

Use of Triclosan-Coated Sutures Led to Cost Saving in Public and Private Setting in India across Five Surgical Categories: An Economical Model Assessment

Authors : Anish Desai, Reshmi Pillai, Nilesh Mahajan, Hitesh Chopra, Vishal Mahajan, Ajay Grover, Ashish Kohli

Abstract : Surgical Site Infection (SSI) is hospital acquired infection of growing concern. This study presents the efficacy and cost-effectiveness of triclosan-coated suture, in reducing the burden of SSI in India. Methodology: A systematic literature search was conducted for economic burden (1998-2018) of SSI and efficacy of triclosan-coated sutures (TCS) vs. non-coated sutures (NCS) (2000-2018). PubMed Medline and EMBASE indexed articles were searched using Mesh terms or Emtree. Decision tree analysis was used to calculate, the cost difference between TCS and NCS at private and public hospitals, respectively for 7 surgical procedures. Results: The SSI range from low to high for Caesarean section (C-section), Laparoscopic hysterectomy (L-hysterectomy), Open Hernia (O-Hernia), Laparoscopic Cholecystectomy (L-Cholecystectomy), Coronary artery bypass graft (CABG), Total knee replacement (TKR), and Mastectomy were (3.77 to 24.2%), (2.28 to 11.7%), (1.75 to 60%), (1.71 to 25.58%), (1.6 to 18.86%), (1.74 to 12.5%), and (5.56 to 25%), respectively. The incremental cost (%) of TCS ranged 0.1%-0.01% in private and from 0.9%-0.09% at public hospitals across all surgical procedures. Cost savings at median efficacy & SSI risk was 6.52%, 5.07 %, 11.39%, 9.63%, 3.62%, 2.71%, 9.41% for C-section, L-hysterectomy, O-Hernia, L-Cholecystectomy, CABG, TKR, and Mastectomy in private and 8.79%, 4.99%, 12.67%, 10.58%, 3.32%, 2.35%, 11.83% in public hospital, respectively. Efficacy of TCS and SSI incidence in a particular surgical procedure were important determinants of cost savings using one-way sensitivity analysis. Conclusion: TCS suture led to cost savings across all 7 surgeries in both private and public hospitals in India.

Keywords : cost Savings, non-coated sutures, surgical site infection, triclosan-coated sutures

Conference Title : ICHEP 2019 : International Conference on Health Economics and Policy

Conference Location : Sydney, Australia

Conference Dates : February 27-28, 2019