

# Local production of alcohol-based handrubs: from the experience of the University of Geneva Hospitals to the WHO hand hygiene improvement strategy

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## Background

Hand hygiene is the most effective measure to prevent healthcare-associated infection (HAI) but compliance among healthcare workers is poor. The use of alcohol-based handrub (ABH) is considered to be the gold standard for hand hygiene in most healthcare situations.

## Aim

To describe the cooperation between the departments involved in the HUG hand hygiene promotion campaign since 1995 and the WHO 1st Global Patient Safety Challenge.

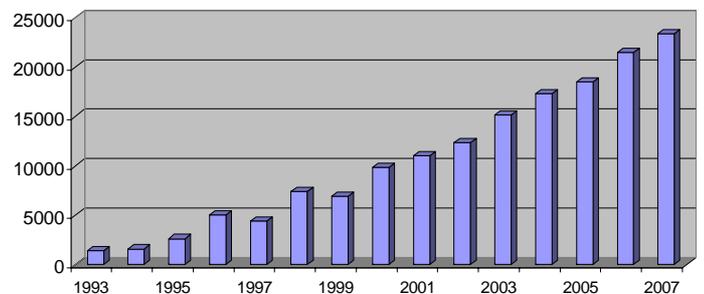
## Retrospective view

**Pharmacy** : In 1974 an ABH containing isopropanol and chlorhexidine was developed and long-term stability allowed series manufacture. Only small quantities were used in the HUG until an unprecedented institutional campaign launched in 1995, gave rise to a production increase from 2'600 litres in 1995 to 22'500 litres in 2007. In 2001 the hospital production was subcontracted to an industrial partner and the product Hopirub<sup>®</sup> was also validated according to the European efficacy standards.

## Hopirub<sup>®</sup> History



Utilisation d'HOPIRUB (litres)



"Talking walls"



It's in the pocket

**Infection Control Programme (ICP)** : The hand hygiene promotion campaign based on multiple components was led by the ICP and strongly supported by the HUG directorate. ABH was distributed in an original 75ml, flat pocket bottle with cartoon type labels to remind staff of the importance of hand hygiene. "Talking Walls" posters were strategically displayed throughout the HUG. The initiative met with great success and HAI prevalence was reduced from 16.9% to 9.9%. Hand hygiene compliance is continually being monitored at the HUG, A national campaign based on this model was launched in 2006 in more than 100 Swiss hospitals.

**WHO 1st Global Patient Safety Challenge** : launched in 2005, is aimed at preventing HAI worldwide and focuses on hand hygiene promotion. Experts from the HUG pharmacy and IPC and the WHO established a Task Force to identify products and methods for ABH production. Ethanol or isopropanol formulations similar to the HUG preparation that would be easy to produce in developing countries were identified. The stability was tested by the HUG pharmacy. Since 2005, 117 countries signed the WHO "Pledge" to tackle HAI and many have started local production in pilot hospitals according to the WHO recommendations. A pharmacist from Mali underwent training at both the ICP and the pharmacy of the HUG and set up production in a hospital in Bamako. 270 batches of ABH were manufactured in 18 months and tested using simple quality control methods. Distribution to health care workers in individual pocket bottles was a key factor determining the success of the hospital hand hygiene campaign and showed that hand hygiene promotion is feasible in a setting with limited resources.

Small scale production for Mali



In Bamako Hospital



The MALI challenge Bamako



WHO 1st Global Patient Safety Challenge



## Conclusion

Teamwork and know-how of both the HUG pharmacy and ICP over many years has finally led to close collaboration with the WHO and significantly contributed to the success of the 1st Global Patient Safety Challenge

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