

Fig. 1.

demonstrated the highest susceptibility. In-hospital mortality occurred in 90 patients (22%), 30-day mortality in 97 patients (24%), and 1-year mortality in 198 patients (48%). Of 93 patients, 23% were readmitted to the hospital within 90 days. **Conclusions:** Providers should maintain a heightened suspicion for infection with XDR *Acinetobacter* spp in older patients seen at urban medical centers who have had recent healthcare and antibiotic exposures, particularly if they have respiratory or urinary tract infections. Isolation of XDR *Acinetobacter* is associated with high in-hospital and 30-day mortality. New antibiotics targeting MDR gram-negative bacteria generally lack activity against *Acinetobacter*, leaving polymyxins, tigecycline, and minocycline as the only limited treatment options. Therefore, novel antibiotics for XDR *Acinetobacter* are urgently needed.

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Top Rated Posters

ESBL Types and Plasmid Heterogeneity in Urinary *E. coli* Isolates: Results From a Nationwide Multicenter Study in Croatia

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Background: The prevalence of *Escherichia coli* strains producing extended-spectrum β -lactamases (ESBLs) has increased both in the community and in healthcare settings. Furthermore, recent studies in nursing homes and long-term care facilities have shown that these institutions can act as potential reservoirs of ESBL- and CTX-M-producing *E. coli*. Consequently, we aimed to characterize ESBLs produced by *E. coli* isolates causing hospital-onset, long-term care facility and community infections throughout Croatia (Europe), as well as to compare antimicrobial sensitivity patterns, molecular specificities, plasmid types and epidemiological features. **Methods:** From a total pool of 16,333 *E. coli* isolates, 164 ESBL-producing strains with reduced susceptibility to third-generation cephalosporins were used for further appraisal. Phenotypic tests for the detection of ESBLs and plasmid-mediated AmpC β -lactamases were initially pursued (including a novel version of modified CIM test named cephalosporin inactivation method), followed by conjugation experiments, molecular detection of resistance genes, plasmid extraction with PCR-based replicon typing, serotyping, genotyping with pulsed-field gel

electrophoresis, and whole-genome sequencing (WGS). **Results:** The isolates in this study exhibited a high level of resistance to expanded-spectrum cephalosporins and carried CTX-M or TEM β -lactamases, and all of them were classified as multi-drug-resistant due to their resistance pattern to other antimicrobial drugs. The β -lactamase content did not differ among isolated *E. coli* strains from various sources (ie, hospitals, nursing homes, and the community). According to the genotyping results, the isolates were allocated into 8 clusters, which contained subclusters. Serotyping results revealed that O25 antigen was the dominant one; furthermore, isolates subjected to WGS belonged to the ST131 sequence type. The most pervasive plasmid types in the isolates from the country's capital (Zagreb) were IncFII and FIA, whereas FIA alone was a dominant plasmid type in the southern part of the country. Conversely, eastern parts were characterized by plasmids belonging to IncB/O and IncW groups. **Conclusions:** Our study demonstrated the dissemination of group 1 CTX-M-positive *E. coli* not only in different geographic regions of Croatia but also in different arms of the healthcare system (ie, hospitals, nursing homes, and the community). Our results also confirmed the switch from previously pervasive SHV-2 and SHV-5 ESBLs to the nationwide predominance of group 1 CTX-M β -lactamases; however, regional distribution was associated with different plasmid types carrying *bla*CTX-M genes. These types of nationwide studies are indispensable for informing global decision making that addresses the issue of antimicrobial resistance.

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Financial and Mortality Modeling as a Tool to Present Infection Prevention Data: What a SIR of 1.2 Means for the Hospital

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Background: Presenting to hospital leadership is an annual requirement of many infection prevention (IP) programs. Most presentations include current statistical data of hospital-acquired infections (HAIs) and whether the hospital has met its goals according to the National Healthcare Safety Network (NHSN) criteria. We presented HAI data in a novel way, with financial and mortality modeling, to show the impact of IP interventions to leadership not attuned to NHSN metrics. **Method:** We looked at 4 HAIs, their trends, and their effect on our hospital, Santa Clara Valley Medical Center (SCVMC). To estimate the impact of specific HAIs, we used 2 metrics derived from a meta-analysis by the US Department of Health and Human Services (HHS): excess mortality and excess cost. Excess mortality is defined as the difference between the underlying population mortality and the affected population mortality expressed as deaths per 1,000 population. Excess cost is defined as the additional cost introduced per patient with a specific HAI versus a similarly admitted patient without that HAI. HHS data were multiplied by the number of HAI events at SCVMC to generate estimates. **Result:** In our presentation, we elucidated a previously unseen cost savings and decreased mortality with 2 HAIs, central-line-associated blood stream infections (CLABSIs) and catheter associated urinary tract infections (CAUTIs), which were below NHSN targets due to

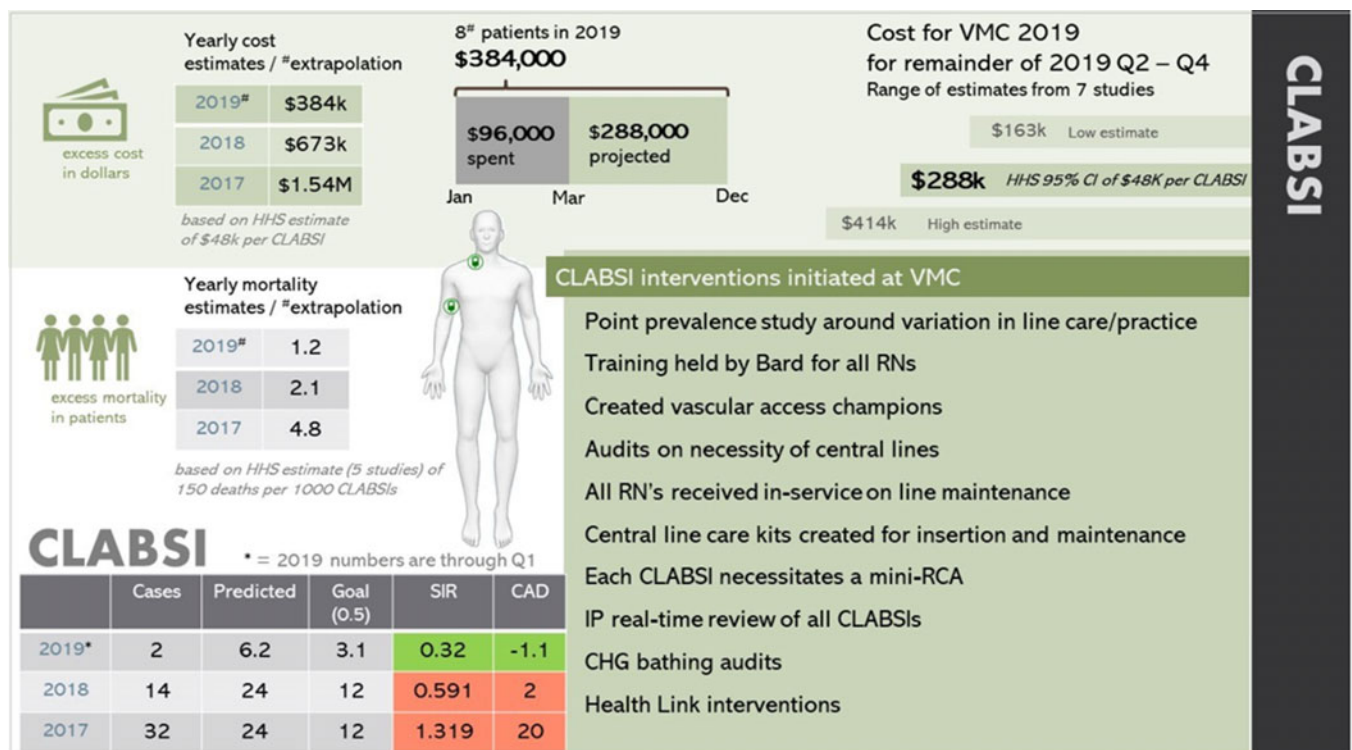


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