

**NHS Improvement June 2018**

**SBAR: Automated/electronic systems for hand hygiene monitoring**  
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<b>Situation</b>	This SBAR is a position statement from NHS Improvement with regards to the use/implementation of electronic monitoring devices across NHS England to improve hand hygiene practice/compliance.
<b>Background</b>	Following a Government ministerial debate on 'raising standards of infection control in the NHS', further information was requested of NHS Improvement with regards to the potential effectiveness of automated/electronic hand hygiene monitoring systems being used across NHS England to improve hand hygiene compliance.
<b>Assessment</b>	<p>Hand hygiene is an essential part of any infection prevention programme and for that reason compliance with hand hygiene policy is considered a good quality indicator for hospital patient safety/quality improvement.<sup>1</sup> Although there are many strategies aimed at enhancing hand hygiene e.g. campaigns and staff education, it is difficult to increase compliance and even more difficult to ensure that improvement is sustained.<sup>2</sup></p> <p>Researchers and industry have been exploiting modern technology to develop automatic hand hygiene monitoring systems as an intervention to improve hand hygiene compliance on the basis that these systems have several advantages over direct observation of practice i.e. the possibility of continuous monitoring over time and automatic data download and analysis; mitigation of the Hawthorne effect; and minimal human resource requirements.</p> <p>However, the WHO (2013) systematic review of the literature highlights limitations inherent to the technologies tested;<sup>3</sup> whilst the electronic device provides information on frequency, time and location of use, and trends in hand disinfection events overtime, these systems do not monitor against standard hand hygiene indications,<sup>1</sup> nor do they evaluate that the hand hygiene practice performed is appropriate and optimal. The WHO concluded that there is limited evidence to validate the use of electronic devices compared to direct observation.<sup>3</sup></p> <p>Direct observation is considered the gold standard method for hand hygiene monitoring; it is recognised that it is limited to time and place, is time consuming and potentially observer dependent. Nevertheless, a recent Cochrane review demonstrated that timely performance feedback is the most effective way of securing hand hygiene adherence.<sup>4</sup> Gould et al (2017) reported that whilst technological systems to monitor hand hygiene practice may overcome the Hawthorne effect, they are costly and are not widely used outside research studies and thus their actual cost-effectiveness remains unknown.<sup>2</sup></p> <p>Realising the full benefit of investment in electronic hand hygiene monitoring</p>

	<p>systems requires careful consideration of implementation strategies e.g. selecting a system that minimises disruption to the physical healthcare infrastructure and to clinical workflow, and that fits with the organisations culture and budget; planning for ongoing support and maintenance; and ensuring information from the system is presented in a meaningful way to empower and inspire staff.<sup>1</sup></p> <p>Thus, whilst these new technologies present a number of advantages and may become the future approach to hand hygiene compliance monitoring, NHS providers are currently calling for support with their data collection methodology and reporting; outcomes of a scoping exercise during 2017/18 on making improvements to hand hygiene monitoring (March, 2018):</p> <ol style="list-style-type: none"> <li>1. Produce a national policy (practice guide) for hand hygiene that all provider organisations can implement</li> <li>2. Produce a national policy for PPE that highlights appropriate and inappropriate glove use in an effort to improve hand hygiene practice</li> <li>3. Explore and implement new resources for hand hygiene campaigns, including visual prompts such as posters, hand hygiene competences, and compliance monitoring data collection competences</li> <li>4. Develop a standardised hand hygiene audit tool that providers can choose to adopt informing the need to ensure data is collected in accordance with agreed methodologies</li> <li>5. Promote the use of new (standardised) quality metrics for measuring the effectiveness of an integrated system-wide approach to hand hygiene</li> </ol> <p>These requests/requirements have been included within the 2018/19 NHS Improvement work stream on improving hand hygiene practice across NHS provider organisations in England.</p>
<p><b>Recommendations</b></p>	<p>To ensure hand hygiene compliance monitoring has a truly integrated system wide approach that aims to improve hand hygiene practice and results in a meaningful quality measure.</p> <p>NHS Improvement recommendations (Clinical Fellow working in collaboration with all key stakeholders):</p> <ul style="list-style-type: none"> <li>• Agree a national hand hygiene and PPE policies that will replace locally devised documents</li> <li>• Review extant hand hygiene campaign resources with stakeholders and agree a suite of national hand hygiene resources for use across healthcare settings</li> <li>• Agree on a meaningful, national, quality measure(s) for hand hygiene</li> <li>• Agree on a national hand hygiene data collection and reporting methodology i.e. where data should be collected, how often it should be collected, to whom it should be reported and where it should be published.</li> </ul> <p>It would be the intention that all other health and social care providers could use the same resources; this could be reinforced by the H&amp;S Care Act.</p>

### Reference List

- (1) World Health Organization. WHO guidelines on hand hygiene in health care. First global patient safety challenge clean care is safer care. 2009.
- (2) Gould DJ, Creedon S, Jeanes A, Drey NS, Chudleigh J, Moralejo D. Impact of observing hand hygiene in practice and research: a methodological reconsideration. *Journal of Hospital Infection* 2017;95(2):169-74.
- (3) World Health Organization. Systematic literature review of automated/electronic systems for hand hygiene monitoring. Preliminary results. 2013.
- (4) Gould D, Moralejo D, Drey N, Chudleigh J, Taljaard M. Interventions to improve hand hygiene compliance in patient care: Reflections on three systematic reviews for the Cochrane Collaboration 2007 to 2017. *Journal of Infection Prevention* 2018;19(3):108-13.