exposures. To determine the proportion of health workers with correct knowledge and practice in classifying solid medical waste and related factors at District 4 Hospital, Ho Chi Minh City. **Methods:** A cross-sectional study was conducted on 149 health workers at District 4 hospital in 2022. Self- administrated questionnaires including personal data, 50 knowledge questions and practice checklists for solid medical waste classification were used. Determine the relationship using the $\chi 2$ test, PR, and the 95% confidence interval. **Results:** Health staff have knowledge account for 87.25%; general practice 53,69%. Knowledge of color coding non-infectious hazardous waste accounts for less than 50%. Waste bin cleaning 9.4%, exposure reporting procedures 30.87%. The age group >30, the subclinical departments, the information sources from radio, and friends have a higher rate of practice correctly than the other group, $p < 0.05$. **Conclusions:** Health staff have correct knowledge account for 87.25%; correct practice account for 53.69%. Health facilities need to maintain training on solid waste classification knowledge, focusing on color coding, symbols, handling and responding to incidents of exposure to medical waste and occupational safety. Fully equipped with different means of communication to instruct, supervision classification, collection and transportation of solid waste to take timely remedial measures.

Keywords: classification; solid medical waste

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Infection rates, risk factors and microbial etiology of Cerebrospinal Fluid (CSF) shunt infections – a single centre prospective study from India

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Background/Objectives: CSF shunts are widely used in neurosurgery practice for temporary or permanent CSF diversion. Patients on CSF shunts are at risk of device-associated CNS infections particularly ventriculitis or meningitis. The study objectives were to delineate the risk factors and infection rates for various shunt procedures and their microbial etiology. **Methods:** This is a single center prospective cohort study. The study period was 2 years (October 2020- September 2022). Patients were categorised using IDSA criteria as Contamination or Colonisation or Infection. Device days were also collected from the Hospital information system (HIS) for calculation of infection rates. Microbial etiology was identified by culture of CSF and shunt catheter tips. Cox regression model was used to estimate hazard risk for various risk factors. **Results:** During the 2-year study period, 161 shunts were inserted.133 were ventriculo-peritoneal (VP) shunts, 19 were lumbo-peritoneal (LP) shunts, 6 were subduro-peritoneal (SDP) shunts, 2 were syringo- subarachnoid (SS) shunt and 1 cysto-peritoneal (CP) shunt. Hydrocephalus was the commonest indication for a shunt insertion (71.4 %). There were 8 VP shunt and 1 LP shunt infections during the study period. The average infection rates for VP and LP shunts were 6 and 5.2 per procedure, respectively. Gram negative bacteria caused most of the shunt infections (7/9, 77%). The most common organism causing shunt infection was *Klebsiella pneumoniae* (n=4, 44%), followed by *Staphylococcus aureus* (n=2, 22%). The risk factors which were independently associated with increased risk for shunt infection were Pre-OP ASA score >3 [HR:8.28, p - 0.013], presence of associated perioperative systemic [HR:3.89, p-0.01] or scalp infections [HR:3.53, p-0.005]. **Conclusion:** VP and LP shunt infection rates were similar in our study. *Klebsiella pneumoniae* was the commonest causative agent causing shunt infection. High Pre-OP ASA score and associated perioperative scalp or systemic infections were independent risk factors for shunt infection.

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The impact of hospital wide measures to reduce mupirocin resistance among methicillin-resistant *Staphylococcus aureus* in a Singapore hospital

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Introduction: Methicillin-resistant Staphylococcus aureus (MRSA) is a leading cause of healthcare associated infections. Colonization with MRSA increases the risk of subsequent nosocomial infection. The primary concern regarding widespread use of mupirocin is the emergence of mupirocin resistance. A prospective cross-sectional study in Singapore in 2013, found mupirocin resistance to be 31.6% in Changi General Hospital (CGH). Annual usage of mupirocin (g) in CGH was 36870 and hospital-onset MRSA bacteremia was 1.1/10,000 patient-days in 2013. **Objective:** To study the impact of hospital measures to reduce mupirocin resistance among MRSA by detection of mupirocin resistance in screening isolates. **Method:** Changi General Hospital is a 1000 bedded acute care hospital. Hospital wide measures were instituted in CGH to reduce mupirocin resistance in MRSA included a) universal body wash with Octenidine for all hospitalized patients in the wards with MRSA cubicles b) 2% mupirocin ointment removed from formulary (available for nasal decolonization only) A study was conducted on MRSA screening isolates from the Microbiology Laboratory between May and September 2019. These were obtained by swabbing nasal, axilla and groin on all newly admitted patients as part of an active surveillance program since 2013. The swabs were streaked onto MRSA^{ii}selective media plates which were incubated at 35 °C for 20 hours and stored at 4 °C. E-test was performed to determine the susceptibility and minimum inhibitory concentration (MIC) of MRSA isolates to mupirocin, oxacillin and vancomycin, following the CLSI guidelines for S. aureus. MPCR (multiplex polymerase chain reaction) assay was used for the simultaneous identification of *ileS*-2 (primers MupA and MupB) and mecA (primers MecA1 and MecA2). PCR amplification of *ileS*- 2 gene for high level mupirocin resistance and Mec A gene was performed on Touch thermal cycler. **Results:** 200 MRSA isolates were tested. E-test revealed 5 isolates were detected to be High Level mupirocin- resistant (2.5%) and 69 isolates were detected to be oxacillin-resistant (74%). The MPCR assay detected mecA gene in 100% and *ileS*-2 gene in 3 isolates (1.5%). **Conclusion:** Our study indicated the low prevalence of high level mupirocin resistance among MRSA screening isolates in 2019 in CGH. This suggested that the hospital wide measures to reduce mupirocin resistance were effective.

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Risk factors for Catheter-Associated Urinary Tract Infection (CAUTI) in sepsis patients at RSPAD GATOT SOEBROTO 2022: a quantitative study

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Background: Urinary tract infection (UTI) is the most dominant case, around 40% of healthcare-associated infections (HAIs). UTI related to