



Incidence of hand washing practices in Neonatal unit at Dr Bhimrao Ambedkar Hospital Raipur Chhattisgarh

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Abstract

Good hand hygiene compliance is essential to prevent nosocomial infections in healthcare setting (NICU). Direct observation of hand hygiene compliance is the gold standard but it is time consuming. An electronic settings (CCTV) monitoring allows continuous monitoring of its usage. Hand washing practice review by set of observers might help in behaviour change regarding hand washing practice. The purpose of this study is to determine compliance with hand hygiene protocols by electronic surveillance and reinforcing behaviour change.

Keywords

Handwashing, Neonatal

Aim

To Study incidence of behaviour change in hand washing after electronic monitoring of hand washing practices.

Objectives

To evaluate the usefulness of electronic device (CCTV) for monitoring alcohol-based hand rub use and hand washing. To compare incidence of hand washing practices before and after CCTV monitoring intervention.

Material and methods

Design of study: This is a prospective observational, intervention study.

Study duration: This study was conducted between January 2020 to December 2020.

Study population: This study was conducted among NICU staff including consultants, faculties, residents and nursing staff and aaya dais.



Study setting: This study was conducted in NICU of Department of Pediatrics, Pt JNM Medical College & Dr B.R Ambedkar Memorial Hospital Raipur C.G.

Sample size: Hand washing practices of all the 85 health care staff (including faculties, consultants, junior and senior residents, nursing staff and Aaya dais).

Inclusion criteria: All medical faculty and staff BRAM Hospital during the study period

Exclusion criteria: Relatives of patient and some NICU staff.

Methodology:

- It is Prospective Hospital based Interventional study conducted in the Departments of Paediatrics in Dr BRAM hospital.
- Hand hygiene practices before and after the education program were compared by guided observations.
- The incidence of nosocomial bloodstream infection per day at risk in new born will analysed by a segmented loglinear regression analysis.

Statistical analysis

Data was collected in predesigned Performa and entered in excel sheet and analysed using SPSS 20 version. Student's t test will be used to check the significance of difference between two parameters in parametric data. P value <0.05 was considered as statistically significant.

Results

Difference in mean rate of hand washing in before after CCTV monitoring

The mean hand washing rates before CCTV monitoring was 1.59 that improved to 5.85 after CCTV monitoring. The mean difference in hand washing rates was -4.259. The mean difference in hand washing rates was checked for significance using paired t test and it was



statistically significant (P=0.000).

Particulars	Mean	N	Std. Deviation	Std. Error Mean	Mean difference	T	df	P value
Hand washing rate before CCTV monitoring	1.59	85	1.072	.116	-4.259	-29.95	84	0
Hand washing rate after CCTV monitoring	5.85	85	1.230	.133				

Conclusions

The study shows good compliance to hand-washing practices after CCTV monitoring. As hand hygiene compliance increases a concurrent decrease in health care associated infection rate was also observed in this study. CCTV monitoring is helpful in behaviour change in hand washing practices. Innovative interventions may be required to improve hand-washing behaviour during night shift, and among parents.

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