expert Team provided training to School SWITCH Teams using 4 online Checkpoint sessions. Motivational Interviewing techniques were used to help schools use the results from school- and student-level needs assessment tools to set future wellness programming goals. See Figure 4 for sample reports.

Figure 5 depicts the overall flow and timing of training and support provided to schools during SWITCH.



Figure 5. Timeline of SWITCH Training and Support.



Figure 4. Sample School Planning Reports

## Evaluation of the Feasibility of SWITCH Program Implementation

The evaluation captured the degree with which schools adhered to the 'quality elements' and the degree with which they followed 'best practices' for programming in the classroom, lunchroom and physical education settings. Descriptive analyses were used to summarize the mean responses for School Implementation and Setting Implementation in the eight pilot schools. Variability in item specific responses were examined qualitatively to better understand the quality elements and best practices that were easier or harder to implement. Overall indicators of implementation (obtained from Checkpoints 3 and 4) revealed implementation rates ranging from 2.0-2.8 on a 3-point scale (Figure 6). Variability in setting level implementation is in Figures 6-9).

Figure 6. School Team Reported SWITCH Implementation

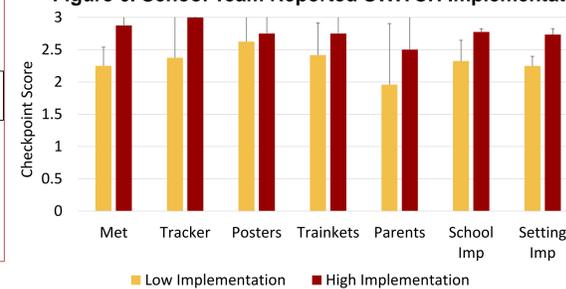


Figure 7. Lunchroom Reported SWITCH Implementation.

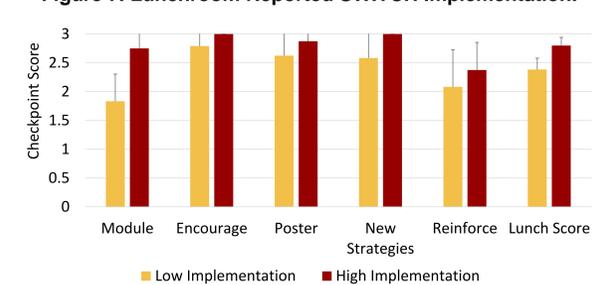


Figure 8. PE Reported SWITCH Implementation.

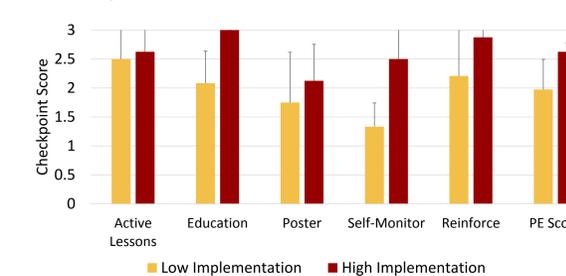
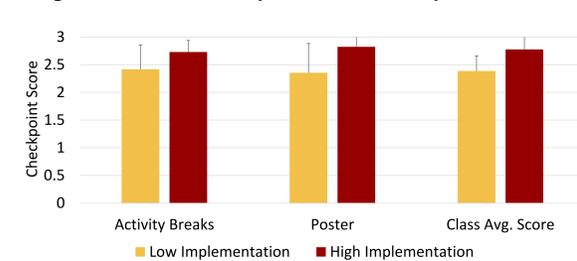


Figure 9. Classroom Reported SWITCH Implementation.



Supplemental analyses examined the impact of the web-based tracking tool used to promote behavior change in the three target behaviors: PA ("do"), SB ("view"), and FV consumption ("chew"). There was wide variability in school-level tracking with tracking rates ranging from 0% to 90% (see Figure 10). However, exploratory analyses demonstrated that children with high tracking rates had significant gains in minutes of reported PA (mean change= 7.76 minutes, 95% CI = 5.57-9.95;  $p < .0001$ ) from baseline to follow-up as assessed with the online Youth Activity Profile tool (See Figure 11). Significant changes were not observed for indicators of SB or FV but the results support the utility of the web-based system to enable schools to promote behavior change.

### SWITCH Tracker

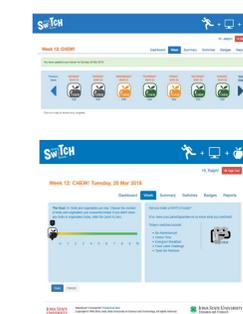


Figure 10. Student tracking rates by school.

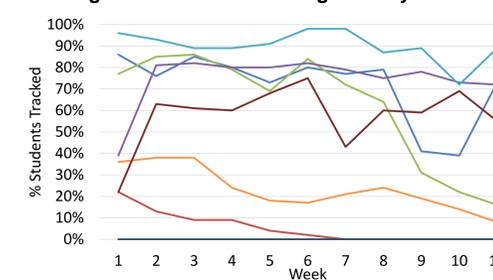
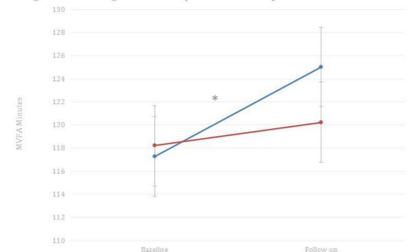


Figure 11. Change in MVPA by Individual Implementation



## Conclusion

The utility of the SWITCH implementation framework was evidenced most directly by the fact that schools were able to independently run SWITCH on their own. The evaluation supports the feasibility of the planned approach and provides insights to facilitate the broader dissemination of SWITCH with our state / county 4H collaborators. The results support the importance of the web based tracking to achieve changes in student outcomes. Future research questions are outlined below :

- Evaluate the utility of enhanced Extension-based support on school implementation of SWITCH.
- Evaluate the factors that influence the capacity to effectively implement SWITCH.
- Evaluate social and environmental factors that moderate the effectiveness of SWITCH on youth outcomes.