

## PP10 Preventing The Winter Quadruple Threat: The Value Of Hospital Bed Capacity Freed Up By Vaccination

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**Introduction:** Hospitals in England experience extremely high levels of bed occupancy in the winter. In these circumstances, vaccine-preventable hospitalizations due to seasonal respiratory infections, have a high cost because of the missed opportunity to treat other patients on the waiting list.

This study sought to generate evidence on the hospitalizations that vaccines for older adults against seasonal influenza (flu), pneumococcal disease (PD), respiratory syncytial virus (RSV) and COVID-19 may prevent during the winter season (October-March) in England. The monetary value of the vaccine-preventable hospitalizations was estimated using a conventional reference costing method and a novel opportunity costing approach.

**Methods:** Based on retrospective analysis of Hospital Episode Statistics data on hospitalizations in England, and efficacy and observed coverage rates per vaccination program, we estimated the number of bed-days that current vaccines against flu, PD and COVID-19, and a hypothetical RSV vaccine, could free up by preventing hospitalizations in the winter among older adults. We valued the freed-up bed-days (1) as the cost of prevented hospitalizations (reference cost); (2) as the Net Monetary Benefit (NMB) generated by alternative uses of the freed-up bed-days. The opportunity cost of vaccine-preventable hospitalizations is (2) when they would be an optimal use of beds or (1)+(2) when they would be a suboptimal use.

**Results:** In the winter months, vaccination programs targeting flu, PD and RSV for older adults could collectively prevent 72,813 bed days and save over £45million (USD56 million) in hospitalization costs. The COVID-19 vaccine could prevent over 2 billion bed days and save GBP1.3 billion. Importantly, the value of hospital beds freed up by vaccination is likely to be 1.1–2 times larger (£48–£93 million [USD60–116 million] for flu, PD and RSV; £1.4–£2.8 billion [USD1.8–3.5 billion] for COVID-19) when quantified in opportunity cost terms. Scenario analysis replacing the current vaccine used in the adult PD program with the newly licensed pneumococcal conjugate 20-valent vaccine (PCV20), would increase the impact of each modelled outcome for this program by approximately 38 times.

**Conclusions:** Vaccines for flu, PD, RSV and COVID-19 could prevent a significant number of hospitalizations in the winter. The value of the associated freed-up bed capacity is likely to be underestimated by conventional reference costing methods.

## PP11 Patient Involvement In Drug Evaluations To Inform Funding Decisions: A Singapore Case Study

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**Introduction:** Patient involvement has become increasingly integral to health technology assessment (HTA) processes globally due to greater recognition of the important contribution patients make to address uncertainties in the scientific evidence base and interpret results for real-world implementation. To align with best practices and encourage meaningful patient input in HTAs in Singapore, patient involvement processes were established by the Agency for Care Effectiveness (ACE) in 2021. This presentation discusses how patient groups were identified in Singapore and describes the new patient involvement processes.

**Methods:** In the absence of a centralized database, a stakeholder mapping exercise was undertaken in 2021 to identify all relevant patient and volunteer groups in Singapore. A comprehensive search of the Singapore Charity Portal, hospital websites, standard search engines and social media platforms was conducted.

Identified groups were screened in line with specific inclusion criteria and contacted via email and cold calling to find out more about their remits. Plain English resources, targeted training materials and a process guide to encourage patient involvement in ACE's work were co-developed with local patient organizations by drawing upon best practices from overseas HTA agencies contextualized to local patients' needs. Supporting resources and processes were revised in 2022 based on ACE's experience receiving inputs from patients and caregivers to inform drug HTAs.

**Results:** One hundred and six patient groups covering 20 conditions were identified including registered organizations and informal support groups. In the first half of 2022, ACE received responses from 82 patients from ten patient organizations to inform seven drug HTAs for cancer, diabetes, HIV, and other conditions in line with the new patient involvement processes. Patient organizations viewed the opportunity to submit testimonials of their lived experience with different conditions as a meaningful and important activity for their members.

**Conclusions:** Patient involvement processes have improved the legitimacy and acceptance of ACE's work and will be continuously revised to ensure that they remain relevant and meet patients' expectations and needs.