published in the English language from dates of inception to January 2007. Patients were considered to have CHB if they had elevated ALT levels and active viral replication. Monotherapy, combination and sequential therapies were included. Among trials that met our inclusion criteria, we abstracted data describing normalization of ALT, HBV DNA, sustained biochemical response, HBeAg seroconversion, histological improvement, drop-outs and adverse events. Intention-to-treat data were combined using a random-effects meta-analysis, with missing data considered as treatment failures. Outcomes were expressed as relative risks with 95% confidence intervals. **RESULTS:** The initial search yielded 2064 references, 127 were excluded due to inadequate blinding, allocation concealment, randomization and reporting of outcomes; 20 studies were included. Trials involved 5573 patients (4121 males, 1309 females), ranging in size from 200–814 patients. Mean age was 40.7. Eleven trials studied HBeAg-positive patients, four trials studied HBeAg-negative patients, and four trials studied both. Due to small numbers of trials for comparison led to pooling of HBeAg-positive and HBeAg-negative studies. No treatment was superior for all outcome measures. Monotherapy was superior to placebo. Comparisons of single drugs favored treatment with ADF or ENT over LAM or PEG. LAM was superior to PEG with better clinical outcomes and fewer adverse events and patient dropouts. Combination and sequential treatments were not superior, however comparisons were limited by our one-year follow-up. **CONCLUSION:** Monotherapy with ADF or ENT are the most attractive treatment options within the first year of treatment. Further research on combination and sequential therapies may provide better options but presently insufficient evidence exists to support this approach.

PIN3

DATA MINING PHYSICIAN DECISION AND INVESTIGATING TREATMENT OPTIONS OF OSTEOMYELITIS

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OBJECTIVE: The purpose of this study is to investigate treatment options of osteomyelitis based on physician decisions recorded in our dataset. **METHODS:** We want to find the frequency of a given input (code) for a variable, or more than one variable in health care data. Using the Thomson MedStat MarketScan data containing all patient claims for 40 million observations, the primary diagnosis code is given for each patient as well as fifteen possible secondary diagnoses. We use SAS Text Miner to demonstrate a simplified method to search these fifteen columns. We use ICD9 and CPT codes to find treatments for osteomyelitis. We also look for sequential treatments for recurrence of osteomyelitis. After filtering the data for Osteomyelitis, there are 18,721 observations in inpatients that contain 2661 patients, and 233,001 observations in outpatients with 78,957 patients. **RESULTS:** The difference between the number of observation and number of distinct patient IDs shows that most patients have a sequence of procedures during their treatment. After sorting the data by procedures, the most frequent (20%) is "Dorsal and dorsolumbar fusion, posterior technique", second is "Excisional debridement of wound, infection, or burn" (15%), third "Amputation of toe" (9%), and in forth place, "Revision of amputation stump" (7%). In the outpatient data, the most frequent procedure is code 86.59 (Closure of skin and subcutaneous tissue of other sites) with 4021 records out of 8711 records. We found that about 8 % of patients with osteomyelitis from inpatient data and about 0.3% from outpatient data had amputation. **CONCLUSION:** While amputation does not occur as often as debridement, we want to examine the sequence of treatments to see whether amputation follows a pattern of debridement.

PIN4

ANTIMICROBIAL RESISTANCE PREVALENCE OF ENTEROCOCCI FROM BOGOTA, COLOMBIA HOSPITALS 2001–2006

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OBJECTIVE: To determine antimicrobial resistance profiles for Enterococcus in 14 tertiary-level hospitals in Bogotá, Colombia. **METHODS:** Time series analyses were performed, as well as descriptive analyses of Enterococcus faecalis and Enterococcus faecium in hospitals belonging to the Bogotá Bacterial Resistance Control Group from January 1, 2001–January 1, 2007. We identified the presence and species of enterococcus according to anatomical site. **RESULTS:** During that period, a total of 5770 strains of Enterococci faecalis and 1259 of Enterococcus faecium were analyzed. Enterococcus was found in >20% of isolates from blood samples and abdominal fluid in critical care units (SUCI) and in >10% of samples from non-critical care services (SNUCI) in tertiary-level hospitals in Bogotá. Ampicillin was active against Enterococcus faecalis strains in Critical care units (SUCI) and other services (SNUCI), but >50% of E.faecium strains in SNUCI were resistant. Vancomycin-resistant strains occurred in >2% of E.faecalis strains identified in SUCI and >8% in SNUCI. The resistance trend in E.faecium to vancomycin in SNUCI was towards the low in the six years studied. **CONCLUSION:** This study confirms the worldwide trend towards an increase in infections due to Enterococcus. The emerging pattern of antimicrobial resistance among such isolates is alarming.

PIN5

INTEREST OF MULTI-CRITERIA MODELING APPROACH IN ASSESSMENT OF YELLOW FEVER EPIDEMIC RISK

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OBJECTIVE: The danger of widespread and intense epidemics of yellow fever (YF) in Africa has become very serious, requiring urgent immunization response. Because it is not possible to vaccinate 100% of the adult population, the challenge is to prioritize immunization of the population at highest risk. An original risk assessment has been performed at the initiative of the World Health Organization, using modeling to enable countries to define populations currently at highest risk, which will be vaccinated in priority. **METHODS:** Five exposure risk factors have been selected and collected at the district level in three African countries: Burkina Faso, Togo, Mali. The five indicators are: ecological risk zone, confirmed YF cases since 1960, suspected cases since 1960, number of years in which YF cases notified since 1960, district close to another district that has notified cases since 1960. A multi-criteria analysis based on multiple component analysis (MCA) has constructed a composite exposure indicator (CEi) from the five selected exposure risk factors. In reducing by mathematical projections the number of dimensions, MCA modeling synthesize complex data tables. **RESULTS:** For each of the three target countries, three analyses have been done for rural districts, urban districts and rural + urban districts. Four risk clusters have been determined from the lowest risk to the highest risks, allowing the construction of detailed YF risk maps in Burkina-Faso, Togo and Mali. These "YF risk assessment maps" present in four colors the four risk clusters at each

district level. **CONCLUSION:** This approach seem to be an original, robust and reproducible technique for risk assessment purpose, which can be applied to a number of diseases and technology assessment when the number of indicators (risk indicators, clinical indicators, biologic indicators, etc) make data interpretation, comparisons and decision making difficult.

WITHDRAWN **PIN6**

PIN7

MRSA: INVESTIGATING THE DANGEROUS HOSPITAL INFECTION

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OBJECTIVE: Methicillin-resistant Staphylococcus aureus, or MRSA, is a commonly acquired infection in the hospital environment. We examine data from the National Inpatient Sample (NIS) to diagnose trends to gain more insight about the infection. It is the purpose of this study to determine if race, age or gender are factors in the severity of the infection, and to ascertain what effects any secondary conditions may have on a patient with MRSA. **METHODS:** The data were collected from a 10% sample from 2004 from the NIS with information relevant to 5974 patients diagnosed with MRSA. The data were then imported into SAS Enterprise Guide 4. SAS is used to create tables of data and kernel density estimates, which give an estimate of the data's probability density, to develop a logistic regression model relating death risk to specific diagnoses, and to develop a linear model concerning a patient's total charges. **RESULTS:** There appears to be a correlation between the age of a patient and the length of inpatient stay. Asian American and African American patients experience a higher mortality rate with MRSA. Total charges were similar between males and females, although males showed a slightly higher mean; secondary conditions and age had a much more pronounced effect on charges. The three most common conditions present in patients with MRSA were hypertension, urinary tract infection (UTI), and congestive heart failure—UTI and heart failure appear to raise the risk of death to one with MRSA. **CONCLUSIONS:** Further studies should be conducted to investigate MRSA and how it affects people from various ethnic backgrounds and age groups. By analyzing medical data and performing kernel density estimates, it is possible to uncover important relationships that can be used to treat patients worldwide.

INFECTION—Cost Studies

PIN8

BUDGET IMPACT OF ADDING DORIPENEM TO A HOSPITAL FORMULARY

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OBJECTIVE: Quantify the budgetary impact of adding a new carbapenem, doripenem, to a hospital formulary for treatment of complicated intra-abdominal infection (cIAI), complicated urinary tract infection (cUTI) and nosocomial pneumonia (NP) including ventilator-associated pneumonia (VAP), in the United States. Doripenem has been approved in the US for cIAI and cUTI and is under FDA review for treatment of NP, including VAP. **METHODS:** This model was developed in accordance with Good Research Practices for Budget Impact Analysis disseminated by ISPOR to estimate the annual impact on a hospital's budget of adding doripenem. Carbapenem (doripenem, imipenem, meropenem) wholesale acquisition costs from 2007 National Drug Data File, hospitalization costs (2006 US dollars) from published literature, annual hospital admissions for NP, VAP, cIAI, and cUTI, current proportional share of imipenem and meropenem (50% each, no doripenem use), treatment duration and length of stay (LOS) from clinical trials were considered. A new proportional share of 50% doripenem, 30% imipenem and 20% meropenem was assumed for this analysis. Sensitivity of results on different proportions of doripenem use was examined. **RESULTS:** Total cost per treated patient was estimated to be $24,284 (range: $13,117 (cUTI) to $71,026 (VAP)), prior to introduction of doripenem. With the new proportional share, it would decrease to $23,305 (range: $12,987 (cUTI) to $65,289 (VAP)), a 4% reduction in the budget. Pharmacy costs made up 4% of overall treatment costs. The majority of savings came from shorter hospital LOS for VAP, observed in clinical trials comparing doripenem to comparators. Scenarios with a greater proportion of doripenem use resulted in larger savings to the hospital budget ($1927 per patient at 100% doripenem use). Results remained favorable for formulary with doripenem under various sensitivity analyses. **CONCLUSION:** Results indicate that adding doripenem to a hospital formulary will yield potential savings to a hospital's budget.

PIN9

THE WORKFORCE AND COST IMPLICATIONS OF SUBSTITUTING NURSES AND PHARMACISTS FOR DOCTORS IN THE FOLLOW-UP OF PATIENTS WITH AIDS ON ANTIRETROVIRAL THERAPY IN UGANDA

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OBJECTIVE: To quantify the workforce and cost implications of routine doctor-intensive (DI), nurse-intensive (NI) and pharmacist-intensive (PI) ART follow-up algorithms for HIV/AIDS treatment at the Infectious Diseases Institute, a large urban HIV clinic in Kampala, Uganda. **METHODS:** We performed a societal perspective cost analysis including health resource utilization and opportunity cost of patient waiting (PW) time. A time-motion survey was performed to estimate median health worker utilization (HWU) and PW times for different services. Unique personnel requirements were identified to determine hourly HWU per patient, which was multiplied by hourly wages for different cadres. PW times were multiplied by mean hourly wage for Ugandans. National workforce and cost implications were projected. **RESULTS:** Median HWU and PW times per visit (hours) were 0.20 and 0.24 for triage nurses, 0.12 and 1.10 for doctors, 0.08 and 0.27 for pharmacists, and 0.13 and 0.05 for nurses. HWU time for refill pharmacists was 0.03 with no waiting. Hourly wages were: nurses-$4.6, doctors-$8.3, and pharmacists-$3.3. The average Ugandan hourly wage was $0.99. Total annual societal per-patient cost of follow-up was $45.2 for DI, $28.3 for NI and $16.3 for PI. Total projected national annual follow-up cost was $13.5 million for DI, $8.5 million for NI and $4.9 million for PI. Extrapolating to a national level, we project that the substitution of nurses or pharmacists for doctors would save 404 full-time-equivalent doctors per year, 18.4% of the current number practicing in Uganda. **CONCLUSION:** The use of NI and PI innovations as substitutes for DI follow-up results in