

## PIN9

**LENGTH OF STAY AND COSTS ASSOCIATED WITH SURGICAL SITE INFECTIONS IN COLON PROCEDURES IN A LARGE U.S. DATABASE**Turpin RS<sup>1</sup>, Mahmoud N<sup>2</sup>, Yang G<sup>3</sup>, Saunders W<sup>3</sup>

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**OBJECTIVES:** During the 1990's, colorectal patients in the U.S. experienced 6.5 extra hospital days and \$3089 in costs attributable to surgical wound infections, but no updated information is available. We utilized a large U.S. hospital database to identify the variables associated with increased length of stay (LOS) and costs for colon procedures. **METHODS:** We utilized a retrospective comparative national database to assess LOS and costs in 196 hospitals from 1/1/2005 through June 30, 2006. The study population was all patients >18 years, identified via ICD-9 & CPT procedure codes for elective colon procedures. Patients given cefotetan as surgical prophylaxis were compared to patients given commonly used prophylactic antimicrobials, including cefazolin/metronidazole. Patient demographics, surgical procedure, primary diagnosis, co-morbidities, and patient severity were examined as predictors of LOS <7 days and cost >=\$15,000 using logistic regression. Patient severity was classified by APR-DRG severity of illness subclasses and SENIC risk index for infection. **RESULTS:** Hospitals were mostly urban (90%) with >300 beds (70%), and 58% were non-teaching. They represented each region of the U.S., though predominantly Mid- and South-Atlantic (44.0). The 23,801 unique patients were 51% >65 years, 53% female, and 73% white. The overall infection rate was 3.3%; mean LOS 7.0 (SD 5.7); mean total cost \$12,871 (SD \$11,295); and mean daily cost \$2015 (SD \$917). In an adjusted model, compared to cefazolin/metronidazole, cefotetan is associated with a lower rate of LOS 7 days or more (OR = 0.92; p = 0.007) and total cost >=\$15,000 (OR = 0.71; p < 0.001). Additional predictors of greater LOS and costs are elevated severity (OR = 9.02 & 11.53) and SENIC scores (OR = 1.51 & 4.12), age <75 (OR = 2.18 & 1.66), and non-white ethnicity (OR = 1.31 & 1.16). **CONCLUSION:** Cefotetan has limited availability and substitutions are increasingly utilized. Yet in elective colon procedures, cefotetan used as surgical prophylaxis is associated with lower LOS and costs compared to cefazolin/metronidazole.

## PIN10

**ANALYSIS OF INCIDENCE, RESOURCE USE AND COSTS OF SEVERE SEPSIS IN BRAZIL AND THE ECONOMIC IMPACT OF DROTRECUGIN-ALFA ACTIVATED**Marques AC<sup>1</sup>, Janiszewski M<sup>2</sup>, Houlis D<sup>3</sup>

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**OBJECTIVES:** To estimate severe sepsis (SS) incidence, health resource use and costs during hospitalization in Brazilian private health care system, and to verify economic impact of drotrecogin-alfa activated (DrotAA) treatment. **METHODS:** We performed a retrospective data analysis of private health plans' electronic claims between April 2005 and March 2006. SS were defined according to 2001 ACP/SCCM criteria. Collected data were: total length of stay (LOS), length of ICU stay (ICU-LOS), maximum organ dysfunction number achieved during hospital stay (MOD), average cost per day, and total cost per patient. **RESULTS:** Incidence of SS hospitalization among 5.2 million health plan beneficiaries was 2,12/1000, summing up 11,067 patients/year. Cost/day and total hospital cost increased propor-

tionally to MOD: from R\$ 2398.00 (patients with 1MOD) to R\$ 2900.00 (4MOD) and from R\$ 43,010.00 to R\$ 64,276.00. ICU-LOS varied from 8 to 10 and total-LOS from 18 to 22 days. Patients with SS with 1MOD represented >75% of the total number, while with 4MOD were 2% of total population. DrotAA were given to 1.3% of total SS patients (148). Fifty-three percent of DrotAA patients had MOD $\geq$  2, compared to 19% of the non-DrotAA patients. Average cost of DrotAA per patient was R\$ 38,809.00. Total hospital cost for the whole group of patients was R\$ 498,079,803.00. Thus, DrotAA cost represented 1.2% of hospital costs related to SS. **CONCLUSION:** Costs with SS are substantial, and increase with disease severity. Since there is minor increase in LOS, an increase in daily medical resources is expected. Patient number receiving DrotAA, and consequently, additional cost are small relative to SS baseline cost. Thus, previously described DrotAA benefit on survival and organ dysfunction may outweigh drug costs.

## PIN11

**COST-EFFECTIVENESS OF SUBSTITUTING LAMIVUDINE (LVD) WITH ENTECAVIR (ETV) IN CHRONIC HEPATITIS B (CHB) PATIENTS IN THE PUBLIC SECTOR OF HONG KONG**Lee KK<sup>1</sup>, Lee VVWY<sup>1</sup>, Yuan Y<sup>2</sup>

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**OBJECTIVES:** To study the cost-effectiveness if LVD were replaced by ETV in a group of patients with CHB in a public hospital in Hong Kong. **METHODS:** From a public hospital perspective, a decision analytic model was used to study the cost-effectiveness of 2 years of treatment of ETV in a hypothetical cohort of 1000 CHB patients; cirrhosis and hepatocarcinoma (HCC) events were projected to 10 years. Clinical efficacy data was obtained from a recently published international randomized phase III trial in a group of HBeAg negative CHB patients. The multivariate-adjusted relative risks for events were estimated by Cox proportional hazards model from a recent Taiwan epidemiology study. Local health care costs including drug cost were used. Cost of management of the different disease states were adopted from a recently published local cost of illness study and QALYs were calculated using the utility values obtained from another recent local study. Hong Kong governmental population statistics of life expectancy was used for the estimation. **RESULTS:** Using a 5% discount rate for all projections, a 2-year of ETV treatment would incur an extra drug cost of HKD23.5 million (about USD3 million, 1USD = 7.8HKD); yet about HKD13.8 million (USD1.7 million) would be avoided in 10 years time due to reduction in compensated and decompensated cirrhosis and HCC. The incremental cost-effectiveness for ETV is about HKD24,000 (about USD3000) per life year saved and HKD30,000 (about USD3800) per QALY saved. **CONCLUSION:** Using the US standard of USD50,000 per QALY in deciding whether a therapy is cost-effective, the present study suggests ETV to be a more cost-effective treatment relative to LVD for CHB patients in the Hong Kong public sector.

## PIN12

**THE COST-EFFECTIVENESS ANALYSIS OF ENTECAVIR IN THE TREATMENT OF CHRONIC HEPATITIS B (CHB) PATIENTS IN POLAND**Orlewska E<sup>1</sup>, Cerri KH<sup>2</sup>, Kutikova L<sup>3</sup>, Yuan Y<sup>4</sup>, Ilojeje U<sup>5</sup>, Hay JW<sup>6</sup>

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