IS IT TIME FOR IRELAND TO CONSIDER VARICELLA PERTUSSIS VACCINATION TO THE NATIONAL IMMUNIZATION PROGRAMME?

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Background Varicella (chickenpox) is generally considered a mild illness; however the resultant disease burden is substantial. Uptake of the live-attenuated vaccine to National immunization programmes is variable among European countries. Varicella could pose serious illness and mortality among vulnerable populations such as immunocompromised and those with significant co-morbidities. Varicella vaccine is commercially available in Ireland, however not funded for universal immunization. Since 2012 hospital admissions with varicella is notifiable in Ireland.

Aims To analyse the reporting of hospitalised cases of varicella in Ireland from 2012 to 2018 for 0 to 19 years of age and to propose the potential benefits of inclusion varicella immunization to the National Programme.

Methods Surveillance data submitted to health protection surveillance centre (HPSC) from January 2012 to December 2018 from hospitals around all the HSE regions of the country was analysed. Annualised rates for age categories of 0–4 years, 5–9 years, 10–14 years and 15–19 years were determined. Cross verification with hospital inpatient enquiry (HIPE) data was conducted; bed days consumed and length of stay (LOS) were estimated. Results were compared with previously published UK/Irish rates. Mortality was not analysed as part of the study. Approval for analysis of collated data from HPSC and HIPE was obtained.

Results There were 444 hospitalisations for the 0 to 19 years (mean of 63.4 admissions/year). 320/444 (72%) were in 0–4 years and 94/444 (21%) among 5–9 years, together contributing to 93% of hospitalisations. With a mean LOS of 2.86 days the varicella admissions contributed to 1269.8 bed days (inclusive of general wards, paediatric high dependency unit and paediatric intensive care unit bed utilisation) based on HIPE estimates. An increasing trend of hospitalisation was observed year-on-year for 0–4 and 5–9 years. HPSC reporting was comparable to, however lower than, the active British paediatric surveillance unit (BPSU) study published in 2007 (including Irish data). Our sentinel rate estimate of 133.1/100,000 population (range 98.8 -224.7) reflects community burden of varicella.

Conclusions Improving and standardising the varicella surveillance, highlighting the preventable acute hospital bed days due to serious illness from varicella, analysing the disease specific mortality, accurately estimating the disease burden in community including the societal costs and predicting the future implications to rate of herpes zoster among adults and the elderly; all should be factored in to make a case for the inclusion of varicella to the National immunization programme in Ireland.