life years (QALYs), and incremental cost-effectiveness ratios. Sensitivity analyses (SAs) were conducted to test the robustness of the results.

**Results.** In the confirmed treatment setting, C/T had a higher cure rate (5.0 percentage points, the same below), lower short-term mortality (~5%), cost more ($2,728), and yielded higher lifetime QALYs (0.61) than meropenem ($4,472/QALY gained). In the initial treatment setting, C/T sustained a better clinical performance (9.5% more cure, ~6.8% mortality, 1.16 more QALYs), yet cost less than meropenem (~$5,662) due to better susceptibility. The response and mortality rates from ASPECT-NP had the greatest impact on results. SAs showed that the result of C/T being cost-effective over meropenem was generally robust.

**Conclusion.** The results indicate that, compared with meropenem, C/T could be a cost-effective option for patients with vHABP/V APB in the US setting.

**Disclosures.** All authors: No reported disclosures.

### 2201. Cost of Antimicrobial Use Against Upper Respiratory Infection in Japan

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**Session:** 244. Bacterial Respiratory Infections

**Saturday, October 5, 2019: 12:15 PM**

**Background.** Antibiotics are often inappropriately prescribed for treating upper respiratory infection (URI) patients in ambulatory care settings. In Japan, a previous study estimated physicians prescribed antibiotics in about 30% of URI cases. However, trends of prescription behavior and additional costs of inappropriate antibiotic use in URI cases are still not clear in Japan. The present study’s main objective was to clarify the amount of additional cost owing to inappropriate antibiotic prescription for URI and the recent trend.

**Methods.** We conducted a retrospective observational survey using longitudinal claims data spanning 2013–2016, obtained from the Japan Medical Data Center Co., Ltd. (JMdC) Claims Database, which contains anonymous claim data on 5.1 million (for 2013–2016) corporate employees covered by the employees’ health insurance plan (Social insurance), and their family members <65 years old. Six physicians specialized in infectious disease assessed the appropriateness of antibiotic prescription based on the ICD-10 code in the database. The total additional cost of antibiotic prescription for URI, and the recent trend.

**Results.** The total annual cost of antibiotic prescription for URI was estimated at US$424.6 (95% confidence interval: 416.8–430.5) million in 2013, 330.9 (335.7–346.2) million in 2014, 349.9 (344.5–355.3) million in 2015, and 297.1 (292.4–301.9) million in 2016.

**Conclusion.** Although a decreasing trend was observed, the annual cost of antibiotic prescription for URI potentially imposes a substantial economic burden in Japan.

### 2202. Validation of a Rabbit Model of Pseudomonas aeruginosa Acute Pneumonia

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**Session:** 244. Bacterial Respiratory Infections

**Saturday, October 5, 2019: 12:15 PM**

**Background.** Severity and antimicrobial resistance of P. aeruginosa (PA) hospital-acquired pneumonia led the FDA to encourage the development of animal models for preclinical evaluation of new therapeutic strategies. We present here the validation of a rabbit model of PA acute pneumonia.

**Methods.** Rabbits were infected by endotracheal instillation of 1.8 mL of a standardized inoculum containing 9 × 10⁵ CFU of PA strain 6,206 caused fatal pneumonia in 13–23 hours by acute respiratory distress syndrome (pulmonary edema and necrosis with LW/BW > 10, pO₂ <40 mmHg) and/or sepsis (hyperlactatemia, hypoglycemia, cytopenia). LW/BW and pulmonary bacterial counts increased significantly over time. The splenic and renal bacterial loads were constant after 6 h. Hypoxemia <60 mmHg appeared at 5 hpi for 4/6 rabbits, associated with elevated plasma IL-8 concentration, massive neutrophilic influx into the airspace, lung necrosis, hemorrhage, and pulmonary edema formation. Consequently, 5 hpi appeared as the most appropriate time to trigger a therapeutic intervention. Meropenem (80 mg/kg/q2h) or tobramycin (1 injection of 2.5 mg/kg, then saline/q2h) showed superior efficacy over saline, with a mortality rate of 33% and 17% vs. 100%, and an LW/BW ratio of 8.53 and 8.54 vs. 13.9, respectively. Tobramycin was less effective than meropenem in clearing bacteria, with, respectively, 1 and 9 out of 12 rabbits having sterile samples.

**Results.** PA strain 6,206 caused fatal pneumonia in 13–23 hours by acute respiratory distress syndrome (pulmonary edema and necrosis with LW/BW > 10, pO₂ <40 mmHg) and/or sepsis (hyperlactatemia, hypoglycemia, cytopenia). LW/BW and pulmonary bacterial loads were constant after 6 h. Hypoxemia <60 mmHg appeared at 5 hpi for 4/6 rabbits, associated with elevated plasma IL-8 concentration, massive neutrophilic influx into the airspace, lung necrosis, hemorrhage, and pulmonary edema formation. Consequently, 5 hpi appeared as the most appropriate time to trigger a therapeutic intervention. Meropenem (80 mg/kg/q2h) or tobramycin (1 injection of 2.5 mg/kg, then saline/q2h) showed superior efficacy over saline, with a mortality rate of 33% and 17% vs. 100%, and an LW/BW ratio of 8.53 and 8.54 vs. 13.9, respectively. Tobramycin was less effective than meropenem in clearing bacteria, with, respectively, 1 and 9 out of 12 rabbits having sterile samples.

**Conclusion.** This rabbit model of PA acute pneumonia is a reliable evaluation tool for new therapeutic strategies. Our study also provides guidance for the