OBJECTIVES: To determine the annual incidence of severe sepsis in the Netherlands by performing a point-prevalence survey in multiple intensive care units.

METHODS: ICU’s were invited to participate in a one-day survey and monitor patients during the first 24 hours of their stay, if they were admitted with a proven/suspected infection. Patient-specific questionnaires captured demographic and clinical information, presence of Systemic Inflammatory Response Syndrome (SIRS), and the functional status of seven organ systems. The annual national incidence was calculated from the results of the survey following two approaches: 1) by multiplying the survey incidence (patients/day) with the number of days per year, corrected for the fact that the survey was held on a weekday, and 2) by using the relation \( P = I \cdot D \) (\( P \) for prevalence, \( I \) for incidence and \( D \) for duration of stay) in which \( P \) was known from the survey and \( D \) was estimated as the geometrical mean of duration-to-date. RESULTS: Forty-seven ICU’s participated (in 43 general and 4 university hospitals), representing 42% of the national admission capacity. During the study-period, 18 patients meeting criteria for severe sepsis were newly admitted, and another 116 patients with severe sepsis were already present. According to the first calculation method, the annual incidence of severe sepsis was 13,137 ± 2,821 patients, whereas the second method, with an estimated \( D \) of 13.3 ± 1.1 days, led to a calculated incidence of 8,643 ± 929 patients/year. CONCLUSIONS: Using the results from a point-prevalence survey, different approaches lead to different outcomes. Both approaches hold advantages and disadvantages. The second method is considered superior because it is based on a larger population and is less sensitive to daily variations.

OBJECTIVES: HPV DNA has been detected in up to 99.7% of all cervical cancers, and infection with 2 types (HPV-16, 18) accounts for more than 50% of cases. We developed a computer-based Markov model of the natural history of HPV infection and cervical carcinogenesis to project the impact of a prophylactic vaccine against HPV 16/18 infection on the age-specific incidence and lifetime risk of invasive cervical cancer, precursor cervical lesions, and type-specific infection with HPV. METHODS: A comprehensive literature review was conducted to define plausible ranges for parameter values and the model was then calibrated to the best available population-based data. We explored the impact of alternative assumptions about vaccine efficacy, waning immunity, and competing risks associated with non-16/18 HPV types in vaccinated women. RESULTS: The model predicted a peak age-specific cancer incidence of 90 per 100,000 in the 6th decade, a lifetime cancer risk of 3.7%, and a reproducible representation of type-specific HPV within precancerous lesions and cervical cancer. A vaccine that prevented 98% of persistent HPV 16/18 was associated with an approximate equivalent reduction in 16/18-associated cancer and a 51% reduction in total cervical cancer. A vaccine that prevented 75% of persistent HPV 16/18 was associated with a 70% to 83% reduction in 16/18-associated cancer and a 51% reduction in total cervical cancer. Several modeling assumptions were identified that resulted in amplification or blunting of the vaccine’s effect on outcomes—however, when the vaccine was either very ineffective (e.g., less than 20% efficacy) or very effective (e.g., more than 80% efficacy), the differences in projected outcomes associated with these were minimal. CONCLUSIONS: A prophylactic vaccine that prevents persistent HPV 16/18 infection can be expected to significantly reduce HPV-16/18-associated LSIL, HSIL and cervical cancer.

OBJECTIVES: It was hypothesised that the total cost of managing a bleed in haemophilia patients with high titre, high responding inhibitors (from initiation of the bleed to resolution) by FEIBA or NovoSeven would be comparable due to a higher first-line efficacy despite the greater cost of NovoSeven. METHODS: Direct costs were compared from the perspective of the National Health Service. Resource utilisation was based on a retrospective analysis of bleeding episodes treated in Slovakia during the period 1990–2001. Clinical outcomes were based on a review of the international literature, data obtained from the retrospective analysis and the consensus of an expert panel of five Slovakian. A decision analytic eco-