study was set, methods employed, the inclusion of active comparators, and study endpoints. Data were extracted from each study to form a data extraction form.

RESULTS: Seventy studies met our inclusion criteria and were included in our dataset. Many of these analyses’ have concluded that FET is cost-effective; 38% of the cost-effectiveness analyses’ findings indicate ICERs below $50,000 (2012 USD). In 2013, the cost-effectiveness literature showed considerable growth of the cost-effectiveness literature more broadly with 35% of studies published since 2009. Across all years, a smaller proportion of studies examining PET emanated from the US than from other countries. The PET analyses generally (29% vs. 42%). The majority of studies examined PET for oncological indications (n=58, 83%). The common

PH28
COST-BENEFIT ANALYSIS OF CENTRALIZING CITY-WIDE MULTI-INSTITUTIONAL NEONATAL TOTAL PARENTERAL NUTRITION AT A SINGLE PEDIATRIC INSTITUTION

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OBJECTIVES: Centralizing city-wide neonatal total parenteral nutrition (TPN) production and distribution reduces error from standardized processes and order sets and pediatric pharmacist review. However, it is unclear if the benefits justify the cost. The purpose of this study was to determine the costs and benefits of centralizing neonatal TPN production at a single city-wide institution. A second objective was to calculate the error reduction potential by centralizing neonatal TPN preparation. METHODS: We performed a cost-benefit analysis that was preliminary conducted in a pilot accuracy study. The model was comprised of direct medical costs and benefits of centralized production at a large, nonprofit tertiary care pediatric hospital by pediatric pharmacists vs. decentralized preparation at multiple large, nonprofit tertiary care adult hospitals by staff pharmacists. Costs, errors, and counter service times were derived from historical data. Medication error rates and costs of errors were obtained from the literature. We took the pediatric hospital perspective for a 5-year horizon. A 3% discount rate was used. Sensitivity analyses of medication error costs and error rates were performed to test the stability of the outcomes. RESULTS: In 2013 adjusted dollars, total costs over 5 years for TPN centralization was $2,028,374 vs $2,668,398 for decentralized, a cost savings of $640,024. TPN centralization remained cost beneficial throughout the analysis model to compare the age-specific incidence, health care resource utilization, costs and quality-adjusted life years (QALYs) related to HZ, PHN, and non-pain complications among vaccinated and unvaccinated individuals at age 50, 60, or 70 years. Health outcomes, resource utilization and costs were projected for the US cohorts from 50 to 99 years of age. It incorporates HZ-specific QALY scores for duration and intensity of pain and the probabilities for Monte Carlo simulations. QALYs and cost per QALY were calculated. Sensitivity analyses were conducted on vaccine efficacy duration and other variables. RESULTS: Vaccinating at age 60 would prevent more shingles cases (26,147 cases per million persons) followed by vaccination at age 70 while vaccinating at age 50 prevents the less number of shingles cases (21,269 vs. 19,795 respectively). However, vaccinating at age 70 would be the strategy with the biggest impact (8,055 cases prevented), followed by age 60 and then age 50 (4,055 vs. 1,012 cases prevented, respectively). Vaccinating at age 70, 60, and 50 would socially cost $38,000, $80,000 and $272,000 per QALY saved, respectively. CONCLUSIONS: Overall, the optimal age for vaccination would be at 70 years. While various uncertainties remain, our results were robust on the sensitivity analyses and the magnitude of the differences in outcomes and costs between strategies.

PH30
THE VALUE OF SPECIALITY BIOPHARMACEUTICALS: ARE THEY WORTH THEIR PRICE?

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OBJECTIVES: Novel specialty biopharmaceuticals hold great promise for patients with chronic diseases and represent an important area of future drug development. However, research on development costs, special handling, and other necessary enhancements to patient support programs all contribute to frequently higher prices for these products. This study sought to assess the value of specialty pharmaceuticals through an examination of the cost-effectiveness analyses (CEAs) and cost-utility analyses (CUAs) of these products. The different indications, disease areas by pharmaceutical spend: rheumatoid arthritis (RA), multiple sclerosis (MS), and breast cancer (BC). METHODS: A systematic review of market research and cost-effectiveness analyses for each disease area to assess clinical, functional, and economic outcomes associated with specialty medicine treatments versus the previous standard of care. RESULTS: All RA clinical (ACR) and functional (HAQ) outcome articles were classified as positive. The median cost-effectiveness ratio was $220,000 per QALY. All MS clinical outcomes were classified as positive. All breast cancer articles were positive. The median cost-effectiveness ratio was $49,000 per QALY. All endpoints reflect a population average treatment response and did not account for the presence of patient heterogeneity of treatment effect. CONCLUSIONS: Novel specialty biopharmaceuticals improve health and improving quality of life for the three conditions associated with the highest specialty pharmaceutical spending. These findings demonstrate a strong value proposition for specialty pharmaceuticals in general, and suggest even greater substantial potential individual patient benefit with consideration of patient heterogeneity.