

## SYSTEMATIC REVIEW

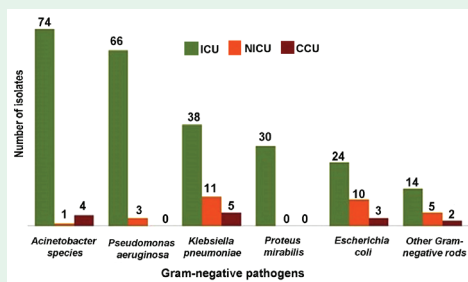
### Knowledge and awareness of diabetes mellitus and its risk factors in Saudi Arabia

Alanazi et al highlights the need for increased knowledge and awareness of DM among the Saudi population. The means of improving knowledge and awareness of DM needs to be integrated into existing healthcare systems and processes to better inform patients, families, and communities about this chronic disease. Most studies found a lack of public awareness of the risk factors and complications of DM. Among medical students and healthcare workers, knowledge about the epidemiology of the disease and angle of insulin injection was deficient. Data were extracted independently by the 2 researchers to a uniform data extraction sheet. The extracted data included: 1) characteristics of the study design, 2) features of the study population and 3) data of the study outcomes. Included studies were classified according to the type of the population: 1) studies on the general population, 2) studies on health care professionals and 3) studies on DM patients. Extracted data from each study were tabulated and reviewed narratively.

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## ORIGINAL ARTICLES

### High antimicrobial resistant rates among Gram-negative pathogens in intensive care units. A retrospective study at a tertiary care hospital in Southwest Saudi Arabia



Frequency of Gram-negative pathogens among 3 intensive care units (general ICU, neonatal ICU and coronary care unit). Others Gram-negative rods include: *Morganella morganii* (n=7), *Citrobacter freundii* (n=1), *Providencia stuartii* (n=4), *Enterobacter cloacae* (n=3), *Stenotrophomonas maltophilia* (n=2), Unidentified Gram-negative bacilli (n=4)

Ibrahim determines the distribution and resistance profiles of Gram-negative bacteria (GNB) in intensive care units (ICUs) at King Abdullah Hospital in Bisha, Saudi Arabia. In total, 3736 non-duplicate clinical specimens from the general intensive care unit (ICU), neonatal ICU (NICU), and coronary CU (CCU) were analyzed for pathogens. Of 3736 specimens, 9.6% (358) were positive for pathogens, and GNB constituted the majority (290/358; 81%). The author conclude that this study revealed that *Acinetobacter spp.*, *P. aeruginosa*, and *K. pneumoniae* are the most common GNB associated with ICU infections in this tertiary hospital. Isolates from different ICUs showed high resistance rates to most antimicrobial agents, and most of them (67.9%) exhibited multi-drug-resistant (MDR) patterns, with the highest frequency occurring among *Acinetobacter spp.* (97.7%). The high rates of antimicrobial resistance are a critical condition that calls for comprehensive surveillance programs to track the origins and emergence pathways of resistant pathogens. Developing local antimicrobial stewardship programs and continuous monitoring of antimicrobial susceptibility might be useful to preclude inappropriate antimicrobial use and the emergence of antimicrobial resistance patterns.

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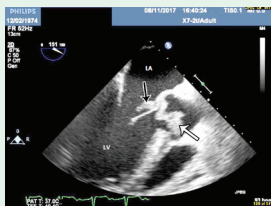
### The importance of hand hygiene education on primary schoolgirls' absence due to upper respiratory infections in Saudi Arabia. A cluster randomized controlled trial

Alzahrer et al quantify the reduction in absence due to upper respiratory infections (URIs) among primary schoolgirls attending Riyadh's schools after delivering a hand hygiene workshop intervention over a period of 5 weeks. A cluster randomized trial was conducted among girls attending 4 primary schools. The participants attended a hand hygiene workshop. The schoolgirls' absences were followed up for 5 weeks. Incidence rate, percentage of absence days, and absence rate were calculated for total and URIs absences. Total number of participating schoolgirls was 496. Upper respiratory infections accounted for 15.3% of absence episodes. Schoolgirls lost 521 days of school and 19.4% of them were URIs-related. Percentage of absence days were lower in the experimental group (CG: 0.86% and 1.39% versus EG: 0.39% and 0.72%). Incidence rates of absence due to URIs were 0.54 and 1.02 in CG versus 0.24 and 0.51 in EG per 100 schoolgirls per day.

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## CASE REPORT

### *Staphylococcus lugdunensis* from gluteal abscess to destructive native triple valve endocarditis



Transesophageal echocardiogram showing a large vegetation on a native aortic valve (thick arrow). A moderate vegetation (thin arrow) can be seen on the mitral valve. LA - left atrium, LV - left ventricle

Al Majid presents a 43-year-old male diabetic patient who presented with an aggressive form of infective endocarditis involving the tricuspid, mitral and aortic valves following a gluteal abscess due to infection with *Staphylococcus lugdunensis*. This coagulase-negative organism which is generally considered a component of the normal flora of the skin has however recently emerged as an unusually virulent pathogen responsible for both nosocomial and community-acquired infections. The case demonstrates the importance of paying utmost attention and ensuring a logical conclusion to the identification of persistent coagulase-negative blood cultures. In addition, it also shows the importance of early identification of this organism and aggressive antibiotic administration to avert endocarditis because of the unusual virulence of the organism. *Staphylococcus lugdunensis* is rarely a clinical specimen contaminant, and its isolation warrants further investigation and concerted treatment.

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