



Training to proficiency in the WHO hand hygiene technique

Gerard Lacey¹, Mary Showstark², James Van Rhee²

¹School of Computer Science and Statistics, Trinity College Dublin, The University of Dublin, Dublin, Ireland

²Physician Assistant Online Program, Yale School of Medicine, New Haven, CT, USA

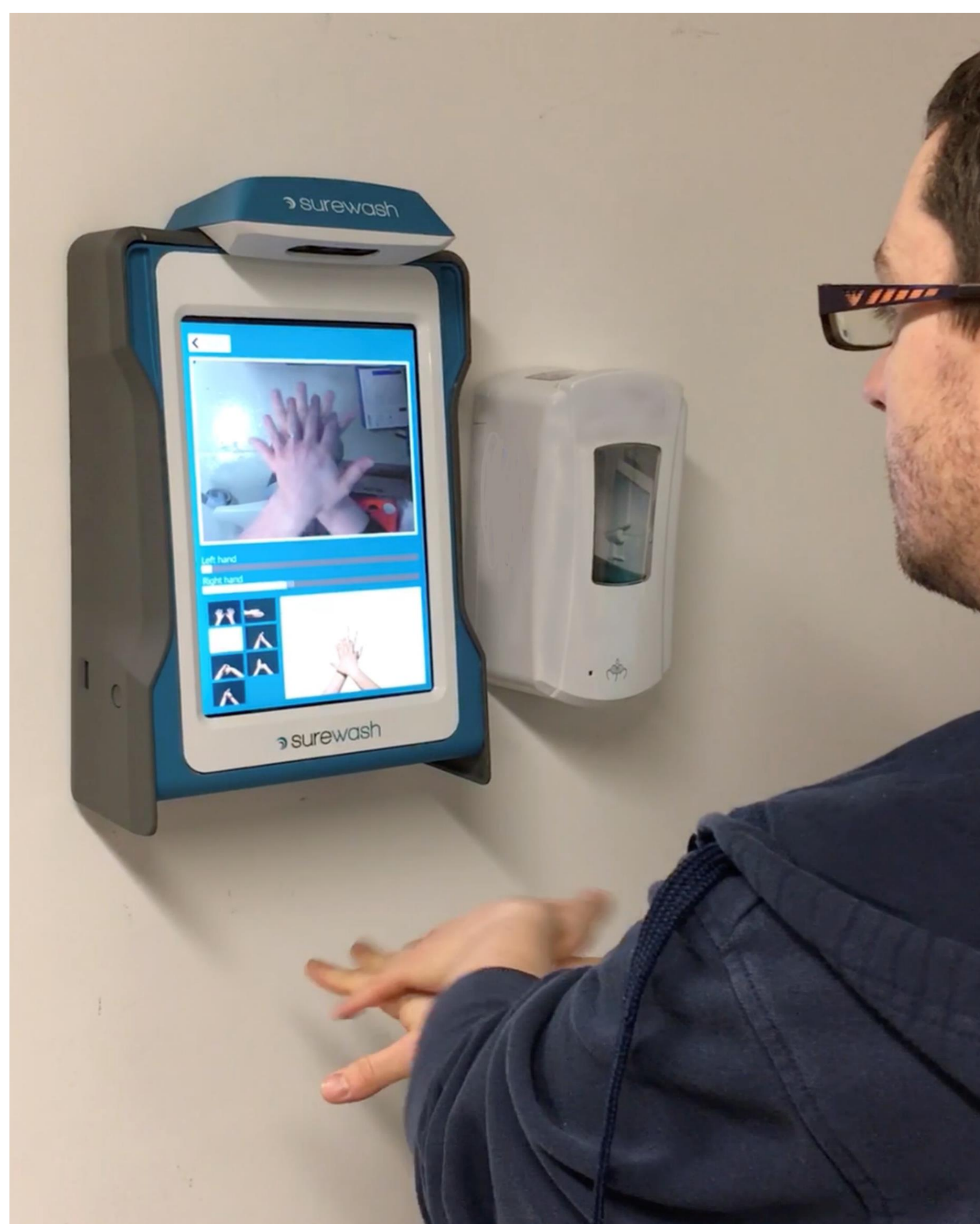
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Objectives:

Hand hygiene is critical to patient safety, but low compliance is often reported. Although training-to-proficiency is common for surgical skills, no proficiency-based training program for hand hygiene has been reported in the literature. This study developed a proficiency-based training program for the WHO hand hygiene technique and assessed the amount of training required to reach proficiency. The training was delivered as part of a 5-day induction for Physician's Assistants.

Methods:

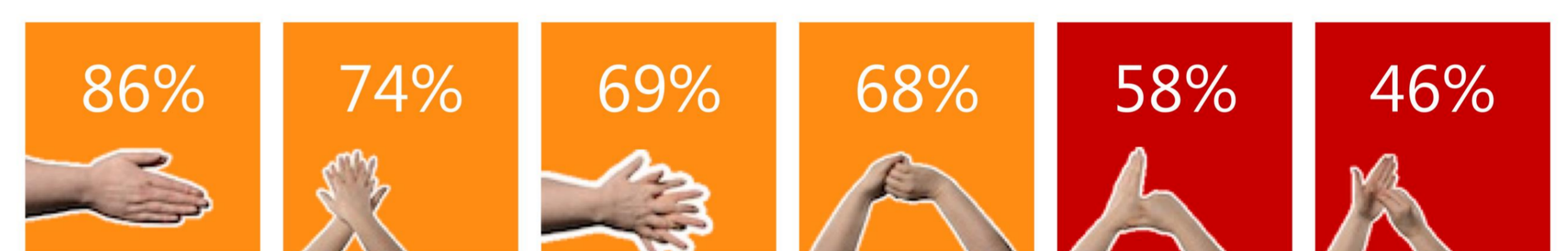
42 Students used a hand hygiene training simulator to objectively assess hand hygiene technique over a 5-day period. Proficiency was determined when students demonstrated the WHO hand hygiene technique in under 42 seconds. The students also completed a post-intervention questionnaire.



Results:

The average training episode lasted 2.5 minutes and consisted of 4.5 hand hygiene exercises. The average student completed 5 training episodes (one per day) taking a total of 17 minutes. 40% (17) of the students achieved proficiency within the 5-days.

Proficiency was strongly correlated with the number of training exercises completed ($r=0.79$, $p < 0.001$) and the total time spent training ($r=0.75$, $p < 0.001$). Linear regression analysis predicted that the 32 hand hygiene exercises or a total of 23 mins training were required to achieve proficiency.



The overall pass rates for each of the steps of the WHO protocol, showing that students took longer to learn the fingertip and thumb technique than the other steps

	Tutorial	Level 1	Level 2	Level 3	Level 4	Level 5
Number passed this level	42	35	30	28	23	17
% Achieving each proficiency level	100%	81%	70%	65%	53%	40%
Number with each proficiency Level	7	5	2	5	6	17
% with this proficiency level	19%	12%	5%	12%	14%	40%
Avg. Minutes spent training	5.49	8.22	17.83	17.90	21.11	22.88
Avg. Number Training sessions	4	6	23	17	24	27

The detailed results in hand hygiene proficiency achieved and the relationships with training time and the number of training sessions, 42 subjects, Yale, 2018

Conclusions:

This is the first study to develop a train-to-proficiency program for hand hygiene and estimate the amount of training required to achieve proficiency. Given its importance to preventing healthcare acquired infections (HAIs) medical education programs should consider making sufficient time and resources available to develop proficiency in hand hygiene technique.

Download a copy of the full paper here

