

# The Role of Direct Feedback in Improving Hand Hygiene Technique

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## Introduction

- Hand hygiene is the single most important tool to prevent nosocomial infections. It is proven that electronic equipment helps to improve hygiene-related behavior by giving objective, instant feedback.
- The aim of this study was to analyze the effects of instantaneous objective feedback on hand hygiene technique.

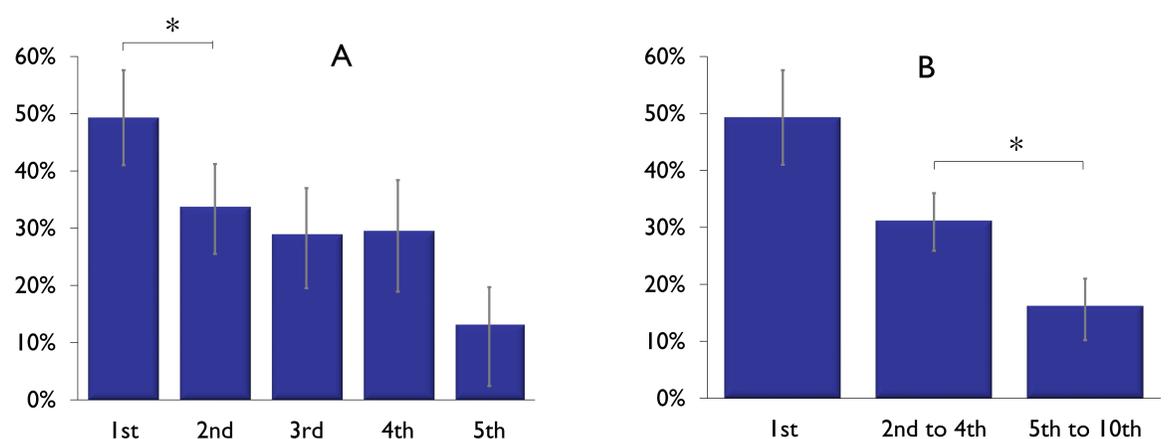
## Conclusion

- **Direct feedback by the Hand-in-Scan device enables correcting wrong practices and eliminates erroneous habits**
- **During 3–4-week-long follow-up studies, the average number of missed spots reduced significantly at every site**
- **Electronic equipment is an efficient mean to improve hand hygiene performance**

## Results

- **Average number of mistakes dropped significantly between the 1<sup>st</sup> and 2<sup>nd</sup> hand rubbing**
- **Significant improvement was detected comparing the outcome of 2<sup>nd</sup> – 4<sup>th</sup> occasions (clustered) with the 5<sup>th</sup> – 10<sup>th</sup> (clustered)**
- **The baseline value 1.5 average mistakes dropped to 0.35 after 5 hand rubbing events checked with Hand-in-Scan**

- Surface of hand was divided into 10 regions for clustered evaluation – based on previous studies.
- Number of missed spots in each region was compiled by an expert based on the recorded images (referred to as "mistakes").
- Performance was classified as correct or erroneous based on the total number of mistakes.



Rate of inadequate performances during the first 5 (a) and 10 (b) observations

## Methods

- 9 wards from 3 Hungarian hospitals were involved
- Using the brand new Hand-in-Scan Medical Trainer device
- Equipment was present for 3-4 weeks
- Participants used the device once every day
- 572 measurements were performed involving 129 healthcare workers

## Hand-in-Scan Medical Trainer



Hand-in-Scan assessment protocol:

- Login with unique identifier (RFID)
- Perform alcoholic hand disinfection (with UV-dyed ABHR)
- Insert hands for scanning, digital record
- Automatically performs the evaluation: highlights the missed areas during disinfection

## Contact

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