Bayesian regression models, which are more flexible and are simple to implement in freely available software. RESULTS: Using health outcomes research examples for illustration in each case, we describe common methodology issues arising from use of these methods, such as when small numbers of trials are analysed, when unequal trial sizes are included and when excess variability between trials (or heterogeneity) is encountered. CONCLUSIONS: For the methods considered, we offer possible solutions, make recommendations for their use and point out situations in which caution should be exercised.

**PMC21**

**EVALUATING THE DIFFERENCE BETWEEN AVERAGE WHOLESALE PRICE AND WHOLESALE ACQUISITION COST FOR PHARMACEUTICALS IN THE UNITED STATES**

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OBJECTIVES: 1) To examine the percent difference between average wholesale price (AWP) and wholesale acquisition cost (WAC) for pharmaceuticals in the United States, accounting for patent status and manufacturer type, and 2) to evaluate the relationship between brand manufacturers and relabelers.

METHODS: Data for this study came from the Master Drug Data Base (MDDB), which is a proprietary drug file containing pricing information for all prescription and non-prescription products available in the US. The percent difference between AWP and WAC for prescription pharmaceuticals was compared on a variety of facets, including single source, type of manufacturer (original or repackager). The difference was expressed as a percentage of AWP (a commonly used method for reimbursing pharmacies in the US). We also compared the AWP among brand name manufacturers and relabelers (who repackaged brand name pharmaceuticals produced by the original manufacturer).

RESULTS: A total of 23,607 unique drug products were included in the analysis examining AWP and WAC. The mean percent difference for brand name pharmaceuticals was 0.23 ± 0.11, as compared to 0.44 ± 0.26, p < 0.001. Brand name drugs that were available from multiple companies had a mean difference of 0.25 ± 0.14, compared to 0.20 ± 0.05 for single source products (p < 0.001). The median AWP for brand name manufacturers was $3.04 per unit, compared to $3.11 per unit for relabelers.

CONCLUSION: This study documents the magnitude of well-known differences between AWP and WAC for brand name and generic products. Further, branded products produced by more than one manufacturer will have larger differences between AWP and WAC than single source products. The findings suggest the need for analysts to critically evaluate the use of AWP for determining product costs in the US and substantial differences exist between single source and multiple source products. A more transparent and accurate pricing system is needed for economic analyses in the US.

**PMC22**

**RELATIVE WEIGHTS ASSIGNED TO PHARMACY PROCEDURES: OPPS METHODS DESIGN AND CONCEPTS**

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OBJECTIVE: The Centers for Medicare and Medicaid Services (CMS) assigns relative weights to procedures in the hospital outpatient setting and may do so for pharmacy handling costs in 2006. This study examines the current approach to assignment of relative weights for drug and biological administration codes under the CMS Hospital Outpatient Prospective Payment System (OPPS) and compares this approach to the resource-based level of effort concept initially created for payment to physicians.

METHODS: Resource-based methods originally proposed for the hospital OPPS and equivalent measurement methods in the original Harvard RBRVS work were deconstructed and evaluated. The MedPAC rationale for recommendation of relative weights for payment of pharmacy handling costs and the proposed weights were also examined and evaluated.

RESULTS: The evaluation sought indications of resource-based level of effort applications in the OPPS and their comparability to the original resource-based studies, especially in the area of intensity measures. The underlying intent of the resource-based relative value scale (RBRVS) was to create a hierarchy of resource-based level of effort in physician service delivery. The concept of hospital OPPS was also intended to reflect resource-based service delivery. Procedures are assigned a relative weight, implying that payment includes level of effort resources. Recommended 2006 handling costs for drugs are assigned five relative weights, each compared to drawing up an injected drug for administration. We postulate these relative weights contain insufficient recognition of the level of effort and resource consumption required, thus distorting the concept’s initial intent. CONCLUSIONS: Many researchers and policy makers assume that relative weights equate to level of effort resource consumption in all instances. We cannot find this is so regarding the five levels of relative weights recommended for OPPS pharmacy handling costs. Because resource consumption is disproportionately greater than relative weights assigned in many cases, the resulting payment will be understated.

**PMC23**

**ECONOMIC EVALUATION OF MEDICAL DEVICES IN FRANCE: A Challenge for Health Economists**

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OBJECTIVES: Pharmacoeconomic evaluation activities have grown rapidly in recent years, but few economic evaluations have focused on Medical Devices (MD). This study addresses the barriers to conducting economic evaluations of MD, in comparison with pharmacoeconomic evaluations, in order to develop a framework for MD economic evaluation. METHODS: First, we studied the differences between MD and drugs that possibly impact on the completion of economic evaluations. Then, we analysed items of the French Guidelines for Economic Evaluations of Health Care Technologies developed by the “Collège des Economistes de la Santé” [http://www.ces-asso.org/docs/France_Guidelines_HE_Evaluation.PDF] that might be barriers to the completion of MD economic evaluations, as compared to drugs, and we developed suggestions to overcome these barriers.

RESULTS: In this abstract we present three of eight barriers to performing economic evaluations of MD. The first one relates to the feasibility of clinical trials, e.g. inadequacy of “placebo” and “double blinding” for MD testing and difficulty to include large numbers of patients. We suggest performing comparative studies for assessing clinical outcomes to be included in economic evaluations and to discuss potential bias. Secondly, MD is developed by engineers who are used to assessing technical performance, but not clinical and economic outcomes. We propose setting up collaborations between engineers, health care professionals and health economists from the very beginning of MD development. Besides, MD effectiveness often depends on the operator (health care professional or patient) and may change over time, when the operator gains experience. Health economists must, therefore, analyse the transferability of economic evaluation results from one setting to another and over time. CONCLUSION: We recommend setting up multidisciplinary groups of engineers,