

“Clean Hands Safe Babies”: A Quality Improvement Project to Improve Hand Hygiene Compliance Among Healthcare Workers at Neonatal Intensive Care Unit (NICU), Teaching Hospital Badulla.

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Introduction - Proper hand hygiene (HH) is a mainstay of infection prevention, especially in neonatal intensive care units (NICUs) where neonates are prone to healthcare-associated infections. An audit was conducted at the NICU of Teaching Hospital Badulla to assess HH compliance among healthcare workers (HCWs), followed by an intervention and re-audit to measure improvement.

Objectives - To assess baseline HH compliance, implement structured interventions and re-evaluate for improvement.

Methods - The World Health Organization (WHO) Five Moments for HH framework set as the audit standard. Observations were made by blinded, randomly assigned five trained HCWs using the WHO tool. HH observed for one-hour sessions and compliance percentage (CP) was calculated in each moment and each HCW category. The initial audit was conducted from 1/10/2023 to 30/11/2023. Then, health education programs and workshops were conducted in December 2023. The re-audit was done from 1/1/2024 to 29/2/2024.

Results - During Initial audit, 480 HH observations were made. Overall CP was 55%. HCWs specific compliance was highest among doctors (62.9%), followed by nurses (53.6%) and healthcare assistants (43.3%). Compliance according to the WHO Five Moments for HH - before touching a patient (1), before an aseptic procedure (2), after body fluid exposure risk (3), after touching a patient (4), after touching patient surroundings (5) were 65.5%, 61.8%, 51.5%, 48.2% and 48.2% respectively.

In the re-audit, 500 HH observations were made. Overall CP was markedly increased to 92.8%. HCWs specific compliance improved significantly, with doctors achieving 96%, nurses 91.6% and healthcare assistants 90.6%. Compliance across all five WHO Moments also increased notably: 1 – 94.8%, 2 – 91.6%, 3 – 90.3%, 4 – 93.8% and 5 – 92.3%.

Discussion - Implementation of structured health education programs and strict HH policies lead to significant improvements in HH compliance among HCWs. Periodic audits and sustained educational reinforcement are important in maintaining high compliance and minimizing infection risk.

Keywords - Hand hygiene, NICU, WHO Five Moments, infection control, audit, healthcare-associated infections