

Health Corner by Maian Pediatrics

As October 15 (**Global Hand washing Day-courtesy of the Global Hand washing Partnership**) approaches, Maian Pediatrics inaugural contribution to the school newsletter is an overview of hand hygiene.

The Centers for Disease Control and Prevention (CDC) tells us that about 52.2 million, under 17 years old, suffer from the common cold each year. This leads to almost 22 million missed days of school. You can imagine how much lost work time this leads to for family members of those students missing school. CDC reports also show 5-20% of the U.S. population contracts the influenza virus each year. Diarrheal illness is second only to colds when it comes to missed work or school days. **Hand washing is important because these are illnesses acquired easily by getting the offending microbe on the hand then transferring it to the mouth/nose. We understand this concept, it makes sense to us.**

Interestingly, this general concept was not universally recognized until relatively recently. A little history: in 1846 Ignaz Semmelweis notice that doctors/medical students caring for women on the maternity ward had a much higher incidence of complications and deaths than those cared for by midwives. He hypothesized that this was because the students were coming from the cadaver labs and carrying some “disease carrying property on them” and once implementing hygiene measures this improved. Six years later this phenomenon was again appreciated by a nurse involved in the care of the injured during the Crimean war. Her name was Florence Nightingale and incidentally she was just trying to rid the ward of “miasmas” (essentially bad smells that caused disease).

This concept of hand washing was not universally accepted by the public until the 1980's. Thanks to more than 2,700 studies devoted to hand washing, we have a lot of evidence that tells us hand washing is one of the most important ways to avoid contracting disease. One study showed that in households given plain hand soap and promotion of hand washing there

was a reduction in incidence of pulmonary infections 50% in comparison to control population (no soap or promotion). Also, there was 53% lower incidence of diarrhea, and 34% lower incidence of impetigo.

Several studies have shown that scheduling hand washing throughout the school day has been shown to significantly reduce absenteeism, one such study showed that reduction to be 50%!

Other studies in relation to hand washing include: children placed into hand washing promotion groups vs. no hand washing group (controls) showed that although there was no difference in physical growth there was a difference in global development quotients of those in hand washing groups at both 5 and 7 years of age; these results are comparable to those same differences measured in children at risk enrolled in public preschools (had significantly better development quotients) vs. those at risk NOT enrolled in those pre-schools within the U.S. Interestingly it's been shown that there is no difference in effectiveness of antibacterial hand soap vs. regular hand soap. Thus, it behooves us to teach our children proper hand hygiene and to reinforce those behaviors from time to time.

Here are tips to good hand washing provided by the Global Hand washing Partnership: wet hands, cover wet hands with soap, scrub all surfaces including between the fingers, under fingernails, palms and backs of hands for at least 20 seconds (sing one verse of “happy birthday to you...”). Rinse well with running water and dry on a clean cloth/paper towel or letting air dry. When to wash hands: the two primary times to wash hands are after contact with feces (such as using the toilet or cleaning a child) and before contact with food (preparing food, eating, feeding, and so on). Other CDC recommendations include: after blowing your nose, coughing, or sneezing; after contact with an animal, animal feed, or animal waste; after handling pet food or pet treats; and after touching garbage. If you would like to read more about this, please refer to the CDC link as a reliable starting point:

<https://www.cdc.gov/handwashing/partnerships.html>

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