

specificity was 98.3%. Four different devices were tested; no significant difference in terms of sensitivity (range 93.2% to 100%) and specificity (range 97.6% to 100%) was observed between the 4 devices.

Conclusion: The performance of SmartRub® in the currently tested clinical environment was outstanding. Objective measures of sensitivity and specificity indicate the promise of SmartRub® to capture behaviors associated with individual ABHR use among HCWs in clinical conditions.

Disclosure of Interest: None declared

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VIEWS AND EXPERIENCES OF HEALTHCARE WORKERS ON THE USE OF AN INNOVATIVE WRISTBAND (SMARTRUB®) TO IMPROVE HAND HYGIENE ACTION

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Introduction: SmartRub® powered by iQati™ is an innovative wristband that provides automatic and individual feedback on the correct duration of hand friction and volume of alcohol-based handrub (ABHR) used.

Objectives: To address the views and experiences of healthcare workers (HCWs) regarding SmartRub®.

Methods: In March 2018 we emailed a questionnaire to 97 participants of a 6-month clinical trial aimed at testing the effect of SmartRub® on hand hygiene (HH) compliance. The 1st part of the survey was based on the Theoretical Domains Framework and the Technology Acceptance Models and included the constructs perceived usefulness, perceived easy of use, attitude, subjective norm, facilitating conditions, anxiety, voluntariness and behaviour intention. The 2nd part inquired about HH: knowledge and beliefs on self-effectiveness, work motivation, and professional role.

Results: A total of 70 HCWs (72%) returned the questionnaire: 41 nurses, 22 auxiliary nurses and 7 others. The majority agreed that SmartRub® was helpful as a reminder of the correct performance of HH action (55). Most perceived the tool comprehensible (49) and easy to use (47). Only 19 HCWs were concerned about confidentiality issues and 16 found that using the wristband bothered the performance of clinical activities. 40 HCWs would continue to use it after the trial once technical issues were resolved. SmartRub® is perceived as a great tool to train students (62) and new HCWs (59), but ultimately, it is regarded as potentially useful to improve HH among all HCWs (53). Volume of ABHR, duration, and technique of HH are seen as important to prevent healthcare-acquired infections by 63, 64 and 63 HCWs, respectively. After participating in the trial, HCWs affirm to use more ABHR (36), and rub hands longer (43).

Conclusion: SmartRub® is perceived by the majority of HCWs as an easy and useful tool for HH training. Up to a half of HCWs affirm to have changed their behaviour towards HH regarding the volume of ABHR and duration of hand friction after the use of SmartRub®.

Disclosure of Interest: None declared

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UNDERSTANDING THE ACCEPTABILITY OF DIFFERENT ABHR FOAM DOSE SIZES WITH HEALTHCARE WORKERS IN THE CONTEXT OF THEIR HAND SIZE, FREQUENCY OF USE, PROFESSION AND EXPERIENCE.

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Introduction: Effective ABHRs and healthcare worker (HCW) compliance to hand hygiene guidelines are important in the prevention of infection transmission in healthcare settings. Compliance to hand hygiene guidelines is affected by many factors including education, ABHR availability, time pressure, skin health and user acceptance of the dose size.

Objectives: To assess different ABHR foam dose sizes that are within the WHO recommended drying time of between 20-30 secs (1.3, 1.5, 1.6 and 1.7mL) with a variety of healthcare workers and consider how repeated use, hand size and years in the jobs might affect acceptability.

Methods: A total of 197 HCWs evaluated a random combination of 3 out of the 4 dose sizes, in a random order, during a central location test at Mount Sinai Hospital, CA. the acceptability of each dose was assessed and rated on a 7-point agreement scale based on their level of agreement with the following statement: 'this product is ideal for me and my patients'. The number of 'acceptability' responses, and the number of top box responses (5-7) for each dose size were analysed using the Chi-Squared test statistical method.

Results: - 80% of assessments scored 1.3ml and 1.5ml as acceptable opposed to 70% for 1.6ml and 1.7ml. 1.3ml was rated significantly higher than 1.6ml and 1.7ml on ideality.

- Considering the first product tested only, there were no significant differences in dose size rating. When multiple doses were tested, 1.3ml scored higher than the other doses.

- Dose size acceptability was influenced by hand size - larger hand sizes were more accepting of the doses

- HCWs employed by Mount Sinai for less than 3 years were less accepting of the dose sizes than those working at the hospital for 6-20 years.

- 47% of HCWs felt all 3 of their assessed dose sizes were acceptable.

Conclusion: When defining the right dose, testing in isolation does not reflect the effect of repeated use. There is a decline in acceptability after 1.5ml, with 1.3ml being the more favoured dose. Smaller doses may therefore increase hand hygiene compliance. Hand size was also an important factor affecting dose size acceptability.

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EVALUATION OF VIRUCIDAL EFFICACY OF ALCOHOL-BASED HAND RUBS AGAINST NOROVIRUS – COMPARISON OF INTERNATIONAL TEST METHODS

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Introduction: The virucidal efficacy of alcohol-based hand rubs (ABHR) is essential ensuring infection prevention. While in Europe virucidal claims are accepted, the FDA does not allow such claims. Efficacy can be tested with in-vivo methods including the whole hand method ASTM E2011-13 and EN 1500.

Objectives: We studied the activity of a commercial ABHR and 70 % ethanol as reference against the clinical relevant norovirus using the murine norovirus (MNV) as surrogate. The question was, how to get scientific and regulatory acceptance evaluating virucidal efficacy of ABHR.

Methods: The reference "70% (w/w) ethanol" and a commercial "preparation" with 80% (w/w) ethanol as active agent have been included in our study. The test virus was MNV strain S99. Activity tests have been performed in-vivo according to ASTM E2011-13 with five subjects in each group and in a cross-over design based on EN 1500 with 19 subjects.