Reviewer’s report

Title: Hand hygiene instruction decreases illness-related absenteeism in elementary schools: a prospective cohort study

Version: 1 Date: 24 October 2011

Reviewer: Charles Vukotich, Jr.

Reviewer’s report:

There have been lots of studies of hand hygiene and absenteeism. This is new in that it focuses on the effect of instruction in hygiene in the process.

MAJOR

1. Teacher’s perceptions paragraph 1: With only 30 teachers in their sample, the authors should have made a bigger effort to get everyone 76% response is low in this instance. It is unclear of the relevance of reporting by school. This should be revised to report by control and intervention. It may even be possible that there is a statistically significant result in this data.

2. Teacher’s perceptions paragraph 2: I am concerned that there was no effort to determine usage. The discussion should be control vs. intervention, not by school.

3. DISCUSSION/conclusions: What is the implication of the fact that the differences on absenteeism didn’t persist beyond flu season. This should be discussed.

MINOR

1. Abstract METHODS: It says here that classrooms were assigned randomly by grade to intervention or control within the same school. This information is not repeated in the paper itself. Why wasn’t this assignment done by school to avoid cross contamination between classrooms in the same school. It’s possible that students in one class learned about hand washing from other students in their grade.

2. Study Design paragraph 2: Why was alcohol based hand sanitizer not used? It has been shown to be the most effective hand sanitizer and sued successfully in schools without incident.

3. Study design paragraph 2: No evidence is presented on hand sanitizer or soap use. How do we know if students used these, and what was the extent of use. A better design would have measured use during some period, and looked at differences in use.

4. Statistical Analysis paragraph 2: The authors fail to mention the presence of H1N1. This was a very special flu season and very unusual in its timing. The activity around H1N1 would have an influence on the schools. This is a
significant confounder that is not discussed. This is not mentioned until the section on study limitations.

5. Results: Absentee Rates: The authors failed to note that October was the peak of H1N1 activity. The authors fail to discuss their statistical results. It is odd that there is no statistical significance in either school, but just in the sample as a whole. This doesn't invalidate the result, but the statistical implications should be further analyzed and discussed. The authors need to dig a little deeper. Also, figure 3 needs to be titled, and the lines labeled. I assume that one is control and one intervention, but it doesn’t say.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that i have no competing interests.