HARTMANN

Overall compliance with hand hygiene increases after implementation of a hospital-wide hand hygiene programme

Observational study
performed at the University of Geneva Hospitals, Switzerland

WHAT WAS INVESTIGATED?

- **Overall hand hygiene compliance (HHC)** before and during implementation of a hand-hygiene campaign
- **Secondary outcome measures** were:
  - Healthcare associated infection (HAI) rates
  - Attack rates of methicillin-resistant *Staphylococcus aureus* (MRSA)
  - Consumption of handrub disinfectant

- HH Campaign consisted of:
  - Posters
  - Pocket bottles
  - Surveys and performance feedback

WHAT WAS THE RESULT?

- **Overall HH compliance increased significantly** from 47.6 % (1994) to 66.2 % (1997) (p>0.001)
- **Compliance with hand hygiene increased** from 13.6 % to 37 %

- **Alcohol-based hand rub consumption increased steadily** from 3.5 L (1993) to 15.4 L (1998)

- **Decrease of prevalence of HAI** from 16.9 % (1994) to 9.9 % (1998)

WHAT PRODUCT REFERENCE DOES THE STUDY HAVE?

Own formulation from Geneva. (alcohol-based formulation with 0.5 % chlorhexidine gluconate and skin emollients)

Improving hand hygiene compliance (HHC) was shown to coincide with a reduction of healthcare associated infections by 41 %.

Research for infection protection

Source: Pittet D *et al.* (2002) Effectiveness of a hospital wide programme to improve compliance with hand hygiene. The Lancet 2000;356:1307 1312.

BACKGROUND

Hand hygiene prevents nosocomial infections, but compliance with recommended instructions remains poor. The promotion of hand hygiene by implementing a hospital-wide programme has been investigated. Healthcare associated infections were measured in parallel.

GOAL

Goal of the study was to promote hand hygiene compliance. Healthcare associated infection rates, attack rates of methicillin-resistant Staphylococcus aureus (MRSA), and consumption of handrub disinfectant were secondary outcome measures.

DESIGN AND METHODS

The study took place at the Geneva university hospitals. Hand hygiene was promoted using posters at 250 strategic areas. Criteria were maximal visibility during daily work and during transit within the hospital. An own alcohol-based preparation with 0.5 % chlorhexidine gluconate and skin emollients was used. In order to be able to use the hand rub at the point of patient care pocket bottles were distributed on the wards and dispensers were attached to all beds. Compliance with hand hygiene was measured by observation. Performance feedback was reported twice per year. For the secondary outcome measures, healthcare associated infections were monitored according to the CDC criteria. The consumption of handrub disinfectant was monitored by the Pharmacy Department.

RESULTS

Between 1994 and 1997 data were collected from 2,509 observation periods and 20,082 hand hygiene opportunities. Overall compliance improved from 47.6 % (1994) to 66.2 % (1997) which is a significant increase (p < 0.001). Hand washing remained stable around 30 %, hand disinfection increased from 13.6 % to 37.0 % (Figure 1). Hand rub consumption increased from 3.5 l per 1,000 patient days (1993) to 15.4 l per 1,000 patient days (1998).

Prevalence of healthcare associated infections decreased from 16.9 % (1994) to 9.9 % (1998) which was significant (p = 0.04). (Figure 2) Overall incidence of MRSA infections decreased from 2.16 to 0.93 episodes per 10,000 patient days.

Figure 1: Modified from Pittet *et al.* (2002)
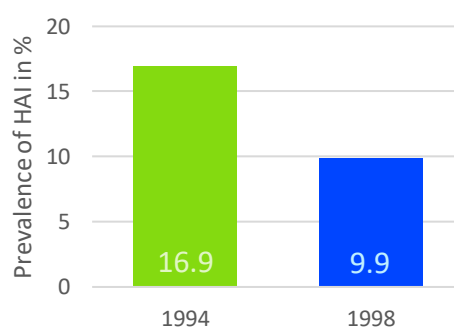
Figure 2: Modified from Pittet *et al.* (2002)

2.16 (1994)

0.93 (1998)
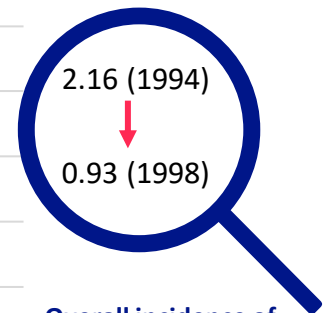
Overall incidence of MRSA infections/ 10,000 patient days

CONCLUSION

Compliance in hand disinfection can be improved by promotion and making the hand rub available at the point of care. Better compliance can reduce the rate of healthcare associated infection by 41 % and the rate of MRSA infections by more than 50 %.
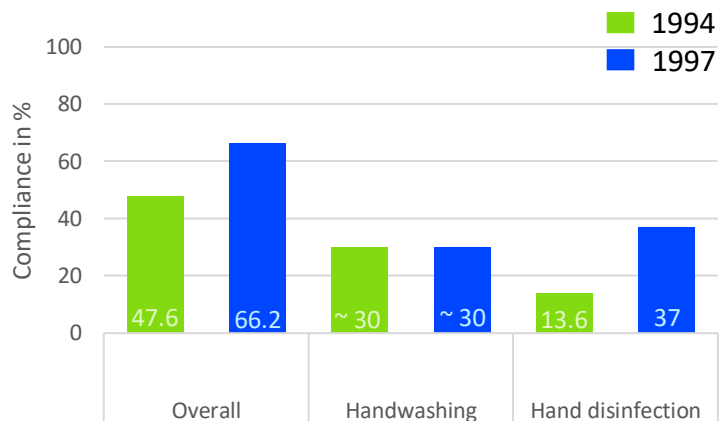
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