Supplementary Table S2. Overview of healthcare-associated (pseudo-)outbreaks in low- and middle-income countries associated with bacterial contamination of antiseptics, disinfectants and hand hygiene products. Country income level is based on the data from the World Bank [14] at the year of publication of the article. Product names are listed as mentioned in the referred articles; in case of brand names or jargon, the generic name is written in brackets and italics. The product categories (antiseptics/disinfectants) are listed according to the categories mentioned in the referred articles. Bacterial names are listed as mentioned in the referred articles, names according to actual nomenclature (*List of Prokaryotic names with Standing in Nomenclature* and updated species names were used [16] are written between brackets and used in the "Summary/Comment". When written in brackets; the term "*modified Kelsey-and-Maurer*" was not used in the original articles but has been added for all articles using a dilution of the liquid product in nutrient broth and subsequent plating on solid culture media. Abbreviations: AMR = antimicrobial resistance, AST = antibiotic susceptibility testing, CHG = chlorhexidine gluconate, CHG-QUAT = chlorhexidine gluconate + quaternary ammonium compound, CFU/ml = colony forming units/ml, CLSI = Clinical Laboratory Standards Institute US, previously "NCCLS", ID = Identification, LIC = low-income country, MIC = middle income country, QUAT = quaternary ammonium compound.

Author – Year **Country** **(Income level)** **Setting**	**Outbreak: description, potential reservoir and transmission, interventions**	**Microbiological methods** **Summary/Comment**
Thong 1981 Malaysia (MIC) Tertiary hospital	Description: *Flavobacterium meningosepticum* (*Elizabethkingia meningoseptica*) infection in a neonatal intensive care unit: 7 cases over 5-year time, 2 deaths Investigation: environmental/carrier cultures, review of procedures Reservoir: *F. meningosepticum* present in wide hospital environment Highest contamination ratios by *F. meningosepticum* from hand basins (36.0%, 73/204) and water-based CHG (63.0%, 12/19: 0.05%, 0.5%, 1%, used for hand washing). Also recovered from air (12.5%), suction apparatus (2/2) and suction tubes (19.0%) and stored distilled water in the pharmacy. Growth of *F. meningosepticum* in throat swabs of babies (8.7%) and mothers (4.1%), as well as in sputum of patients from other wards (11.0%) Relatedness environmental – clinical isolates: Overlap (but not complete and distinctive) between serotypes of patients and environment in particular the CHG solutions. Transmission: Portal of entry not established - hypothesis: direct invasion through respiratory tract mucosa, conjunctiva and abraded skin. Intervention: Use of boiled water, paper towels and hot air for drying hands. For chlorhexidine, only use of heat-sterilized small volumes. Follow-up cultures of environment and equipment (no information added)	Microbiological methods Kelsey-and-Maurer method, no details (neutralizer) given, subculture on blood and MacConkey agar and modified Thayer Martin agar (= selective for *F. meningosepticum*) ID: conventional phenotypical methods No AST done Summary/Comment: ***Elizabethkingia meningoseptica*** protracted outbreak in the neonatal intensive care unit with multiple reservoirs including **water-based chlorhexidine used for hand hygiene, skin antisepsis and disinfectant for suction tubes.** Transmission (portal of entry) not established, no firm conclusions about the (primary) source of the outbreak.
Anyiwo 1982 Nigeria (LIC) Tertiary hospital	Description: high incidence of wound infections with *Pseudomonas aeruginosa*: 9 cases, 1 month, surgery, obstetrics and pediatrics, outcome not specified. Investigation: cultures of water-based CHG 5% (in-use, stock) and tap water (used for dilution) in pharmacy Reservoir: (numbers of samples and contamination ratios not listed) In-use CHG diluted 1/2000 in tap water in the three wards: *P. aeruginosa* In-use CHG diluted 1/200 in tap water in the pharmacy: aerobic spore former Pharmacy: stock CHG 5% solution: no contamination; chlorhexidine in alcohol 1/1000 and in distilled water 1/250: no contamination.	Microbiological methods Direct plating on blood and nutrient agar, incubation at 37°C overnight ID: conventional phenotypical methods No AST done Summary/Comment: ***Pseudomonas aeruginosa*** wound infections ascribed to contaminated **water-based chlorhexidine used as antiseptic in wound**

	Tap water used for dilution considered as the cause. Water-based CHG was used in operating room as "methylated spirit" (ordinary used for dilution) was not available during the period. Relatedness environmental – clinical isolates: pyocine type of *P. aeruginosa* isolates from CHG (n = 7) identical to those from isolates previously recovered (wound and burn infections). Transmission: no further studies done Interventions: Use of alcohol-based CHG, dilution with distilled water. Follow-up: incidence of *P. aeruginosa* wound infection was reduced to 25% 1 year afterwards	**care** diluted 1/2000 with tap water. No other outbreak investigation cultures done. Transmission not assessed; direct contact most probable.
Cissé 1987 Senegal (MIC) Tertiary hospital	Description: Cluster of *Enterobacter cloacae* bloodstream infection 5 children (one with also arthritis), 3 died, duration 5 weeks Investigation: one child had growth of *E. cloacae* from an intravascular catheter – this directed environmental investigation Reservoir: growth of *E. cloacae* from a basin with Dakin solution (hypochlorite, *chlorine*) in which reprocessed (autoclaved) IV catheters were stored pending use. Hypochlorite solution had long in-use time (but no details reported). Multidose saline fluid bag used for IV drug reconstitution grew *P. aeruginosa*. Relatedness Dakin Cooper - clinical isolates: phenotypic ID and AMR pattern Transmission: disinfectant made contact with critical device Intervention: not described	Microbiological methods Culture, ID and AST methods not described AST: resistant to amoxicillin, carbenicillin, cephalothin, trimethoprim-sulfamethoxazole, chloramphenicol and doxycycline, no fluoroquinolone antibiotics or aminoglycosides tested. Summary/Comment: **Multidrug resistant *Enterobacter cloacae*** bloodstream infection traced to basin with **chlorine disinfectant used for storage (soaking) of processed IV catheters**. Transmission via critical item in contact with disinfectant.
Kaitwarchareachai2000 Thailand (MIC) Tertiary hospital	Description: *Burkholderia cepacia* bloodstream infection in hemodialysis patients: 9 patients in 1 week time, 1 died. *B. cepacia* displayed wild-type AMR profile. Investigation: (i) case control study, (ii) procedure and process review (water treatment and equipment disinfection system), (iii) environmental cultures. Case control study: patients with subclavian catheters but not with arteriovenous fistula were affected. Review of procedures and interview with staff revealed no breach in antisepsis during hemodialysis. Cultures of antiseptic/disinfectants, dialysate, blood components, hemodialysis machines, tap water. Reservoir: Growth of *B. cepacia* from subclavian catheters, scanning microscopy of internal surface of catheter showed biofilm with bacteria embedded. Growth of *B. cepacia* from (i) in-use 1/30 diluted CHG-QUAT used for immersing the transfer forceps (5 log10 10 CFU/ml), (ii) dialysate (30 CFU/ml) and (iii) dialysis machines (20 - 330 CFU/ml). Cultures from other fomites remained sterile. Distilled water from the pharmacy (used for dilution) not available for culture. Relatedness environmental – clinical isolates: Random amplified polymorphic DNA (RAPD) analysis: identity of *B. cepacia* from in-use CHC-QUAT and patients' blood and subclavian isolates. No clonal relatedness with *B. cepacia* from dialysis fluid. Transmission: hypothesized: transfer forceps was used to grasp sterile cotton balls and gauze for wiping the hub of the subclavian catheter after dialysis. Bacteria moved to the intravascular parts of the catheter. Dialysis fluid excluded as source because of (i) low bacterial counts and (ii) different RAPD profiles.	Microbiological methods Fluids were cultured quantitatively (log CFU/ml) No further details about culture and ID. No AST done. Summary/Comment: ***Burkholderia cepacia*** bloodstream infection traced to contaminated in-use 1/30 diluted **CHG-QUAT disinfectant in which the transfer forceps was kept,** and supported by RAPD analysis. Transmission via transfer forceps and cotton balls/gauze contaminating subclavian catheters (disinfectant – instrument).

	Interventions: Discontinuation of the practice of transfer forceps standing in diluted CHG-QUAT solution - no new cases afterwards (period not specified).	
Parasakthi 2000 Malaysia (MIC) Tertiary hospital	Description: Multidrug resistant *Klebsiella pneumoniae* bloodstream infection, pediatric oncology, duration 4 weeks unit: 5 children infected, 3 colonized (rectal swab), 2 died. Index patient had necrotizing fasciitis (culture: *K. pneumoniae*) after biopsy taking. Investigation: (i) environmental cultures ("potential reservoir screening") (ii) procedure review (interview, observation). Environmental sampling: solutions for common use (*e.g.*, heparinized saline) and liquid plain soap (4 dispensing containers) used for hand hygiene. Procedure review revealed risk practices: topping-up of containers, no reprocessing before reuse of container, ward staff and doctors' hands touching the spout of the flasks. Reservoir: 2/4 liquid soap samples yielded multidrug resistant *K. pneumoniae* as well as non-multidrug resistant *K. pneumoniae* and *Citrobacter* spp. Culture of sealed stock bottles: no growth. Transmission: Hypothesis: contamination of soap by touching the spout when handwashing, transmission to patients via health care providers' hands or medical devices. Relatedness liquid soap – clinical isolates (from blood and rectal swabs): plasmid analysis and Pulsed Field Gel Electrophoresis (PFGE) showed clonal identity between one liquid soap and a rectal swab isolate as well as between one soap and a blood culture isolate but different PFGE profiles were observed too. Intervention: (i) reemphasis of standard IPC, (ii) barrier precautions for infected and colonized children, closure of the ward to all new admissions, (iii) appropriate use of antiseptics, soaps and handling of containers (elbow-commanded dispensers, improved reprocessing of containers (emptying and soaking in hypochlorite before refill). No new cases in a 3-month follow-up period.	Microbiological methods Culture: enrichment in nutrient broth and/or direct plating on standard culture media ID: conventional phenotypical methods AST: disk diffusion, National Committee for Clinical Standards guidelines, (NCCLS1990, M100 – S4), control strains, E-test extended spectrum beta-lactamase (ESBL) strips. Resistant to ampicillin, cefuroxime, cefotaxime, ceftriaxone, ceftazidime, cefoperazone, trimethoprim-sulfamethoxazole, gentamicin, amikacin; ESBL production. Fluoroquinolones not tested. Summary/Comment: **Multidrug resistant *Klebsiella pneumoniae*** bloodstream infection with partly-related isolates retrieved in **plain soap containers used for hand hygiene** (considered as reservoirs), associated with risk practices. Transmission hypothesis: handborne.
Nasser 2004 Lebanon (MIC) Tertiary hospital	Description: *Burkholderia cepacia* bloodstream infection: 411 episodes (361 patients), 7 years, monthly incidence up to 6.6 cases/month, all wards, outcome not reported, *B. cepacia* displayed wild-type AMR profile. Investigation: (i) case-control and retrospective cohort studies, (ii) environmental cultures (ethanol 70% prepared in pharmacy, water used for dilution; povidone-iodine) (iii) procedure review (antisepsis and disinfection from procurement to in-use, catheter insertion and care, blood culture sampling). Cases showed intravascular catheter-related phlebitis and 35/41 catheters cultures grew *B. cepacia*. Ethanol 70% was prepared in pharmacy (100 l container), distributed in plastic 4 l transport containers and transferred to squirt bottles; no written procedure was available. Evaporation of alcohol in squirt bottles assumed. At intravascular catheter insertion, povidone-iodine was used, after application, it was removed by wiping with cotton-humidified with ethanol 70%. Reservoir: Pharmacy-prepared ethanol 70% and tap water used in the pharmacy to dilute ethanol 90% to ethanol 70% grew *B. cepacia*. Povidone-iodine samples and water supply elsewhere in the hospital: no growth of *B. cepacia*.	Microbiological methods Water supply points: flaming taps, run water for 30 sec., use sodium thiosulfate (neutralize chlorine), 45 µm membrane filtration, Cetrimide selective agar, incubation at 37°C for 24 hours Ethanol samples: centrifugation, adding 10 ml of tryptic soy agar to the pellet, mix and incubate at 37°C for 24 hours ID: conventional phenotypical methods AST: disk diffusion, NCCLS1993, M2 – A5 Summary/Comment: Protracted outbreak of ***Burkholderia cepacia*** bloodstream infections. Epidemic and microbiological investigation with subsequent PRC-RFLP traced the reservoir to contaminated **ethanol 70% used for skin antisepsis** at intravascular catheter insertion. Ethanol 70% was

	Transmission: hypothesized routes include skin antisepsis at intravascular catheter insertion as well as disinfection of the rubber top of the multidose heparin vials used for catheter care. Pharmacy staff had used tap water for ethanol dilution instead of water from dedicated chlorinated tank. Relatedness environmental – clinical isolates: Antimicrobial resistance profile; (Restriction Fragment Length Polymorphism (RFLP)-PCR analysis of *B. cepacia* 16S rDNA: homogeneity among *B. cepacia* from patients, ethanol 70% and pharmacy water. Intervention: sterile water for dilution of ethanol, single-use, individually packaged alcohol swabs for catheter insertion and care. Follow-up: sporadic occurrence of a few cases – this was probably related to stock rupture or financial barrier to the individual swabs, making staff reverting to the pharmacy-prepared ethanol.	considered as the source and had been contaminated by dilution with tap water.
Espinosa de los Monteros 2008 Mexico (MIC) Tertiary hospital	Description: ESBL producing *Serratia marcescens* outbreak in a children's surgical unit, 26% mortality, 2 months. No information about numbers and infection site(s). Investigation: in-use diluted CHG solution (n = 12), CHG stock solution (n = 1, concentration not mentioned), patient samples and medical staff (n = 41, hands) Reservoir: 2/12 in-use CHG, CHG stock and 1/41 nursing staff grew *S. marcescens*; 20 clinical isolates (9 urine, 5 catheters, 2 blood, 2 wound, 1 from cellulitis) Transmission: authors declared they could not address the transmission route Relatedness CHG - clinical isolates: PFGE identity between clinical isolates and isolates from the CHG stock solution and the nurse, but the CHG stock solution isolate was ESBL negative. Isolates from in-use CHG solution belonged to a different PFGE clone and had a different ESBL enzyme. Intervention: No intervention described (only brief referral in Abstract).	Microbiological methods Methods of sample processing not described ID: conventional phenotypical methods AST: disk diffusion, CLSI2005, M100 – S15 Resistant to ampicillin, amoxicillin - clavulanic acid, cefoxitin, trimethoprim-sulfamethoxazole, chloramphenicol, gentamicin, tetracycline, ESBL production Summary/Comment: ESBL producing multidrug resistant ***Serratia marcescens*** infection with partly related isolates retrieved from the **antiseptic/disinfectant** (terms used interchangeably) **CHG stock solution** and a nurse, considered as potential sources
Ben Saida 2009 Tunisia (MIC) Tertiary hospital	Description: Methicillin-resistant *Staphylococcus haemolyticus* infection in a neonatal intensive care unit affecting 42 newborns, 8 died; 132 weeks duration Investigation: Case definition. Cultures of samples of newborns (blood, cerebrospinal fluid, vascular catheter), hands of nursing staff (n = 12) and environment: surfaces, equipment, incubator, furniture, telephone) and multiple use disinfectant containers used for hand hygiene (commercial CHG 1% - QUAT 0.2%: 12 in-use, 8 unopened multiple-use containers, 4 newly arrived bottles). Reservoir: Isolates of *S. haemolyticus*: 46 from newborns, 2 from hands of nurses, 2 from in-use disinfectant containers (both from content and cap). Half of in-use and unopened bottles were contaminated with other species of coagulase-negative staphylococci. Newly arrived bottles yielded growth of Gram-negative bacilli, *Staphylococcus hominis* and *Actinomycetes*. Transmission: Assumed: multiple-use containers of disinfectant, contamination during international transport, inappropriate storage Relatedness disinfectant, staff and clinical isolates: 5 PFGE types from clinical isolates (A and B dominant, PFGE type from isolates from 2 nurses were similar to A and B but different antibiotic	Microbiological methods Hands nursing staff: modified glove-juice technique Disinfectant liquid content: (*modified Kelsey-and-Maurer*): 200 µl in 100 ml brain heart infusion broth incubated at 37°C for 48 - 72h, next 100 µl subculture on blood agar (37°C, 48-72h); same procedure for disinfectant cap (inside surface) Environment: swabs directly plated on blood agar; incubation at 37°C for 48h. Species ID: API32 STAPH bioMérieux AST: Disk diffusion, French Society for Microbiological – version not mentioned Methicillin resistance, co-resistance to trimethoprim-sulfamethoxazole, fosfomycin, aminoglycosides, ofloxacin, erythromycin, lincomycin, rifampicin, tetracycline

	resistance profiles; disinfectant isolates were type B. Most type B isolates carried resistance gene *QUATA*/B (= efflux pump). Intervention: Increased attention for bottle capping procedures for suppliers, proposal to seal bottles with a protective membrane before putting the cap	Summary/Comment: **Methicillin-resistant *Staphylococcus haemolyticus*** outbreak in a neonatal intensive care unit. Multiple-use **disinfectant containers (CHG 1% – QUAT 0.2%) used for hand hygiene** identified as potential reservoir. Contamination was extrinsic as well as intrinsic.
Khanna 2013 India (MIC) Tertiary hospital	Description: *Serratia marcescens* infection (blood, urine, wound), 11 patients in an Intensive Care Unit – all immunocompromised. Duration 15 days. Investigation: Environmental investigation (walls, floors, corners door handles, shelves, sinks, soap dispensers and saline used for dilution, ventilators, stethoscopes not specified), in addition surveillance cultures from patients (colonization) and staff (hands) yielding 327 clinical and 84 environmental isolates over a 6-months period. Reservoir: One isolate *S. marcescens* obtained from a soap dispenser, various other bacteria isolated from environmental cultures. Transmission: Hypothesized: patient care *e.g.,* placing urinary catheter (5 patients with *S. marcescens* from urine) or endotracheal tube, wound care (1 patient) Relatedness soap dispenser's – clinical isolates: unusual isolate, pigment production, antimicrobial susceptibility profile Intervention: Removal of contaminated dispenser, hand hygiene compliance, use of alcohol-based hand rub. No new cases during a 6-months follow-up.	Microbiological methods Methods of sample processing not described ID: conventional phenotypical methods AST: disk diffusion, CLSI2000, M100 – S10 AST profile: Resistant to ampicillin, aminoglycosides and cefotaxime/ceftazidime, susceptible to colistin, ciprofloxacin, ertapenem, piperacillin-tazobactam Summary/Comment: ***Serratia marcescens*** infection in an Intensive Care Unit with a phenotypically similar isolate obtained from a **soap dispenser used for hand hygiene.**
Stoesser 2015 Nepal (LIC) Secondary hospital	Description: Multidrug resistant *Enterobacter cloacae* bloodstream infections in a neonatology ward (consisting of different units), 23 isolates from 16 patients from whom 6 died and 4 had persistent bloodstream infection. Duration 12 weeks. Investigation: No data provided. One isolate from a refillable soap dispenser (swab inside container). Soap product not described. Reservoir and Relatedness soap dispenser - clinical isolates: Whole Genome Sequencing: two distinct *E. cloacae* outbreaks, one outbreak (3 patients) clustered with soap dispenser's isolate. Transmission: not studied. Intervention: "Fumigation" with H_2O_2 -but this had little effect on the cluster associated with the soap dispenser (cases occurred as well after fumigation).	Microbiological methods Methods of sample processing not described ID: conventional phenotypical methods AST: disk diffusion, Phoenix (Becton Dickinson) system, NCCLS2001, M02 – A11 and EUCAST2013, version 3.0 New Delhi metallo-beta-lactamase (NDM) carbapenemase Summary/Comment: Whole Genome Sequencing study on retrospective isolates from an outbreak of **NDM carbapenem resistant *Enterobacter cloacae*** in a neonatology ward reveals different clusters of which one was associated with *E. cloacae* cultured from a refillable **soap dispenser**, considered as a potential reservoir and source of transmission.

Valderrama-Beltrán 2019 Colombia (MIC) Tertiary hospital	Description: *Burkholderia cepacia* pseudo-outbreak in Intensive Care Unit (adults and pediatric): 8 cases of blood cultures, no case fatalities, duration 14 days. Investigation: Epidemiological analysis: case definition and timeline: all blood cultures were sampled through a central venous catheter. Environmental analysis: culture of 193 samples including bed rails, fans, ultrasound scanners, infusion pumps, containers of alcohol and chlorhexidine, sinks, doors, windows, medicine cards and nursing stations, soap, antiseptics and disinfectants, saline and dextrose solutions, ultrasound gel and vials of heparin and fentanyl. Reservoir: Surgical CHG 4% "soap" in sachets was contaminated with *B. cepacia* (ratio not specified). *B. cepacia* grew also from sinks and ultrasound gel. Transmission: CHG 4% used for antisepsis at insertion of subclavian catheters. Relatedness CHG soap – clinical isolates: Similar antimicrobial resistance profile and Repetitive Element Sequence-Based Polymerase Chain Reaction (rep)-PCR profile Intervention: Cohorting of patients, removal of the CHG sachet lot, optimization of cleaning and disinfection processes, review of procedures of vascular catheter care	Microbiological methods Methods of sample processing not specified ID: conventional phenotypical methods AST: molecular test AST profile: carbapenemase (VIM), co-resistance to amoxicillin, cefotaxime, ciprofloxacin, chloramphenicol, trimethoprim-sulfamethoxazole, gentamicin, piperacillin-tazobactam Summary/Comment: ***Burkholderia cepacia* pseudo-outbreak** traced back to intrinsically contaminated single-packed **antiseptic CHG sachets** used during insertion of intravascular catheters.
Clara 2021 Argentina (MIC) Tertiary hospital	Description: *Achromobacter* spp. (including one case with *A. xylosoxidans*) outbreak in multiple hospital wards (emergency, hematology-oncology, surgery, and internal medicine): 20 infected (28%) and colonized (72%) patients (including bloodstream infection), one death (unrelated to *Achromobacter* infection); duration 2 years Investigation: Epidemiological investigation: case definition: clinical samples mainly from operating room, patients assisted in clinical and critical care areas, and previously washed with CHG 4% antiseptic suggesting a common source. Environmental analysis: environment, equipment, antiseptic and disinfectant samples from 5 different operating rooms Reservoir: CHG 4% 15/17 samples from all operating rooms and unopened containers grew *Achromobacter* spp. Transmission: CHG 4% antiseptic soap was used to wash patients in the operating rooms Relatedness CHG-soap – clinical isolates: similar PFGE profile Intervention: Removal of all 4% CHG from all the facilities, notifying the supplier about the intrinsic contamination of the product, and notifying to the relevant health authorities.	Microbiological methods Inoculating soap samples in BactAlert flask (bioMérieux), incubation 5 days; two-fold dilution (2.5 ml in 2.5 ml of human plasma) ID: Molecular tests (*nrdA* sequencing, multilocus sequence-typing (MLST) and PFGE No AST Summary/Comment: ***Achromobacter* spp.** infections and colonization associated with intrinsically contaminated **antiseptic CHG used for pre-surgical patient's bath**.
Said 2022 South Africa (MIC) Tertiary hospital	Description: Hospital-wide (multiple wards) *Achromobacter denitrificans* outbreak; 43 patients, multiple specimens (mostly blood > pus, peritoneal fluid, cerebrospinal fluid, urine, tracheal aspirate), no case fatality, duration 11 months. Investigation: Epidemiological analysis triggered by an unusual increasing number of index bacterium noticed; patient risk factors and diagnosis retrieved by a questionnaire survey for clinicians. Environmental analysis: culture of preparation areas in the hospital pharmacy: surfaces (table-top, antiseptic bottles and dispensers) and solutions (CHG 0.05% stock solution, water-based diluted CHG, sterile water used for dilution, bromothymol blue added to the diluted solution); number of environmental samples collected was not specified.	Microbiological methods Sampling collected with moistened swabs, culture on blood agar and MacConkey agar, incubation at 35 – 37°C for 48 h ID: commercial (Vitek 2) AST: disk diffusion and BD Phoenix system, guideline CLSI 2018, M-100 AST profile: Resistant to aztreonam and aminoglycosides, and susceptible to antipseudomonal agents (piperacillin-tazobactam,

	Reservoir: in-house prepared water-based CHG (dilution 1/2 of CHG 0.05% stock solution) was contaminated by *Achromobacter denitrificans* (proportion not specified); bacteria grew also from the water used for dilution and from the interior surfaces of the nozzles of the dispensing machine used for dilution and filling of the bottles. Transmission: contaminated CHG was used for skin antisepsis, urethral catheterization and wound care. Relatedness environmental – clinical isolates: repetitive-element, sequence-based-PCR genotyping done for 16 clinical isolates, 2 clusters Intervention: Removal diluted CHG, dispenser used for the preparation of the solution replaced or sterilized appropriately by the suppliers	ceftazidime, cefepime, imipenem, meropenem, fluoroquinolones) Summary/Comment: ***Achromobacter denitrificans* outbreak** linked to the highly **water-based diluted CHG** (1/2 in sterile water of stock solution of CHG 0.05%) used during **invasive procedures** (skin antisepsis, catheterization and wound care)