OBJECTIVES: Before 2006 bed occupancy rates during winter periods were above the government acceptance threshold (85%) in Jessa Hospital paediatric ward (Hasselt, Belgium), with peaks above 100%. This causes pressure on bed and people management expressed in bad QoC scores. We evaluated two methods to improve the scores and their investment costs. METHODS: Option A is extending the number of beds by 4% due to the unit operation capacity, and Option B is introducing rotavirus vaccination to infants with high coverage in the catchment area. A hospital with 36 paediatric beds was simulated in TreeaCpD. Cost-effectiveness ratio was calculated for each method over a period of 6 years (2004-2009) were collected, including pre- and post-introduction of the vaccine in 2006. Estimated birth cohort was 7,000/year in the catchment area. For Option A total cost per year was calculated referencing to the observed pre-vaccination period. For Option B cost of vaccinating the birth cohort with implants has been calculated and hospital savings was calculated applying the observed post-vaccination period. Total cost per year for each option was compared. RESULTS: Option A: extending beds was not profitable and below the threshold, costs about €436,000/year and the threshold may still be exceeded. Option B: vaccination program in the area costs €420,000/year, leading to a 41% reduction in the number of bed-days for gastro-enteritis during the winter, equivalent to €82,000/year of cost offsets. Total cost of Option B is therefore €338,000/year with an overall 82% bed occupancy rate/day, being below the threshold throughout winters. CONCLUSIONS: Option B with vaccination is cheaper than option A with extra beds. Moreover it maintains the occupancy rate below the safety threshold during the whole winter period, and thus guarantees better QoC scores in the pediatric ward.

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COST-EFFECTIVENESS ANALYSIS OF PHID-CV ROUTINE VACCINATION PROGRAMME COMPARED TO PCV-13 IN PORTUGAL

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OBJECTIVES: To estimate the incremental cost-effectiveness ratio (ICER) of the pneumococcal conjugate vaccine PHID-CV compared to the 13-valent pneumococcal conjugate vaccine (PCV-13) in routine infant vaccination in Portugal. METHODS: The cost-effectiveness analysis (CEA) is based on a Markov model simulating meningitis, bacteraemia, pneumonia and pyogenic arthritis (PP) in a Portuguese cohort (10 yrs of age). CEA is performed from the National Health Service (NHS) perspective with 5% discounting. RESULTS: The model predicts that PHID-CV vaccination is more effective and less costly than PCV-13 (ICER €17,000/y). We have been validated by a panel of experts. Base case scenario assumes vaccination at 11 months of age and 5 years of age. Sensitivity analysis was performed varying model parameters. CONCLUSIONS: Assuming both vaccines have the same price, the model predicts that PHID-CV conjugate vaccine will be more effective and less costly when compared to PCV-13.