Journal of Hospital Infection (2006) **62**, 311–318

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Multicentre study on hand hygiene facilities and practice in the Mediterranean area: results from the NosoMed Network

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Received 21 June 2005; accepted 28 September 2005
Available online 10 January 2006

KEYWORDS
NosoMed;
Mediterranean region;
Hand hygiene;
Facilities; Practices;
Audit

Summary Hand hygiene literature is scarce in the southern Mediterranean area. In order to establish a baseline position, a study was performed in four Mediterranean countries. Seventy-seven hospital wards in 22 hospitals were enrolled and information on hand hygiene practice and facilities were collected. The overall compliance rate was very low (27.6%), and was significantly higher where the perceived risk was considered to be high. Intensive care units showed the highest level of compliance. Analysis by country indicated higher compliance in Egypt (52.8%) and Tunisia (32.3%) compared with Algeria (18.6%) and Morocco (16.9%). Facilities for hand hygiene, particularly consumables, were shown to be deficient. Multi-approach programmes combining the production of official local recommendations, education and regular evaluation of hand hygiene practice are much needed to improve the present situation.

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0195-6701/$ - see front matter
doi:10.1016/j.jhin.2005.09.023

Introduction

The importance of hand hygiene practice in preventing nosocomial infection is now well established in many countries, backed by considerable literature.[1-9] In the southern Mediterranean region, however, published studies are scarce. In order to establish a baseline position, a study was conducted within the framework of the NosoMed project to assess the availability of hand hygiene facilities and the quality of its practice.

Materials and methods

The study was carried out between September 2002 and August 2003 in 22 hospitals (four in Algeria, six in Egypt, four in Tunisia and eight in Morocco) as part of the NosoMed (Strengthening Healthcare Epidemiology for the Investigation of Nosocomial Infections in the Mediterranean Area) project. The latter was funded by the Directorate General for Research of the European Commission, and was set up in 2001 in nine Mediterranean countries (Algeria, Egypt, Spain, France, Italy, Morocco, Syria, Tunisia and Turkey).

Seventy-seven hospital wards, including medicine, surgery, intensive care and haemodialysis, were enrolled in this study, which was conducted by external auditors who followed training organized locally in each participating country.

Assessment of hand hygiene facilities

Information on hand hygiene facilities was collected according to a standard protocol based on usual recommendations[10] and consensually established by local experts (Table I). Data were collected using two standardized forms. The first form included characteristics of the unit (speciality, number of beds, patient rooms and treatment rooms), number of sinks per hospital unit, their distribution (treatment rooms, kitchens, patient rooms, medical offices), presence of a hand hygiene protocol and its availability for personnel. On the second form, the location, functionality (i.e. accessibility and working condition) and presence of all elements necessary for correct hand hygiene (including presence of a tap with non-manual control; presence of a liquid soap distributor; presence of a paper towel distributor; presence of towels and their type; presence of hand hygiene agents; plain, antiseptic or bar soap; presence of a waste bin and whether equipped with a non-manual control) were noted for each listed washing station.

Assessment of hand hygiene practice

Direct observation of practice was carried out for different healthcare worker (HCW) categories (physician, nurse, others) for 1-h periods. The study was carried out anonymously although the HCWs were aware why the auditor was present.

The following information was collected: (1) service speciality; (2) personnel category; (3) all activities carried out by the HCW; (4) risk level associated with each activity; (5) patient's status for infection and immunosupression; (6) presence or absence of a hand hygiene procedure; and (7) type of hand hygiene procedure (simple washing, hygienic washing or hand rubbing) and whether it was correct and adapted to the situation.

A list of activities requiring hand hygiene was set up in accordance with recommendations.[11,12] Table II describes different levels of risk associated with the corresponding adapted procedure in the context of microbiological efficacy. Table III represents the quality criteria corresponding to the correct hand hygiene procedure.

Judgement criteria

Rate (%) of compliance: the number of procedures carried out divided by the number of hand hygiene opportunities.

Rate (%) of adapted procedures: the number of adapted procedures divided by the total number of procedures carried out.

Table I Recommendations for hand hygiene facilities in hospitals

1	Handwashing sinks should be functional, accessible and in working condition
2	Taps should be equipped with non-manual controls
3	There should be a liquid soap distributor
4	Plain liquid soap and antiseptic soap should be provided
5	There should be a paper towel distributor
6	Paper towels should be for single use
7	There should be a waste bin with a non-manual control