Abstract: Past its Expiration Date: Maximizing Relevance, Effectiveness and Rigor in a Longitudinal Design

One of the significant drawbacks of a multi-year evaluation design is that the key research questions may no longer be relevant by the time the study has concluded. While other challenges associated with a longitudinal design, such as confounding effects, cumulative attrition, and so forth can be difficult, once the research objective becomes irrelevant the other challenges are somewhat moot. In such cases, the direction of the research may need to be adjusted mid-stream in order to provide results that are relevant and actionable. The question is, how to make these adjustments while retaining rigor?

The author will describe how a five-year randomized control trial is being reconceived and expanded to improve it’s utility. The author will describe the original design and the changes that have occurred to make the original goal of the study irrelevant. However, two design options are being pursued that would broaden the relevance of the study beyond the original program.

Research Question: The evaluation of the Healthy Schools Program (HSP) will be used as the exemplar in this presentation. The goal of this evaluation was to estimate the relative effectiveness of two models of HSP implementation support; onsite and online. As background, the Funder (JPB Foundation) and the Program (the Alliance for a Healthier Generation) had set ambitious goals for the expansion of the HSP, requiring a departure from the traditional (and expensive) on-site support model. They had recently developed an on-line model of support, but were wary about implementing it on a wide scale, and wanted to base their decisions on a rigorous impact evaluation.

The evaluation was therefore designed to compare these two support models over four years in terms of schools’ (1) success adopting policies and practices to support wellness, (2) implementation fidelity, (3) program retention, and (4) their cost effectiveness.

Setting: There are currently 29,000 schools across the nation implementing HSP. A non-representative national sample of 130 schools in 24 districts and 14 states were recruited to participate in the evaluation. To be eligible to participate in the study, the schools must a) not have used HSP in the past, b) serve some combination of grades K-5, and c) have more than 50 percent of students eligible for Free and Reduced Price Lunch. All 130 schools began implementing HSP during the 2014-15 school year. By the end of year two,10 sites had dropped out, leaving 120 schools. (Overall attrition is calculated to be 7.7%; and differential attrition is 9.2% - within the WWC 'liberal' boundary)

Intervention. The Alliance for a Healthier Generation (AHG) created the Healthy Schools Program (HSP) to support schools in creating a healthy environment for students. Using a six-step process, schools are provided with support (either through onsite visits, or an online program) to check their progress, make improvements, learn from successes and challenges, and keep improving. Schools receive support to increase opportunities for physical
activity and to provide healthier foods for students and staff. HSP has adopted the CDC’s School Health Index (SHI) to help schools assess their progress towards these goals. The SHI includes the following six wellness categories:

1. School health policies and environment;
2. Health education;
3. Physical education and other physical activity programs;
4. Nutrition services;
5. Health promotion for staff; and
6. Family and community involvement.

Research Design. To assist the program staff and their funder make informed decisions regarding the proposed expansion of HSP, we randomly assigned 130 HSP schools to one of the two methods of support (after blocking on school location and percent FRPL). After schools had completed the four-year program, results would be compared and a cost-effectiveness analyses conducted. At baseline, both groups were statistically equivalent on all key factors—baseline equivalence will be assessed again at the conclusion of the study, on the post-attrition sample. Because some key outcome data are self-report, we conducted a validation study of this data source. Using independently verified data from a random sample of 45 participating schools, we determined that the self-report data were sufficiently reliable to be used. A series of HLM models (schools nested within districts) will be used to determine the extent to which schools receiving online support differ from those receiving onsite support in school-level policy changes that support wellness goals. Non confirmatory analyses will explore whether the two groups implemented HSP with differing levels of fidelity, as well as whether retention in the program differed across the two groups. A cost effectiveness analyses is also planned.

Findings. Over the first two years of the study, AHG administrators improved and expanded the online support mechanisms, making the support more proactive and intensive. The online support started taking a larger role as new schools were recruited into the program, with a blended support model (a combination of onsite and online) gaining traction. Also, schools that contain fewer than 50 percent FRPL students, and schools graduating the program were also provided with online support. It was clear that the program could not wait two more years for the results of the evaluation, and that the online model was being expanded and implemented ahead of the evaluation findings. In short, the program and funder did not need us anymore – but there were already some sunk costs.

The solution was to expand the focus beyond the specific program under study. To do this, we wanted to add additional study arms – ideally a control group as well as an additional treatment. In this way, we would have a continuum of support intensity, from no support (new control arm), low support (online model), medium support (onsite support) and a new high intensity model of onsite support. By providing a range of support options, any kind of program working with schools could benefit from the findings of the study.

The presentation will describe how these two additional study arms were identified and incorporated into the evaluation design with very minimal additional cost. The methodological challenge of incorporating several quasi-experimental contrasts within an originally experimental design will also be addressed.

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