

**P2598 Prevalence of healthcare-associated infections in Dutch nursing homes**Kati Halonen\*<sup>1</sup>, Marjolein Korndewal<sup>1</sup>, Rudy Hertroys<sup>1</sup>, Sabine De Greeff<sup>1</sup><sup>1</sup> RIVM, Bilthoven, Netherlands

**Background:** Residents in nursing homes (NHs) are vulnerable for infections due to underlying chronic illnesses, sharing facilities and living in closed setting. Systematic surveillance on prevalence of healthcare-associated infections (HAI) and antimicrobial usage in this population is essential to target and evaluate infection prevention interventions.

This surveillance study was to determine trends in the prevalence of HAIs and antimicrobial usage in Dutch NHs between 2013 and 2017.

**Materials/methods:** In the Netherlands, the national surveillance network for HAIs in NHs organizes biannual cross-sectional prevalence surveys since 2011. For all residents in participating NHs demographic characteristics and the presence of gastroenteritis, lower respiratory tract infection, urinary tract infection (UTI), bacterial conjunctivitis, bloodstream infection, skin infection (since 2017) and antimicrobial use were registered. Infections were determined based on clinical definitions.

**Results:** In 5 years, 185 NHs participated and on average 65 per survey (range:33-100). 34.346 residents were included and 877 HAIs were registered in 870 residents. Mean annual prevalence of residents with HAI was 2.5% (95%CI: 2.4-2.7) and varied between 2.1% (95%CI: 1.8-2.6) and 3.3% (95%CI: 2.8-3.7). The most common infections were the UTIs (1.5%, 95%CI:1.4-1.7) and skin infections (1.0%, 95%CI: 0.8-1.4).

Residents of rehabilitation units (5.0%, 95%CI: 4.2-5.9) had a higher risk for HAI than residents of other units. There was no difference in HAI between the genders (2.7%) nor with increase in age (2.8% group <60 years to 2.6% group >90 years).

In the study period, the number of single bedrooms in NHs increased from 67% to 90%. Overall HAI prevalence of residents having a single bedroom was lower but statically not significant (2.7%, 95%CI: 2.5-2.9) compared to residents having a multiple bedroom (2.9%, 95%CI: 2.6-3.2).

Mean prevalence of antimicrobial usage was 5.4% (95%CI: 5.1-5.6), 60.5% (95%CI: 58.3-62.8) for prophylactic use and 39.5% (95%CI: 37.3-41.7) for infection.

Use of antimicrobials increased from 5.3% (95%CI: 4.6-6.0) to 6.7% (95%CI:6.1-7.3).

**Conclusions:** Based on 5 years of biannual prevalence surveillance the prevalence of HAIs in LTCF is stable. Residency at a rehabilitation unit is associated with a higher prevalence of HAI. An increase was seen in the percentage of residents receiving antimicrobials.

