

OP72 Innovating To Decrease Mortality And Resource Use In Surgical Inpatients: The ZERO Project

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Introduction: Interest in early detection of complications in hospitals has increased recently. Complications after elective or urgent surgery are frequent and are associated with higher mortality rates, longer hospital stays, and more resource utilization. The ZERO project implemented an educational nursing program and developed an innovative algorithm that assesses a patient's complication risk based on clinical parameters to prevent complications and reduce hospital burden. Our aim was to present the results from one year of implementing ZERO at the Clinic Barcelona University Hospital.

Methods: A comparative effectiveness and cost study was conducted. Data from patients admitted after elective or urgent surgery were collected for one year retrospectively (n=8,844 from January 2019 to December 2019) and prospectively (ZERO) (n=8,163 from October 2021 to October 2022). Effectiveness was measured in terms of mortality, complications, and life-years gained (LYG). Length of stay (LoS) at conventional, intermediate, and intensive care units and rates of readmissions were collected for resource use. The chi-square test was used to compare categorical variables. The t-test and Wilcoxon test were used for normally and non-normally distributed continuous variables, respectively.

Results: There was a significant decrease in the rate of complications (7.8%, 95% confidence interval [CI]: -8.46, -7.19; p<0.001) with ZERO. Moreover, there were statistically significant reductions in mean LoS for readmissions to conventional wards (-5.04 days, 95% CI: -9.9, -0.18; p=0.04) and to the intensive care ward within the same episode (-4.68 days, 95%CI: -9.26, -0.14; p=0.02). The mean cost per patient was EUR2,772.92 and EUR2,591.57 before and after ZERO implementation, respectively. After accounting for the cost of implementing ZERO, there was a cost saving of EUR147.76 per patient (p=0.048), which yielded a yearly impact of EUR1,206,165 for the hospital budget.

Conclusions: This one-year analysis of the effect of ZERO on surgical patients shows that it decreases complication rates and all types of LoS, leading to overall cost savings for the hospital.

OP74 Analysis Of Literature And Research Foci In Overdiagnosis Based On Citespace

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Introduction: With the rapid development of innovative health technologies, evidence increasingly shows that overdiagnosis is harmful to a person's health and that it is a global public health issue. This study aimed to analyze the current research status and corresponding foci in the field of overdiagnosis in Chinese and English databases using bibliometric methods.

Methods: A search was conducted in the English Web of Science Core Collection database and the Chinese China National Knowledge Infrastructure database for literature published from inception to 31 December 2021. CiteSpace (version 5.8 R1) software was used to perform bibliometric analysis on the countries, institutions, and keyword clusters of the included literature on overdiagnosis and to draw a corresponding visual knowledge map.

Results: A total of 2,841 English and 43 Chinese publications were included. There was an increasing trend in the annual publication volume of both Chinese and English literature, with the publication volume of English research increasing significantly since 2010. In terms of countries and institutions, the top ten in English research on overdiagnosis were all from high income countries. The cooperation among these countries and institutions was close, unlike in China where the cooperation was relatively limited. Analysis of keyword clustering showed that the potential research foci for English literature on overdiagnosis included breast cancer, thyroid cancer, prostate cancer, lung cancer, and other tumor types, whereas the clustering in Chinese records was relatively scattered and mainly focused on overdiagnosis of thyroid cancer.

Conclusions: The research topics in the Chinese literature on overdiagnosis lag significantly behind English research. It is suggested that more research on overdiagnosis and related fields should be actively promoted and conducted in China in the future.

OP78 Cost-effectiveness Of A 20-valent Pneumococcal Conjugate Vaccine To Directly Protect Adults Against Pneumococcal Disease In England

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Introduction: Adult vaccination with 13-valent pneumococcal conjugate vaccine is currently recommended in the UK only for very high-risk individuals, with 23-valent pneumococcal polysaccharide vaccine (PPV23) being recommended to all adults 65 years or older and those 18 years or older with specified risk conditions. A 20-valent pneumococcal conjugate vaccine (PCV20) has recently become available for use in adults with potential to address a substantial proportion of the current adult pneumococcal disease burden in the UK. We evaluated the cost-effectiveness of PCV20 vaccination compared with PPV23 in adults in England currently eligible for pneumococcal vaccination.