DOWNLOAD PDF UNDERSTANDING PHARMACY CALCULATIONS

Chapter 1 : Pharmacy Calculations App | PTCBÂ® Calculations Questions | Pocket Prep

Written in easy-to-understand language and emphasizing practical calculations that pharmacists do every day, this revised and updated edition of Understanding Pharmacy Calculations guides student pharmacists through the sometimes overwhelming introduction to the subject.

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Chapter 2 : Pharmaceutical Calculations

Of all the health professions, pharmacy is probably the most calculation intensive. Written in easy to understand language and emphasizing practical calculations that pharmacists do every day, this work highlights for students the relevance of calculations to pharmacy practice.

Prospect, Kentucky US Pharm. One of the most confusing markets for consumers is located at the pharmacy counter. The rise of health care costs has lawmakers and employers scrambling to find ways to provide access to care without going bankrupt. Numerous policies at different levels of government and in the private sector have further complicated this market, creating a system nearly impossible for the average person to navigate. Changes in supply and demand influence market price, and then a price change influences consumer decisions to purchase. In the case of drug pricing, there are several factors that have complicated this particular market. Expert Influence and Inelasticity of Demand A major factor in the drug pricing market revolves around the influence physicians and other prescribers have on demand. The process starts when patients visit their physician and receive a prescription for a medication. The prescriber decides on appropriate therapy pursuant to the diagnosis and provides a request for a pharmacist to dispense the medication. While prescribers consider cost important in decision making for their patients, they are often inconsistent or hesitant in applying that awareness in practice. In other words, price changes will have little effect on the purchasing decision of a sick patient. The cost of doing nothing is hard to define and may not be realized for years, so even small copayment amounts on preventive treatment may be enough to deter a patient from purchasing. Influence of Supply and Supply Chain Markup The abundance of pharmaceutical manufacturers makes it difficult for pharmacies to purchase drug products directly from the factory where the drug is produced. The supply of pharmaceuticals involves a chain of wholesalers that help distribute drugs to pharmacies before they reach the patient. The business model for wholesalers relies on the ability to purchase large orders of drug products from manufacturers and sell them to pharmacies at a higher price. The pharmacies benefit from not having to coordinate with all of the manufacturers, and they enjoy reduced inventory carrying costs. This supply chain dynamic has created three transaction areas of particular interest: Each transaction within the chain allows for measurement of drug pricing, as displayed by the acronyms in TABLE 1. Using data collected through legally required reporting, voluntary price submissions, or other calculations allows payers to estimate the cost of drugs. The first transaction in the supply chain between the manufacturer and wholesaler or pharmacy as a direct purchaser produces several different measurements for drug costs. The average manufacturer price AMP is a measurement of the price wholesalers pay to purchase drug products from the pharmaceutical manufacturer. The average sales price ASP is derived from the sales from manufacturers to all purchasers and includes practically all discounts, but is limited in that it is only available for Medicare Part B covered drugs. The average wholesale price AWP is a measurement of the price paid by pharmacies to purchase drug products from wholesalers in the supply chain. The EAC is meant to reflect the cost of the drug to the provider from the wholesaler, but is not a published figure. The average actual cost AAC is considered the final cost paid by pharmacies to their wholesalers after all discounts have been deducted and is derived from actual audits of pharmacy invoices. Currently, two states are using the AAC for pharmacy reimbursement. FIGURE 1 shows a basic supply chain example from manufacturer to consumer along with some of the pricing acronyms and their relation to the supply chain. Third-Party System In most markets, consumers see a price for a good or service and make a decision to purchase if the benefit of the good or service outweighs the cost. At the point of sale when patients pick up their prescription from the pharmacy, they usually pay a smaller portion of the transaction and the PBM reimburses the pharmacy for the balance. This reduction in price helps drive consumer demand for this prescription medication. When patients are responsible for a larger proportion of the cost, they are less likely to utilize the health care service. For a business to be profitable, revenue from the pricing of all goods and services should be greater than the sum of all costs of the business. In the case of pharmacies, pricing of medications for insured patients is determined by contracts with each PBM and the government. In an effort to control spending on prescription drugs in the Medicaid system, the federal

government sets a price ceiling for certain drugs called the federal upper limit FUL. Pharmacy revenue may also be derived from a dispensing fee added to the drug price. Operating expenses are different for every pharmacy. These expenses may include wages, advertising, utilities, administration, and supplies. Dispensing fees paid to pharmacies vary. Gaining From Pharmacy Loss The competition in the retail market has become fierce, and leverage from PBMs has made it more difficult for pharmacies to profit solely from medication dispensing. Some community pharmacies utilize the prescription dispensing service as a way to draw in customers and so generate revenue from other sources. As revenue from prescription dispensing decreases, pharmacies rely more on this portion of the business. Other Profit Incentives The simple transaction of a pharmacy dispensing a drug to a patient pursuant to a prescription has provided multiple opportunities for companies to profit. In the case of the PBM, two additional revenue generators have emerged: When the patient receives an explanation of benefits EOB from the insurance company, the apparent total cost of the medication may be higher than what the pharmacy is actually paid due to the markup by the PBM within the spread. This value may vary depending on the drug product. This type of markup is much more complicated than a simple flat fee per claim submitted to the PBM. If the PBM then contracts with a pharmacy to reimburse the pharmacy for drug costs using MAC pricing, the PBM would then profit from the difference of this calculation. In therapeutic classes where multiple brand-name medications are available as acceptable treatment, PBMs are able to negotiate with pharmaceutical manufacturers to make a particular drug preferred to patients under the prescription drug plan. One of the largest PBMs negotiated with Pfizer to make brand Lipitor preferred over the newly released generic version for a specified period of time. This gross profit amount is not enough to cover the cost of the vial, label, lid, prescription bag, or of overhead to keep the electricity on in the pharmacy and pay wages to employees. Laws with good intentions often have unintended consequences. In this simple theoretical case, the incentive at the pharmacy level is much greater to dispense a more expensive therapy. Conclusion Drug pricing is influenced by a variety of factors, and the complexity can be overwhelming for health care professionals as well as the public. It is important that we continue to discuss current and proposed models for drug pricing, pharmacy reimbursement, and the final cost to the patient. While being an expert on pricing acronyms and federal statutes does not help pharmacists provide care to patients, understanding the basic language used in drug pricing is an essential skill for anyone involved in the prescription-drug market. A survey of physician attitudes and practices concerning cost-effectiveness in patient care. The elasticity of demand for health care: What is the price benchmark to replace average wholesale price AWP? J Manag Care Pharm. One pill, many prices: Trends in usual and customary prices for commonly used Drugs. Effects of cost sharing on care seeking and health status: Am J Public Health. National Association of Chain Drug Stores; Replacing Average Wholesale Price: Medicaid Drug Payment Policy. Accessed March 18, J Health Polit, Policy Law. Medicaid Drug Price Comparisons: Average Manufacturer Price to Published Prices. To comment on this article, contact rdavidson uspharmacist.

DOWNLOAD PDF UNDERSTANDING PHARMACY CALCULATIONS

Chapter 3 : Understanding Pharmacy Calculations by Teresa A. O'Sullivan

Description. Written in easy-to-understand language and emphasizing practical calculations that pharmacists do every day, this revised and updated edition of Understanding Pharmacy Calculations guides student pharmacists through the sometimes overwhelming introduction to the subject.

To ask or answer a question, scroll down the page to the Question and Answer section. When you are working in a pharmacy there are some basic math calculations that you will use every day. The most common calculation will happen when the amount of medication prescribed does not exactly match an amount in a dosage form. For example, if a prescription calls for the patient to take 3 grams of medication daily. The only pills you have available are milligram capsules. To convert the prescribed dosage to milligrams, multiply grams by This means the prescription calls for milligrams daily, or six milligram capsules. The key to being able to do these pharmacy technician math calculations quickly is in being able to understand the important information that is on the prescription. Information for tablets and capsules lists the amount or dosage of medication per unit, liquid medications are listed in medication per volume of liquid, and injectable solutions are listed as medication per volume injected. The prescription will list a total amount of medication. So just like in the example above, the first step is to convert the amounts of medication to the same unit of measurement. Milligrams to grams or vice verse will be the most common conversion. It can also help to carry a pocket reference guide that has conversion information listed. This will make it easy to ensure you know the correct conversion to use. To convert between the two forms, simply use a calculator to divide the top number by the bottom number. Five-eighths for example, you would enter 5 divided by 8. Ratios and concentrations will also be an important part of the daily math used in a pharmacy. Click here for more on IV Infusion Calculations. The last main use of math in the pharmacy is to calculate days supply. Days supply refers to the number of days the physician wants the patient to take the medication. A common default is a 30 day supply. This means you need to ensure they have enough individual daily doses to last for 30 days total. If they need to take four tablets every day, then the 30 day supply would be tablets total.

Chapter 4 : How to Understand Pharmacy Math Calculations?

Understanding Pharmacy Calculations, 2nd Edition / Edition 2 Written in easy-to-understand language and emphasizing practical calculations that pharmacists do every day, this revised and updated edition of Understanding Pharmacy Calculations guides student pharmacists through the sometimes overwhelming introduction to the subject.

Chapter 5 : How to Understand Pharmacy Technician Math Caculations | Career Trend

Back to Understanding Pharmacy Calculations, 2e "The book is easy-to-use and read and is of a proper size to actually perform the calculations in the book. It is well written and easy-to-understand and is recommended for students, technicians, and practitioners.".

Chapter 6 : Understanding Pharmacy Calculations (September 1, edition) | Open Library

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Chapter 7 : Understanding Drug Pricing

patient care in every pharmacy practice environment and a vital part of any pharmacy technicians' duty. Although most pharmaceutical calculations are not overly difficult, they do require flawless accuracy.

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Chapter 8 : Pharmacy Calculations

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Chapter 9 : STAT!Ref - Understanding Pharmacy Calculations

pharmaceutical calculations. Perfecting basic mathematical functions will help to attain In pharmacy, the correct answer is more important than the method. b.