Health care-associated infections

WHO statistics

- Health care-associated infections are among the major causes of death and increased morbidity in hospitalized patients
- WHO prevalence study: 55 hospitals of 14 countries in South-East Asia, Europe, the Eastern Mediterranean and Western Pacific revealed that on average 8,7 % of hospital patients suffer nosocomial infections
- health care-associated infections rank as a major killers of patients of all ages
- In developed countries about 5 – 10 % of patients admitted to acute care hospitals acquire an infection that was not present or incubating on admission

- In USA one in 136 hospital patients come seriously ill as a result of acquiring an infection in hospital
- In England in ICUs at least 25 % of patients admitted develop an infection
- In Trinidad and Tobago as many as two-thirds of patients admitted to intensive care suffer at least one health care-associated infection
- Worldwide at least 1 in 4 patients in intensive care will aquire an infection during their stay in hospital.
- In developing world this estimate may be doubled
- In Mexico health care-associated infections are the third most common cause of death for the entire population

- The estimated proportion of all hospital infections may be as high as 40 % or more in developing countries
- The rate of infections associated with vascular devices among neonates is 3 – 20 times higher in developing countries than in developed countries
- In Brazil and Indonesia more than half of the neonates admitted to neonatal units gets health care-associated infection, fatality rate between 12 % - 52%
- The last two decades have seen the greatest increase in nosocomial infections in hospitals in developing countries where infectious diseases remain the leading cause of death
- Surgical site infections are leading cause of illness and death certain hospitals in sub-Saharan Africa

- The arsenal of drugs available to treat infections is being progressively depleted because of increasing resistance of the microbes to antimicrobial drugs
- Nosocomial infections cause considerable human misery and economic impact:
  - USA extra costs US$ 4500 – 5700 million a year
  - England estimated costs £ 1000 million annually to the National Health Service
  - Trinidad and Tobago use 5 % of their budget to care the nosocomial infections
  - In Thailand some hospitals spend 10 % from the budget on the management of infections
  - In Mexico these costs represent 70 % of the entire budget of the ministry of health
- Knowledge of measures to prevent health care-associated infections has been widely available for years

- Most patient deaths and suffering related to health care-associated infections can be prevented
- Low-cost and simple practices already exist e.g. hand hygiene remains the primary measure to reduce these infections
- Failure to apply infection prevention measures favours the spread of pathogens, particularly important during the outbreaks
- The emergence of life-threatening infections e.g. severe acute respiratory syndrome, Ebola and Marburg viral infections highlight the urgent need for efficient infection control practices in health care settings
- Uneven application of policies and practices across countries is another concern and inside one country

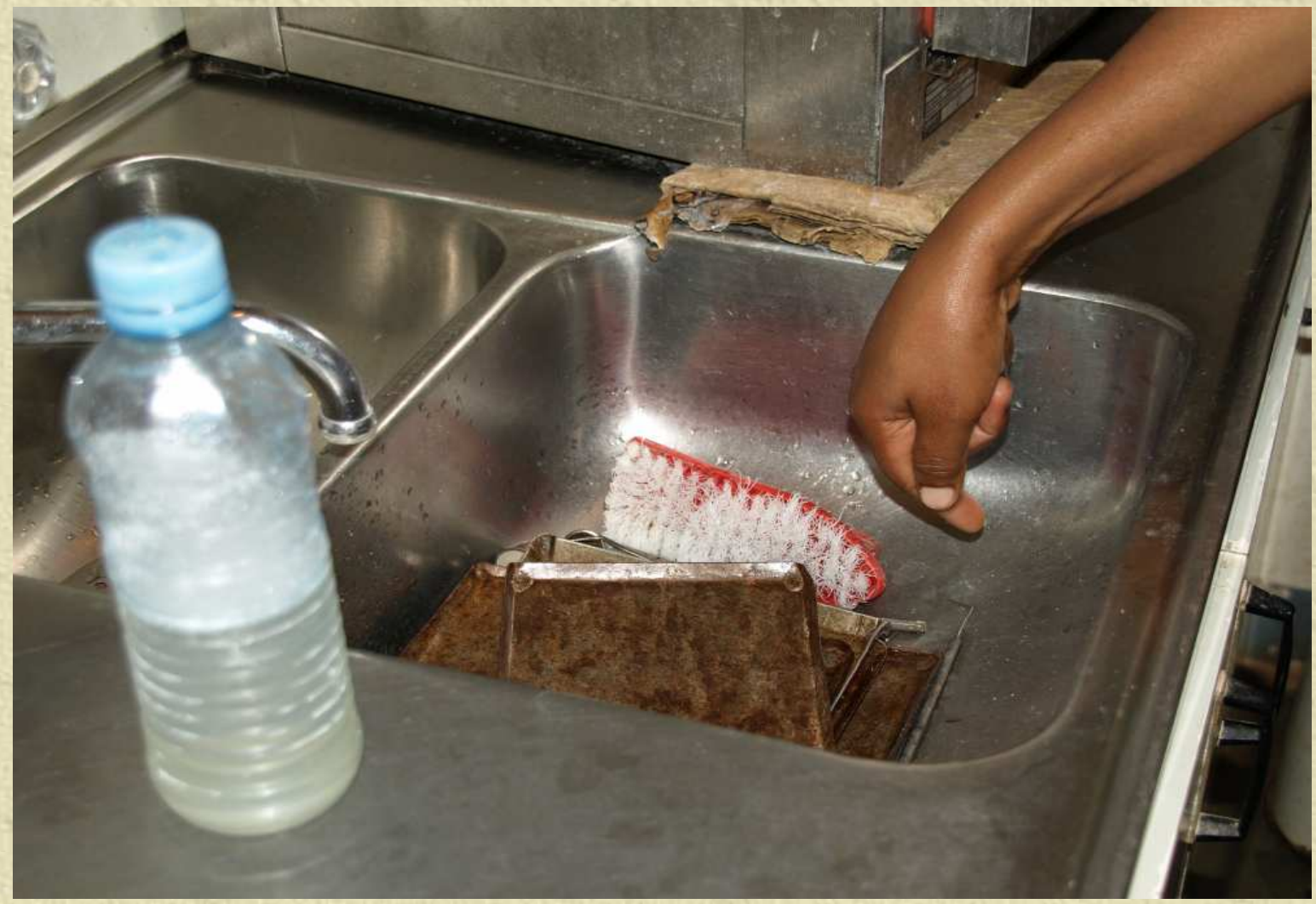
- Reasons for poor adherence to recommended hand hygiene:
  - understaffing or overcrowding
  - nursing assistant status, physician status (rather than a nurse)
  - lack of knowledge of guidelines and protocols
  - not thinking about it, forgetfulness
  - no role model from colleagues and superiors
  - scepticisim about the value of hand hygiene
  - lack of scientific information of definitive impact of improved hand hygiene on hospital infection rates
  - lack of soap, paper, towel
  - lack of institutional priority for hand hygiene
  - lack of active participation in hand hygiene promotion at individual and institutional level

- A single severe surgical site infection, lower respiratory tract or bloodstream may cost the hospital more than its entire annual budget for antiseptic agents used for the hand hygiene
- National Taiwan University Hospital, 2004, NICU, multimodal campaign for hand hygiene promotion: 1) formal lectures 2) written instructions 3) posted reminders regarding hand hygiene techinics 4) covert observation 5) financial incentives 6) regular group feed back
- Surveillance of handwashing compliance and nosocomial infection before and after the program

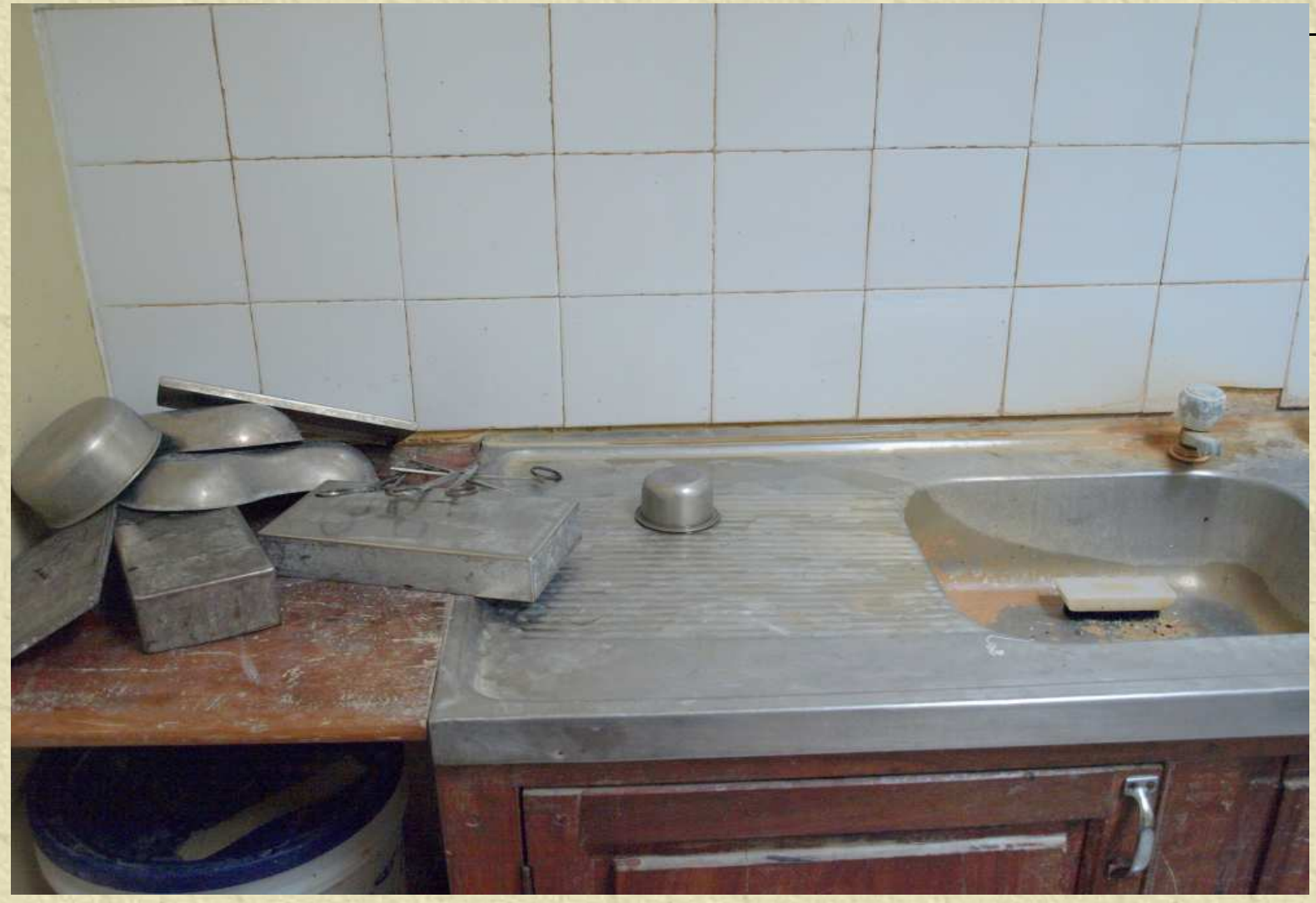
- Improved compliance with handwashing was associated with a significant decrease in overall rates of nosocomial infections and respiratory infections in particular
- The overall compliance with handwashing improved from 43 % at baseline to 80 %
- The rate of nosocomial infections decreased during the program from 15.3 to 10.69 per 1000 patient days, respiratory tract infections decreased from 3.35 to 1.06 per 1000 patient days
- economic analysis from UK's 'cleanyourhands' concluded that the program will be cost beneficial even if infection rates were decreased by as little as 0,1 %

Laboratory is one of the high-risk places in hospitals and counter tops whoud be cleaned in every shift by chlorine 0,5 % or lysol 5 %. Also labelling of specimens should be clear.

Instruments should be cleaned after decontamination with soap and water and soft brush. This one is very rough. Rusted trays tell that chlorine is not 0,5 % or instruments have been there for a long time. Staff must be taught!!



This kind of places in the hospital is not convincing about the proper hospital hygiene



New clean delivery room. In order to reduce hospital infections table with sterile items below open window without net is a risk factor here: african dust and flies!!