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Hand hygiene and infection control in limited-resource countries: still a big challenge



Sir,

I read with great interest the article by Alshehri *et al.* who investigated effective interventions on hand hygiene (HH) compliance among healthcare workers (HCWs). This mini systematic review indicated that implementation of a multi-modal intervention can increase HH compliance [1]. The role of HH is very important in the prevention of healthcare-associated infections (HCAIs) [2], but HH compliance among HCWs is low, and is a particular challenge in low-income countries. An evaluation of HH compliance among nurses in an oncology centre in Iran found the rate to be just 12.8% [3].

In developing countries, there is an extended scope of social and system deficits, and an absence of collection and reporting of incidences of HCAI [4]. The key factors determining HH compliance in developing and developed regions differ. Borg *et al.* identified infrastructural issues such as the numbers of sinks and the quality of HH products as critical factors in eight developing countries [5]. In contrast, heavy workload and skin problems were the main reasons for non-compliance in Western countries. Indeed, in rich countries with well-resourced hospitals and strong infection control, structural and organizational problems are less important factors.

The contrast between countries is demonstrated by a comparison of the situation in Turkey, a country with 'limited' resources, and the Netherlands, a country with 'reasonable' resources. Rates of HH compliance are poor in both countries, despite better availability of hand hygiene facilities in the Netherlands, but rates of HCAI are higher in Turkey. Challenges in Turkish hospitals include an absence of single or isolation rooms, and poor air quality. Thus, poor HH is not the only determinant of HCAI rates [6]. In addition, many countries with limited resources do not have suitable organization chart, hospital manager support, and correct planning for infection prevention and control (IPC) or a trained IPC team [7].

The prevention of HCAIs in limited-resource countries is a critical challenge for global patient safety that needs a strategy, supported by tools, to mobilize an unprecedented global movement. Resource-poor countries require better systems for gathering and reporting HCAI rates. Knowledge of HCAI rates can then be used to measure improvements as national programmes to reduce HCAIs, including improvements in HH compliance, are rolled out following the World Health Organization's multi-modal strategy.

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