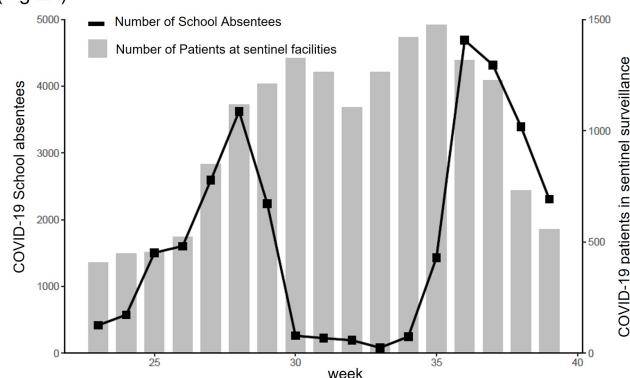
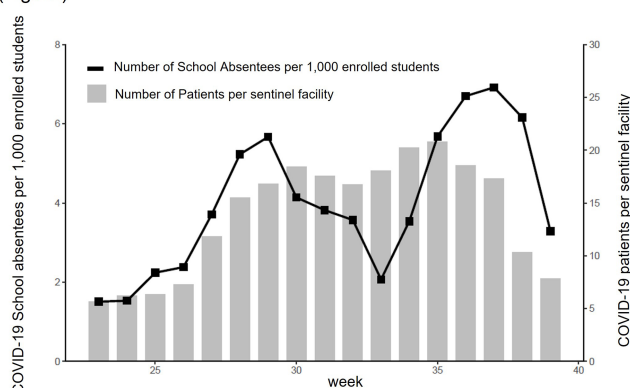


(Fig 2A)



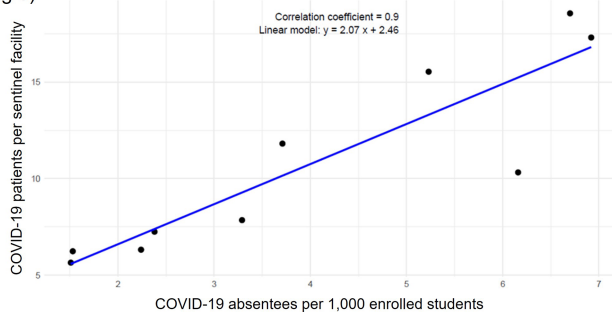
(Fig 2B)



(2A) indicates COVID-19 school absentees and patients reported by sentinel facilities from week 23 to week 39 in 2023.

(2B) indicates COVID-19 absentees per 1,000 enrolled students and the number of COVID-19 patients per sentinel facility from week 23 to week 39 in 2023.

(Fig 3)



The correlation between COVID-19 absentees per 1,000 enrolled students and number of COVID-19 patients per sentinel facility except for weeks 29-35, 2023.

were observed in school absentee surveillance, but in sentinel surveillance, some health centers reported significantly more cases than others. **Conclusion:** The results of this study suggest that although COVID-19-based school absentee surveillance has some drawbacks, such as the limited number of subjects and the difficulty of evaluation during the summer

vacation when schools are closed, it has the advantage of being able to evaluate the entire community without being affected by medical institution practice bias, and can be used to monitor trends in infectious diseases. It was considered important to combine and evaluate multiple surveillance indicators in order to accurately monitor epidemiologic trends of infectious disease over time.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s148–s149

doi:10.1017/ash.2024.325

Presentation Type:

Poster Presentation - Poster Presentation

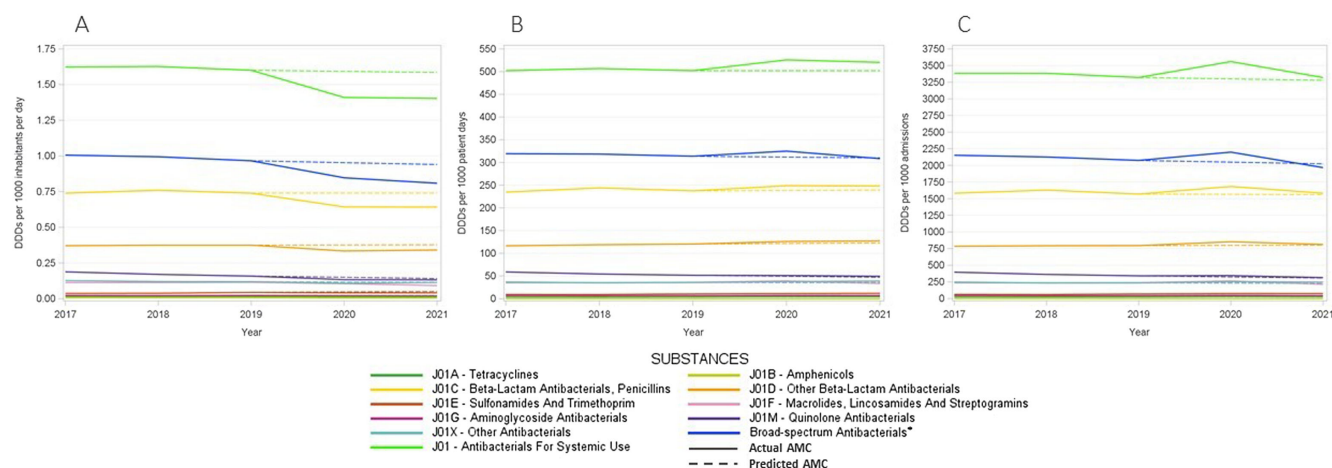
Subject Category: Surveillance

Trends in Hospital Antibacterial Consumption in Belgium (2017-2021): Evaluating the Impact of the COVID-19 Pandemic

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This study aimed to evaluate the impact of the COVID-19 pandemic on antimicrobial consumption (AMC) in Belgian hospitals from 2017 to 2021, using data from the European Surveillance of Antimicrobial Consumption Network (ESAC-Net) and the Belgian Hospitals Surveillance of Antimicrobial Consumption (BeH-SAC). Antimicrobial volume was quantified in Defined Daily Doses (DDDs), and AMC was expressed in DDDs/1000 inhabitants/day (DIDs), DDDs/1000 patient days and DDDs/1000 admissions. Linear regressions were employed to analyze 5-year trends for the ATC J01 group, at the ATC-3 level and for broad-spectrum antimicrobials. Broad-spectrum antibiotics included combinations of penicillins, incl. beta-lactamase inhibitors (J01CR), second-generation cephalosporins (J01DC), third-generation cephalosporins (J01DD), macrolides, lincosamides and streptogramins (J01F, excluding erythromycin J01FA01), and fluoroquinolones (J01MA). The compound annual growth rate (CAGR) calculated for the years preceding the pandemic was used to forecast 2020 and 2021 AMC, enabling a comparison with the actual use. Hospital AMC measured as DIDs decreased by 12% from 2019 to 2020. In contrast, when expressed as DDDs/1000 patient days and DDDs/1000 admissions, a 5% and 7% increase was observed, respectively. Antibacterials for systemic use (J01) showed a significant decrease over the 5 years only when expressed in DIDs. Notable trends included a negative trend for quinolone antibacterials (J01M) when expressed in the three incidence units, as for amphenicols (J01B) when using hospital denominators only. Positive trends were observed for sulfonamides and trimethoprim (J01E) using hospital denominators and for other beta-lactam antibacterials (J01D) with the 'patient days' denominator. While the consumption of all J01 antimicrobial subclasses deviated negatively from predicted use both in 2020 and 2021 when expressed in DIDs, positive deviations were recorded using hospital denominators, except for macrolides (J01F). The use of broad-spectrum antimicrobials showed a notable decrease between 2017 and 2021 when expressed in DIDs. However, when using hospital denominators, the observed use of broad-spectrum antimicrobials exceeded the forecasted values in 2020, to regress below the forecasted levels in 2021 (Figure 1). Contrary to results obtained using the widely applied country's population as the denominator, a notable surge in AMC, particularly for broad-spectrum antimicrobials, was observed in 2020 when using hospital-specific denominators. This increase coincided with the onset of the COVID-19 crisis. These findings emphasize the need for a national hospital surveillance system that uses denominators that accurately represent the specific population being monitored. Implementing robust hospital-specific surveillance mechanisms would improve the precision

Figure 1: Evolution of actual and predicted consumption of Antibacterials for systemic use (J01, subclasses & broad-spectrum) between 2017 and 2021 in all Belgian hospitals (n=170) expressed in DDDs/1000 inhabitants/day (A), in acute care hospitals (n=103) expressed in DDDs/1000 patient days (B) and DDDs/1000 admissions (C)



* Broad-Spectrum Antibacterials include Combinations Of Penicillins, Incl. Beta-Lactamase Inhibitors (J01CR), Second-Generation Cephalosporins (J01DC), Third-Generation Cephalosporins (J01DD), Macrolides, Lincosamides And Streptogramins (J01F) except Erythromycin (J01FA01) and Fluoroquinolones (J01MA).

of evaluations and facilitate targeted interventions aimed at optimizing antimicrobial utilization.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s149–s150

doi:10.1017/ash.2024.326

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: Surveillance

Efficacy of Empiric Contact Precautions for Patients from High Risk Facilities

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Background: Infection prevention surveillance revealed that patients admitted from two specific long term care facilities comprised the majority of multi-drug resistant organisms (MDRO) and scabies cases at our institution. Current practices include performing active surveillance for *Candida auris* and methicillin-resistant *Staphylococcus aureus* (MRSA) for specific high-risk patients, as surveillance for all MDROs and scabies is impractical. We therefore sought to create an admission screening process to efficiently identify patients from high-risk facilities (HRFs) and place them in pre-emptive contact precautions upon admission. **Methods:** Patients admitted from HRFs were identified on admission as part of the initial nursing assessment. For any positive responses, nursing received a Best Practice Advisory to place the patient in contact precautions and patient placement received an alert that the patient would require a private room. Infection Preventionists reviewed a report of all patients who screened positive and added a “High Risk Facility” banner to the chart. This banner remained for the duration of hospitalization and for every subsequent readmission and outpatient visit. We reviewed the electronic

medical records of all patients with a HRF banner placed from March 8, 2023 to September 15, 2023 and abstracted data regarding the presence of scabies or any of the following MDROs before and after placement of the banner: *C. auris*, carbapenem-resistant enterobacterales (CRE), MRSA, vancomycin-resistant *Enterococcus* (VRE), carbapenem-resistant *Acinetobacter*, and MDR *Pseudomonas*. **Results:** Of the 93 patients who had a HRF banner added during the study period, 31 (33.33%) were already known to have MDRO colonization at the time of admission to our facility. Thirty-three of the remaining 62 patients (53.22%) without known MDRO colonization were subsequently found to have MDRO colonization/infection or scabies infestation that may have required contact precautions during their index admission or a subsequent admission. This included 14 patients with *C. auris*, 2 with CRE, 3 with MDR *Pseudomonas*, 12 with MRSA, 12 with carbapenem-resistant *Acinetobacter*, and 2 with VRE. Patients were admitted for a median of 9 days before their diagnosis, and 36 of the 93 patients (38.71%) were re-admitted to our hospital during the study period. **Conclusion:** We found that empiric contact precautions based solely on exposure to specific HRFs facilitated earlier isolation by a median of 9 days. This approach should be considered in acute care hospitals with a high proportion of admissions from HRFs, especially when active and passive surveillance for MDROs is limited.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s150

doi:10.1017/ash.2024.327

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: Surveillance

Antimicrobial Use in Belgian Acute Care Hospitals : Results of the 2022 ECDC Point Prevalence Survey

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Background: Point prevalence surveys (PPS) organized by the European Centre for Disease Prevention and Control (ECDC) play a crucial role in assessing healthcare-associated infections (HAIs) and antimicrobial use (AU) in European acute care hospitals. In 2017, a crude prevalence of 28.1% (95% CI 27.3-29.0%) of inpatients receiving at least one