REFERENCE GUIDE FOR PHARMACY MANAGEMENT & PHARMACOECONOMICS Questions and Answers

SECOND EDITION 2013-2014

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Dedicated To
My beloved
grandmother

PREFACE:

I am very happy to introduce this new review guide that covers the major portion of pharmacy management and pharmacoeconomics. As in recent years, FPGEE exam is putting more weight on management and the economic portion of the pharmaceutical field, which has inspired me to introduce a guide that may help students to answers questions in the exam related to these topics.

I tried to cover all the pharmacy management and pharmacoeconomics aspects in this guide. The reason to introduce this review guide is to provide foreign students with enough information regarding the management aspect of health care in the U.S.

The students must try to understand the information provided in this guide since that's the only way to apply your logic to answer management and economics related questions in the exam. You may not receive straightforward questions from this guide, however the information presented in this guide will definitely help you to guess the best logical answer for a given question.

I hope my efforts will bring you much success.

Best of luck,

Manan H. Shroff

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QUESTIONS

1. For two drug products to be considered bioequivalent:

I. The rate of absorption between the products may differ by -20%/+25% or less.

II. The 90% confidence interval for the ratio of the mean response is within the limits of 0.8 to 1.25.

III. The extent of absorption between the products may differ by -20%/+25% or less.

a. I only
b. I and II only
c. II and III only
d. All

2. A prescription for Lorazepam issued on 01/01/2001 should not be filled after:

a. 04/01/2001.
b. 07/01/2001.
c. 10/01/2001.
d. 01/01/2002.

3. Which of the following statements is TRUE about physician assistants (PAs)?

I. PAs are healthcare professionals licensed to practice medicine with physician supervision.

II. PAs are allowed to write prescriptions.

III. PAs are educated in the medical model designed to complement physician training.

a. I only
b. I and II only
c. II and III only
d. All

4. Current DUR procedure in most health plans usually focuses on:

I. Product-centered DUR study.
II. Patient-centered DUR study.
III. Healthcare system-centered DUR study.

a. I only
b. I and II only
c. II and III only
d. All

5. Which of the following best describes the Medicare Advantage Plan?

I. The Medicare Advantage plan includes HMOs offering prescription drug coverage.

II. The Medicare Advantage plan includes PPOs offering prescription drug coverage.

III. The Medicare Advantage plan was formerly known as Medicare + Choice.

a. I only
b. I and II only
c. II and III only
d. All

6. The Medicare Part D prescription drug benefit program was enacted as part of the Medicare Prescription Drug under the:

a. DBA.
b. OBRA.
c. MCA.
d. MMA.

7. Which of the following factors is the most responsible for lower medication adherence rates in blood-glucose lowering therapy?

a. Medication side effects
b. Frequent dosing
c. Lack of perceived regimen benefits
d. Medication costs

8. Mrs. Gomes seems to be reluctant to answer Mr. Shah's direct questions about her compliance with high blood pressure medication. What type of questions should Mr. Shah ask to get a more detailed explanation?

a. Open-ended
b. Closed-ended
c. Authorize
d. Affirmative

9. According to WHO, health is defined as:

a. The absence of illness.

b. A healthy state of well-being, free from disease.

c. A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

d. The overall condition of an organism at a given time in regard to soundness of body.

10. Which of the following codes is classified as a "Diagnosis-code" in the current healthcare setting?

I. ICD 9
II. CPT
III. NDC

a. I only
b. I and II only
c. II and III only
d. All

11. Mrs. Gomes states, " I am tired of taking this medication. Sometimes I don't take them like I should." Mr. Shah responds by saying, "How long have you been taking this medication, Mrs. Gomes? Is it causing you any particular side effects?" Mr. Shah's response is an example of what type of response?

a. Analyzing
b. Evaluating
c. Quizzing
d. Advising

12. The Poison Prevention Packaging Act is generally enforced by the:

a. FDA.
b. CPSC.
c. DEA.
d. FTC.

13. The approval of new packaging and labeling of already marketed drugs should be done by filling out a(n):

a. NDA.
b. ANDA.
c. SNDA.
d. IND.

14. All of the following are disease specific quality of life instruments EXCEPT:

a. AIMS.
b. FLIC.
c. QOLIE.
d. KDQOL.

15. What should be measured in a CUA study?

I. Cost
II. Consequences
III. Survival rate

a. I only
b. I and II only
c. II and III only
d. All

16. Schedule V prescription controlled drugs:

a. Can be refilled 999 times.
b. Can be refilled 5 times.
c. Can be refilled indefinitely.
d. Can never be refilled.

17. Pharmacies may transfer the refill prescription for Schedule III, IV and V controlled substances only:

a. One time.
b. Two times.
c. Three times.
d. Four times.

18. All of the following are principal components of a Pharmacy Benefit Management (PBM) program EXCEPT:

a. Drug formulary.
b. Mandatory generic substitution.
c. Prescription co-payment.
d. Prospective DUR.

19. Which of the following shall be included in protocol prepared pursuant to the collaborative drug therapy management agreement?

I. The list of specific drug or drugs to be managed by the pharmacist.

II. The terms and conditions under which drug therapy may be implemented, modified or discontinued.

III. The conditions and events upon which the pharmacist is required to notify the physician.

a. I only
b. I and II only
c. II and III only
d. All

20. The warning "Caution: Federal law prohibits the transfer of this drug to any person other than the patient for whom it was prescribed" is required when dispensing:

I Schedule II controlled drugs.
II Schedule III controlled drugs.
III Schedule V controlled drugs.

a. I only
b. I and II only
c. II and III only
d. All

21. Which of the following are classified as NTI drugs?

I. Carbamazepine
II. Theophylline
III. Naltrexone

a. I only
b. I and II only
c. II and III only
d. All

22. Which of the following barriers has the most significant effect on communication between pharmacists and prescribers?

a. Time
b. Knowledge
c. Attitude
d. Money

23. Which of the following is NOT TRUE about emergency prescribing of controlled II drugs?

I. Pharmacists can only dispense 30 units of prescribed drug.

II. Prescribers should send cover prescriptions within 7 days from authorizing emergency controlled drugs.

III. Pharmacists have to make reasonable efforts to ensure that the information provided by the prescriber is correct.

a. I only
b. I and II only
c. II and III only
d. All

24. Common abuses of the fee-for-service system include which of the following?

I. Churning
II. Upcoding
III. Unbundling

a. I only
b. I and II only
c. III only
d. All

25. The program of palliative and supportive care services that provides physical, psychological, social, and spiritual care for terminally ill persons, their families, and other loved ones is defined as:

a. Home infusion care.
b. Skilled nursing facility care.
c. Hospice care.
d. Long-term care.

26. The partial filling of Oxycodone + APAP to a patient who resides in Charlestown nursing home should be done within:

a. 24 hours.
b. 72 hours.
c. 48 hours.
d. 60 days.

27. What is the most stated reason for noncompliance?

a. Cost
b. Forgetfulness
c. Side effects
d. Confusion

28. A diabetic patient has been asked: “Have you ever had a low blood sugar reaction?” by a caregiver provider. This type of question usually:

a. Encourages patients to discuss the disease.
b. Is classified as too personal and should not be asked.
c. Discourages patients to discuss the disease.
d. Is classified as the most appropriate question according to Blooms Taxonomy of Education.

29. Which of the following community pharmacy provider networks have the highest reimbursement rates and program costs?

a. Pre-contracted networks
b. Customized networks
c. Closed networks
d. Specialized networks

30. Medicare is a health insurance program for:

I. People 65 years of age and older.
II. People with disabilities under 65 years of age.
III. People with End-Stage Renal Disease.

a. I only
b. I and II only
c. II and III only
d. All

31. If the expiration date on a bulk bottle of Cephalexin is MAY 2007, the drug should not be used after :

a. April 30, 2007.
b. May 31, 2007.
c. May 1, 2007.
d. April 15, 2007.

32. Which of the following is the correct DEA number for Dr. Bridge, Robert?

a. AB 3254767
b. BB 1244691
c. AR 1354789
d. MR 2489432

33. The Medicare Advantage program is also known as:

a. Medicare Part A.
b. Medicare Part B.
c. Medicare Part C.
d. Medicare Part D.

34. A personal care health service given to a patient who is not a bed patient in a healthcare institution is defined as:

a. Primary care.
b. Ambulatory care.
c. Manage care.
d. Secondary care.

35. What are instruments that help to measure utility values?

I. Rating scale
II. Standard gamble
III. Time-trade off

a. I only
b. I and II only
c. II and III only
d. All

36. The principal goal of a CMA study would be to determine:

a. The long-term outcome of the particular illness.

b. The cost associated with two different treatments that have clinically identical effectiveness.

c. The benefits in terms of monetary units.

d. Cost and outcomes in monetary units.

37. Which of the following is an advantage of using Cost of Illness Analysis (CIA)?

I. This method allows researchers to collect and assess disease specific data.

II. It provides a true definition of the particular illness.

III. It provides researchers information about epidermology and potential out come of illness, and the consequences associated with the illness.

a. I only
b. I and II only
c. II and III only
d. All

38. Which of the following factors affect the prescriber's drug decision?

I. Medical management protocols
II. Financial incentives
III. Formularies

a. I only
b. I and II only
c. II and III only
d. All

39. Which of the following statements are TRUE regarding Medicare Part B premiums starting 2007?

I. The member monthly premium will be higher if they file an individual tax return and their annual income is more than $80,000, or if they are married (file a joint tax return) and their annual income is more than $160,000.

II. Social Security will use the income reported two years ago on the member's IRS income tax return to determine the premium if the plan member income is more than $80,000 or $160,000 jointly.

III. Most people will pay the standard monthly Part B premium if their annual income is less than $80,000, or if they are married (file a joint tax return) and their annual income is less than $160,000.

a. I only
b. I and II only
c. II and III only
d. All

40. What is often used by employers and health benefit consultants in evaluating the efficiency of a health plan?

a. PCP
b. RAD
c. UPC
d. MLR

41. Which of the following help to calculate pharmacy program performance metrics?

a. Acid ratio
b. MLR ratio
c. PMPM cost ratio
d. DUR/DUE ratio

42. The abuse of prescription drugs in the United States is:

a. An ongoing problem that is unlikely to change.

b. On the rise and has a dramatic impact on society in a multi-factorial way.

c. Mostly due to endemic prescribing problems.

d. Mostly due to endemic dispensing problems.

43. Which of the following is/are true about dispensing CII prescriptions in emergency situations?

I The quantity prescribed and dispensed should be limited to emergency situations.

II The prescription must be immediately reduced to writing and shall contain all the information except the prescriber's signature.

III The prescriber must submit a written prescription for the emergency quantity prescribed within 72 hours after authorizing a verbal prescription.

a. I only
b. I and II only
c. II and III only
d. All

44. What type of formulary is preferred by physicians?

a. Open formulary
b. Closed formulary
c. Intermediate formulary
d. Negative formulary

45. Managed care plans are trying to encourage pharmacies to accept the prescription reimbursements through capitated plans by:

I. Applying stop-loss provisions that cap potential losses.

II. Carving out certain high-cost disease states.

III. Creating risk pools that include large numbers of pharmacies that share risk.

a. I only
b. I and II only
c. II and III only
d. All

46. Which of the following controls Medicare?

a FTC
b PTC
c HCFA
d CSA

47. Which of the following should be part of a Drug Utilization Review?

I. Drug-food interaction
II. Duplication of therapy
III. Direction for use

a. I only
b. I and II only
c. II and III only
d. All

48. To prevent accidental poisoning in young children, which of the following laws were developed?

a. PPPA
b. CSA
c. PPI
d. FTC

c. Patients should carry their walking cane on the side opposite their weak limb.

d. The cane provides a means to transfer weight off the strong limb.

314. All of the following can be considered the current liability of a pharmacy EXCEPT:

a. Accounts payable.
b. Notes payable within 1 year.
c. Accrued expenses.
d. Notes payable beyond 1 year.

315. DEA form 224a should be used for

I Renewal of a registration
II New registration
III Stolen controlled substances

a. I only
b. I and II only
c. II and III only
d. All

316. What is the mean binomial distribution if the probability of success is 0.20 in 100 trials?

a. 56
b. 20
c. 18
d. 43

317. Which of the following ratios generally indicates the efficiency of a pharmacy?

a. Net profit to total assets
b. Inventory turnover rate
c. Capitalization of net profit
d. Net profit to net sales

318. Rite Care Pharmacy's part of the financial balance sheet is as follows:

YEAR 2007 SALES

RX	$800,000
Merchandise	$170,000
Total	$970,000
Cost of goods sold	$400,000
Beginning inventory	$175,000
Ending inventory	$140,000

What would be the inventory turnover rate for Rite Care Pharmacy?

a. 4.39
b. 2.54
c. 3.05
d. 6.11

319. Patient: "I will take the medicine. I just don't like that I have to take it to be okay." A pharmacist should respond:

a. You do need to take it. You have to decide to take the medicine.

b. It is for your own good.

c. You really do need to take the medicine each day.

d. I believe that taking the medicine is the best decision for controlling your blood pressure.

320. Patient: "I never used to have to take medicine. I don't like getting old." A pharmacist should respond:

a. Even young people have to take drugs.

b. Growing older has been difficult for you to accept.

c. You are healthy otherwise.

d. What concerns you the most about this medicine?

321. Which disease state has demonstrated the benefit of having pharmacists working in a collaborative setting?

a. Hypertension
b. Depression
c. Diabetes
d. Hemodialysis

322. What would be the Pearsonian coefficient of skewness if a sample has a mean of 145 and a median of 125. The standard deviation of the sample is 110.

a. 0.86
b. 0.65
c. 0.54
d. 0.35

323. The reproducibility of results of a number of experiments is generally known as:

a. Precision.
b. Bias.
c. Accuracy.
d. Classlessness.

324. Which of the following statements are TRUE about a paired t-test?

I. It has the advantage of reduced variability over a two sample t-test.

II. It needs less experimental material compared to a two sample t-test.

III. It has the potential disadvantage of carry-over effect from previous experiment.

a. I only
b. I and II only
c. II and III only
d. All

325. Which of the following accounts for most healthcare expenditure coverage?

a. Medicaid
b. Medicare
c. Private insurance
d. Out-of-pocket

326. The net sales of the Rite Care pharmacy are $150,000. Find out the ratio of net sales to inventory of the pharmacy. (Assume inventory of Rite Care pharmacy at time of calculation is $50,000.)

a. 3
b. 5
c. 9
d. 0.33

327. Which of the following prevents the misleading advertising of OTC products?

a. FDA
b. NABP
c. USAN
d. FTC

328. The acid test generally measures a pharmacy's:

a. Financial position.
b. Liquidity.
c. Profitability.
d. Inventory.

329. Which of the following is known as the Drug Efficacy Amendment?

a. Food, Drug and Cosmetic Act
b. Durham-Humphrey Amendment
c. Kefauver-Harris Amendment
d. Orphan Drug Act

330. Which of the following is the most common site of accidental poisoning outside the home?

a. Garage
b. Garden
c. Patio
d. Deck

331. Mr. Brace, a long-term care resident, has been a member of the same Medicare prescription drug plan for the first 6 months of 2007 and is in the catastrophic portion of his coverage. One weekend night he comes down with a urinary tract infection and the doctor on call prescribes a non-formulary antibiotic that Mr. Brace has never taken before. Which of the following statements is true?

a. Mr. Brace will have to pay the full price for the medication and make a formulary exception request on Monday.

b. Due to the fact that Mr. Brace is an LTC resident, he will be allowed an emergency supply of medication to treat his condition.

c. Antibiotics are in one of the excluded classes so it is not covered anyway.

d. The plan must cover the antibiotic be cause it is in one of the 6 protected classes.

332. Which of the following is the greatest barrier for pharmacists in terms of giving more cognitive services?

a. Lack of physician approval
b. Inadequate reimbursement
c. Inadequate resources
d. Patients not accepting pharmacist's knowledge of drug therapy

333. If the value of $p = 0.7$ in binomial distribution, what is the probability of failure?

a. 0.2
b. 0.4
c. 0.3
d. 1.0

334. A percentage of the costs of each service that must be paid by the insured along with the insurance policy payment should be defined as the:

a. Deductible.
b. Co-pay.
c. Coinsurance.
d. Medigap.

335. When the hypothetical value of a parameter is the same as the observed value of a parameter, the error should be considered:

a. Alfa error.
b. Beta error.
c. Gamma-error.
d. Infinitive.

336. Which of the following would meet the qualifications of incident-to billing?

a. Performed by a physician
b. Physician must directly supervise the visit by being in the same room as the other healthcare professional

c. Services are separate from the physician's normal course of treatment
d. A service ordinarily done in a physician's office

337. Find out the retail price of a box of insulin syringes if the cost complement of the product is 30% and the cost of one box of insulin is $11.25.

a. $14.95
b. $37.50
c. $25.26
d. $12.99

338. In a clinical experiment, drug A is compared to a placebo using 30 patients for the drug treatment and 30 different patients for the placebo treatment. Which of the following statistical tests would be appropriate?

a. Chi square
b. Paired t-test
c. Two independent t-tests
d. F-test

339. Cognitive services primarily focus on:

I. Optimizing a patient's drug therapy.
II. Ensuring appropriateness of a patient's drug therapy.
III. Ensuring safety and efficacy of a patient's drug therapy.

a. I only
b. I and II only
c. II and III only
d. All

340. All of the following indicate the ratio that measures the efficiency of a pharmacy EXCEPT:

a. Inventory turnover rate.
b. Net sales to inventory.
c. Acid test.
d. Net sales to net working capital.

341. Which of the following is the greatest barrier for pharmacists in terms of giving collaborative services?

a. Lack of physician approval
b. Inadequate reimbursement
c. Inadequate resources
d. Patients not accepting pharmacist's knowledge of drug therapy

342. Which of the following duties can be performed by a certified pharmacy technician?

I. Taking a stock bottle from the shelf for a prescription.
II. Reconstituting medication.
III. Initiating and receiving refill authorization requests.

a. I only
b. I and II only
c. II and III only
d. All

343. Which of the following laws inspired the FDA to publish the Orange Book ?

a. Durham-Humphrey
b. Waxman-Hatch
c. Kefauver-Harris
d. OBRA-90

344. Which of the following is correct with respect to training requirements for pseudoephedrine sales under the new federal law?

a. Only pharmacists and technicians require training.
b. The training must be performed by DEA personnel.
c. Pharmacies may self-certify that employees have been trained.

d. There is no training requirement.

345. A pharmacist is adding 500 mg of pure codeine powder to 100 cc of acetaminophen with codeine Elixir (120mg/12mg/5cc). The resultant mixture should be classified as:

a. Schedule V.
b. Schedule II.
c. Schedule III.
d. Schedule IV.

346. Who is responsible for assuring that a prescription has been issued for a legitimate medical purpose?

a. The prescriber only
b. The dispensing pharmacist only
c. The prescriber and the dispensing pharmacist share this responsibility
d. The DEA only

347. The average rate of compliance for patients with a chronic illness is approximately:

a. 75%.
b. 25%.
c. 50%.
d. 90%.

348. Which of the following controlled substance(s) requires an exact count when taking inventory?

I. Dextroamphetamine
II. Hydromorphone
III. Fentanyl

a. I only
b. I and II only
c. II and III only
d. All

349. Which of the following about a Binomial experiment is NOT true?

a. Each trial results in an outcome that is classified as success or failure.
b. The repeated trials are dependent upon previous experiment.
c. The experiment generally consists of n-repeated trials.
d. The probability of success remains constant from trial to trial.

350. Which of the following drugs requires a DEA 222 order form in order to purchase?

I. Methylphenidate
II. Pentobarbital
III. Secobarbital

a. I only
b. I and II only
c. II and III only
d. All

351. Which of the following is most consistent with the American Association of Colleges of Pharmacy's definition of clinical pharmacy?

a. Focus on outcomes
b. Development of patient oriented attitudes
c. Obtaining collaborative practice agreements with physicians in lieu of acquisition of knowledge
d. Maximizing patient outcomes with emphasis on patient education

352. A collaborative drug therapy management agreement may authorize a pharmacist to:

I. Implement, modify or discontinue a drug therapy that has been prescribed for a patient.

II. Order associated laboratory tests.
III. Administer drugs.

a. I only
b. I and II only
c. II and III only
d. All

353. Which of the following are principal goals of collaborative practice?

I. To promote the most efficient and clinically appropriate use of resources.
II. To reduce unnecessary variation between caregivers and effect standardized practice guidelines.
III. To collect valuable outcomes and/or utilization data.

a. I only
b. I and II only
c. II and III only
d. All

354. Mrs. Shenaz, a Medicare part D eligible beneficiary, turns 65 in 2007 and signs up for a Medicare Part D prescription drug plan with no enhanced benefits. She has been a member in the plan for 20 days and goes to her neighborhood pharmacy with a prescription for diazepam. Which of the following statements is true?

a. Mrs. Shenaz is within the first 90 days of coverage so her plan should pay for this prescription.

b. We would need to know what phase of coverage she is in before we could tell if this prescription would be covered, regardless of how long she has been a member.

c. Diazepam is considered a Part D exclusion, therefore it would not be covered even if she was in her transition period.

d. The pharmacist will not fill her prescription, but tell her to go home and wait for a letter from the plan.

355. Which of the following organizations compiles the NDC directory?

a. FDA
b. CSA
c. DEA
d. USAN

356. The partial supply of which of the following should be filled within 72 hours from its initial dispensing?

a. Alprazolam
b. Dextroamphetamine
c. Pemoline
d. Zaleplon

357. Mr. Mehta is in charge of controlled drugs at Rite Care Pharmacy. One of his technicians reports a whole stack of DEA 222 order forms has gone missing. Mr. Mehta must:

I. Prepare another form in triplicate with the statement indicating serial number and date of lost forms.
II. Notify the DEA in the nearest local area.
III. Submit copies 1 and 2 of the second form with a statement to the supplier.

a. I Only
b. I and II only
c. II and III only
d. All.

(c) If it is a drug and the methods used in, or the facilities or controls used for, its manufacture, processing, packing, or holding do not conform to or are not operated or administered in conformity with current good manufacturing practice to assure that such drug meets the requirements of this Act as to safety and has the identity and strength, and meets the quality and purity characteristics, which it purports or is represented to possess.

(d) If its container is composed, in whole or in part, of any poisonous or deleterious substance which may render the contents injurious to health.

(e) It bears or contains, for purposes of coloring only, a color additive that is unsafe.

(f) If it purports to be or is represented as a drug the name of which is recognized in an official compendium, and its strength differs from, or its quality or purity falls below, the standards set forth in such compendium.

(g) If it is a drug and any substance has been mixed or packed therewith so as to reduce its quality or strength or substituted wholly or in part thereof.

236.(b) Below expectation.

$$= \frac{\text{Total liabilities}}{\text{Net worth}}$$

$$= \frac{85{,}000}{115000} \times 100$$

$$= 73.91\%$$

The target value for total liabilities to net worth ratio would be 50% or less.

237.(d) A Cochrane database review showed that pharmacist intervention can improve patient adherence, physician prescribing, decrease drug-related morbidity, and decrease healthcare costs.

238.(d) All. This ratio is calculated by dividing profit by inventory. It is a good indicator of profitability as well as efficiency. It can be used for new and old pharmacies. It increases with an increase in sales of a pharmacy.

239.(d) Ativan (Lorazepam) should be classified as a Schedule IV controlled drug. It is indicated for the treatment of anxiety and insomnia.

240.(d) This is an example of resistance. When patients are faced with change, like taking a newly prescribed medicine to control a new illness, they are often resistant to doing what is needed. Resistance behavior can take many forms. Patients can negate things you say by blaming, disagreeing, excusing, minimizing, etc. They may argue with you by challenging you, discounting what you say or becoming hostile or agitated. They may resist by interrupting frequently or by ignoring things you say. The point is that sensitive healthcare providers listen for resistance on the part of the patient. Resistance may occur because patients are ambivalent or there may be other factors involved. A patient may not be able to afford the medicine or simply does not believe the problem is that bad and is not a significant health threat. In any case, resistance needs to be explored. The key word here in dealing with ambivalence or resistance is EXPLORE. Arguing for the benefits forces the patients to argue for the reasons they don't want to take the medicine (blood pressure,

etc.). This is a time to ask the patient questions about the resistance or ambivalence. Therefore, explore resistance by asking questions. For example, the patient says, "I just can't believe that I have high blood pressure. I have always been so healthy." In the above statement we feel that the patient is still not believing that he is ill and require medicine. The choices "a" and "c" make the patient at ease and may end up in noncompliance. The choice "d" would help the pharmacist to initiate communication with the patient without challenging the beliefs of the patient (i.e. belief of being healthy). By initiating communication, the pharmacist can address the significance of taking blood pressure medication regularly.

241.(a) Pharmacists are permitted to make changes to prescriptions, even to Schedule II prescriptions. But the permitted changes are limited. A pharmacist may add the patient's address or change the patient's address without consulting the prescriber. The pharmacist may change or add the dosage form, drug strength, drug quantity, directions for use, or issue date only after consultation with and agreement of the prescriber. The pharmacist is never permitted to make changes to the patient's name, controlled substance prescribed (except for generic substitution permitted by state law) or the prescriber's signature.

242.(b) Under Part D, Medicare is set to pay 75% of initial drug costs up to $2400 after a $250 deductible for most seniors. But then the program pays nothing until drug expenses reach $3840, after which the government pays 95% of all costs. The complete lack of coverage for drug spending between $2400 and $3840 is often called Medicare's "Donut Hole." This amount is reached by taking into consideration the full cost of the drugs, not just the beneficiary's out-of-pocket cost-sharing. For example, if a drug costs $150 and the beneficiary's co-payment is $40, the full $150 counts towards the initial coverage limit. More than one-quarter of all Medicare beneficiaries are projected to have drug spending that falls in the Donut Hole's range. The following example will help to clarify.

Mrs. Gomes has monthly drug costs of $800 for three drugs that cost $200, $300 and $300, with a co-pay for each prescription at $40. Assuming that all of the plans in which she is interested have a $2400 initial coverage limit, and that all of her drugs are on the plans' formularies, she will reach the Doughnut Hole or coverage gap in three months (800 x 3 = $2400). As stated previously, the full $800 counts towards the initial coverage limit, even though the true out-of-pocket expenses are merely $120 ($40 x 3 = $120). After three months, she has to pay all expenses out-of-pockets until she passes the limit of $3840 (i.e. from $2400 to $3840 = $ 1440 out-of-pocket). After passing $3840, the insurance will again kick in with 95% coverage provided by Medicare and 5% patient's out-of-pocket expenses.

243.(c) Oxycontin is a Schedule II controlled substance. When dealing with Schedule II controlled substances, it is better to reverse the claim and return the prescription to the patient. The other option would be to dispense the partial quantity within 72 hours of initial dispensing of the drug.

244.(c) A pharmacist may partially dispense a prescription for a Schedule II (Codeine) drug if the pharmacist is unable to supply the full quantity prescribed. The pharmacist must note the quantity prescribed on the front of the written prescription. The remaining portion may be dispensed within 72 hours of the first partial dispensing. If the remaining portion cannot be dispensed within the 72-hour period, the pharmacist must notify the pre-

scriber. No further quantity may be supplied beyond the 72 hours, except on a new prescription.

245.(a) Floor stock distribution system: In this type of dispensing, a bulk supply of each drug product is maintained on the nursing unit in advance of need and nurse prepares the doses for administration. The lines of communication for drug orders are short (the pharmacist is excluded), decisions about orders and dose preparations are decentralized and can be made at patient's bedside. Nurses order drugs in bulk supplies from the pharmacy; the drugs are stored in a medication room on the ward. Nurses are responsible for any necessary labeling. Any medications taken from stock bottles and not administered to patients are generally disposed of. Historically, this did not work well because the unit dose preparation process demanded drug knowledge beyond that of the typical nurse. A 1999 national survey of drug dispensing and administration practices indicated that about half of the surveyed hospitals reported drug distribution "systems" that bypassed the pharmacy, including hospitals that reported using floor stocks, borrowing other patients' medications, and hidden drug supplies. However, when access to floor stock drugs that are stored in automated dispensing machines is required by the nurse, he/she can access them only after the pharmacist has reviewed the order and activated the dispenser.

Unit dose dispensing system: In this type of system, when physicians write orders for inpatients, these orders are sent to the central pharmacy (by pharmacists, nurses, other personnel, or computer). Pharmacists verify these orders and technicians place drugs in unit-dose carts. The carts have drawers in which each patient's medications are placed by pharmacy technicians' one drawer for each patient. The drawers are labeled with the patient's name, ward, room, and bed number. Before the carts are transported to the wards, pharmacists check each drawer's medications for accuracy. Sections of each cart containing all medication drawers for an entire nursing unit often slide out and can be inserted into wheeled medication carts used by nurses during their medication administration cycles. A medication administration recording form sits on top of the cart and is used by the nurse to check off and initial at the time of each administration of each medication. The next day, the carts are retrieved from the wards and replaced by a fresh and updated medication supply. Medications that have been returned to the central pharmacy are credited to the patient's account.

Patient prescription system: This system is distinguished by the fact that all drugs are retained in the pharmacy until the order is received, and then a multiple-dose supply is dispensed to the nursing unit labeled for use by a specific patient.

246.(b) Under the revised law, retail sales may not exceed 3.6g PSE (pseudoephedrine) base per day per purchaser, regardless of the number of transactions. The previous law placed limits only on individual transactions. Moreover, individual consumers are prohibited from purchasing more than 9g PSE per 30-day period. All non-liquid forms (including gel caps) of PSE products must be sold in blister packs with no more than two dosages or in unit dose packets or pouches.

247.(d) All. Each PDP must have a Medicare P&T committee that meets CMS defined specifications. These requirements are based on the current best practices also referred to as industry standard practices. P&T committee members must come from various clinical specialties that adequately represent the needs of plan beneficiaries.

The membership requirements for this committee are as follows:

1. A majority of the P&T committee members must be practicing physicians, practicing pharmacists or both.

2. At least one P&T committee practicing pharmacist and one practicing physician must be an expert in the care of elderly or disabled persons.

3. At least one P&T committee practicing pharmacist and one practicing physician must be independent and free of conflict with respect to the PDP and pharmaceutical manufacturers.

All P&T committee members must reveal any economic relationship they have which may influence their decisions and provide this disclosure in writing. In addition, the committee must meet at a minimum of every 3 months and document all formulary decisions in writing.

248.(d) All. A pharmacist should offer patient counseling on new prescription drug orders, refill orders and once yearly on maintenance drugs (maintenance medications are defined as any medication the patient has taken for one year or longer).

249.(b) The new law, the Combat Methamphetamine Epidemic Act of 2005, places new restrictions on the sale of pseudoephedrine (PSE) because of its illicit use as a precursor for the illegal manufacture of methamphetamine, whose skyrocketing abuse has forced Congress to respond.

250.(c) Median is classified as a nonparametric statistical test. Nonparametric statistical procedures, commonly referred to as "distribution-free" statistics, do not require the assumption of normality and homogeneity of variance. The major underlying assumption of nonparametric statistics is that the observations are independent. Examples of nonparametric statistics include the mode, median, Sperman's rho, and the Chi-square test.

251.(b) Neither walking canes nor walkers can provide support to the patient's wrists and elbows. The forearm crutch is designed specifically to provide such support in that it has a vertical membrane that extends above the wrist and is secured reasonably well to the fleshy part of the forearm by a collar or cuff. If only one crutch is used, it should be used on the side opposite the weak leg. When two crutches are used, the patient should be instructed to step forward with the right leg and left crutch, followed by the left leg and right crutch.

252.(b) Noncompliance is defined as when the patient is at fault for inappropriate use of medication. The noncompliance can be detected by use of a Medication Event Monitoring System (MEMS). The device is used in the caps of prescription vials. Each time a patient removes the cap of the vial (presumably the same time the medication is ingested), the time and data are recorded. At the time the data are to be analyzed, the monitor can be connected to an IBM personal computer or equivalent. At the current time these systems are being used primarily to monitor compliance in clinical trials.

253.(c) Congress first addressed this problem in 1988 with the passage of the Chemical Diversion and Trafficking Act (CDTA), an amendment to the Controlled Substances Act, which imposed mandatory con-

trols over listed chemicals (pseudoephedrine, ephedrine, phenylpropanolamine) that could be used in the illicit production of controlled substances. The Act imposed reporting, record-keeping, and import/export notification requirements for regulated transactions of controlled chemicals. Under this law, the Drug Enforcement Administration (DEA) has authority to stop shipments of controlled chemicals from US suppliers to companies outside the United States suspected of reselling or diverting them to drug traffickers. Under the CDTA, bulk ephedrine and pseudoephedrine transactions were regulated; however, the law exempted OTC ephedrine and PSE drug products from the record-keeping and reporting requirements if they were products lawfully marketed under the Food, Drug, and Cosmetic Act.

254.(b) The degree of freedom for a Chi-square test can be calculated by:

= (R-1) x (C-1)
= (2-1) x (3-1) = 2

255.(c) In an emergency situation, a pharmacist may dispense a Schedule II controlled substance pursuant to a verbal authorization. An emergency means that the immediate administration of the drug is necessary for proper treatment of the patient, that no alternative is available, and it is not possible for the prescriber to provide a written prescription for the drug at that time. In such an emergency, the prescriber may telephone a Schedule II prescription to a pharmacy, or fax the prescription to a pharmacy, provided that:

1. The drug prescribed and dispensed must be limited to the amount needed to treat the patient during the emergency period.
2. The prescription order must be immediately reduced to writing by the pharmacist and must contain all information, except for the prescriber's signature.
3. If the prescriber is not known to the pharmacist, the pharmacist must make a reasonable effort to determine that the phone authorization came from a valid prescriber, by verifying the prescriber's telephone number with that listed in the directory and by making other good faith efforts to assure proper identity.
4. Within seven days after authorizing an emergency telephone prescription, the prescriber must furnish the pharmacist with a written, signed prescription for the Schedule II controlled substance prescribed. The prescription must have written on its face "Authorization for Emergency Dispensing." The written prescription may be delivered in person or by mail, which must be post marked within the seven-day period.

256.(d) All. Dalmane (Flurazepam), Prosom (Estazolam) and Doral (Quazepam) are benzodiazepines. They are classified as Schedule IV controlled drugs. They are indicated for treatment of insomnia.

257.(c) The partial supply of schedule II controlled drugs should be done within 72 hours from its initial dispensing. Dilaulid (Hydromorphone) is classified as a schedule II controlled substance; and required to be filled within 72 hours from its initial filling.

258. (b) In the AAPCC (American Association of Poison Control Centers), the substances most frequently involved in human poisoning exposures were cleaning supplies (9.4%) fol-

lowed by analgesics (9.1%), cosmetics (7.7%), plants (7.2%), cough and cold preparations (5.1%), and hydrocarbons (3.8%).

259.(a) More common than the forearm crutch is the ordinary wooden or aluminum underarm crutch called the axillary crutch. There are several axillary crutch gaits. The safest, most stable, and most common is the four-point gait. The patient begins by moving the left crutch forward. Next, they move the right leg forward. The right crutch is then brought up to the right foot and, finally, the left leg is brought up to the left crutch. When two crutches are used, the patient should be instructed to step forward with the right leg and left crutch, followed by the left leg and right crutch. This is commonly known as the two-point gait. The three-point gait has two variations: the swing-to gait and the swing-through gait. In either form, the patient begins by moving both crutches forward simultaneously. Another common crutch gait is the hemiplegic gait. It is nothing more than the use of a single axillary crutch in place of a single cane. The crutch is carried on the strong side and is moved forward together with the weak limb alternating with the good leg.

260.(d) The highest incidence of accidental childhood poisoning is in the late afternoon and around the dinner hour or in the early morning hours. Poisoning in the late morning hours often occurs in the kitchen and the substances most frequently involved are common household cleaning products. Poisoning that occur in the bedroom may involve cosmetics and medications. Bathroom incidents usually involve either medications or cosmetics.

261.(a) Primary literature: Articles appearing in pharmaceutical and medical journals have the most current and accurate health-related information. They are classified as primary literature.

Secondary literature: Information about primary sources, usually a compilation or synthesis of various ideas and data. Secondary sources may rearrange or modify data and include such sources as indexes to the primary literature, reference works derived from primary research, and reviews. Examples include encyclopedias, review articles, handbooks, bibliographies, and abstracts/indexes.

Tertiary literature: Reference books and textbooks are considered tertiary literature.

262.(a) The investment of Rite Care Pharmacy in fixed assets meet the requirement. The target value for this ratio would be 20% or below.

$$= \frac{\text{Fixed assets}}{\text{Net worth}} \times 100$$

$$= \frac{60{,}000}{115{,}000} \times 100$$

$$= 52.17\%$$

263.(a)

264.(d) All. Parametric statistic is a group of statistical procedures that researchers use to test data that are normally distributed. The population must have similar variances (known as homogeneity of variance). It can be carried out on data that is interval or ratio scale, and thus is suitable for arithmetic operations such as addition and subtraction. This enables parameters such as mean and standard deviation to be defined. Examples of parametric statistical tests include the mean, standard deviations, t-test, and Pearson's correlation coefficient. For example, if we draw 100 random samples of 100 adults each from the general population, and compute the mean height in each sample, then the distribution of the standardized means across samples will likely approximate the normal distribution. Now imagine that we take an additional sample

in a particular city ("Tallburg") where we suspect that people are taller than the average population. If the mean height in that sample falls outside the upper 95% tail area of the t distribution, then we conclude that, indeed, the people of Tallburg are taller than the average population. Are most variables normally distributed? In the above example we relied on our knowledge that, in repeated samples of equal size, the standardized means (for height) will be distributed following the t distribution (with a particular mean and variance). However, this will only be true if in the population the variable of interest (height in our example) is normally distributed, that is, if the distribution of people of particular heights follows the normal distribution (the bell-shape distribution). For many variables of interest, we simply do not know for sure that this is the case. For example, is income distributed normally in the population? Probably not. The incidence rates of rare diseases are not normally distributed in the population, the number of car accidents is also not normally distributed. For these types of variables we are required to use nonparametric statistical procedures.

265.(d) All. Medicare Part D was implemented on January 1, 2006. The enrollment is voluntary and coverage is guaranteed. It is offered to individuals who have Medicare Part A or B. The plan is usually administered by private health insurance companies.

266.(c) Concertra , Ritalin (Methylphenidate) requires a DEA 222 order form in order to purchase. It is a Schedule II controlled substance. It is indicated for the treatment of ADHD.

267.(c) $37.50

$$MU/C = \frac{\text{Known retail mark-up}}{\text{cost of complement}}$$

$$= 70/30 = 2.33 = 233\%$$

$$R = \text{cost of drug} \times (100 + MU/C)$$
$$= 11.25 \times (100 + 233\%)$$
$$= 11.25 \times (333\%)$$
$$= 11.25 \times 3.33 = \$37.46$$
$$= \$37.50$$

268.(d) None of the above. Schedule II controlled substances are safe and effective pharmaceuticals that have a high potential for abuse. These are the drugs that are most subject to diversion and that are most highly restricted in their prescribing and dispensing. Perhaps the most significant restriction applicable to Schedule II prescriptions is a general rule that they must be in writing. This general rule is in effect unless one of several applicable exceptions to the rule applies. There is no time limit during which a Schedule II prescription must be filled under federal law, although some states do impose such a limit. Any pharmacist who fills a Schedule II prescription several days or weeks after its issuance must determine that the prescribed medication is still needed by the patient, and this may require contact with the prescriber. Federal law places no quantity limits on any prescriptions, including Schedule II prescriptions. Refilling of a Schedule II prescription is never permitted. There are no exceptions to the "no refills" rule for Schedule II prescriptions.

269.(b) The degree of freedom in a t-test can be calculated by using the following formula:

$DF = (n - 1)$ where n = sample size
$DF = (20 - 1)$
$DF = 19$

270.(d) All. Zero-Base Budgeting is a technique of planning and decision-making. It reverses the working process of traditional budgeting. In traditional budgeting, departmental managers need to justify only increases over the previous year's budget. This means what has been already spent is automatically sanctioned. In the case of ZBB, no reference is made to the previous level of expenditure. Every department function is reviewed comprehensively and all expenditures rather than only increases are approved. ZBB is a technique, by which the budget request has to be justified in complete detail by each division manager starting from the Zero-base. The Zero-base is indifferent to whether the total budget is increasing or decreasing.

Advantages of Zero-Base Budgeting:

1. Results in efficient allocation of resources as it is based on needs and benefits.
2. Drives managers to find out cost effective ways to improve operations.
3. Detects inflated budgets.
4. Useful for service department where the output is difficult to identify.
5. Increases staff motivation by providing greater initiative and responsibility in decision-making.
6. Increases communication and coordination within the organization.
7. Identifies and eliminates wastage and obsolete operations.

Disadvantages of Zero-Base Budgeting:

1. Difficult to define decision units and decision packages, as it is very time-consuming and exhaustive.
2. Forced to justify every detail related to expenditure. The R&D department is threatened whereas the production department benefits.
3. Necessary to train managers. ZBB should be clearly understood by managers at various levels otherwise they cannot be successfully implemented. Difficult to administer and communicate the budgeting because more managers are involved in the process.

271.(c) Federal and State Pharmacy Law prohibit pharmacists from re-dispensing any medication that has already been dispensed.

272.(b) The inventory turn over rate can be calculated by dividing the cost of goods the goods sold by the average of beginning and ending inventory.

$$= \frac{400000}{\frac{175000 + 140000}{2}}$$

$$= 2.53$$

The inventory turnover rate should be a minimum of 4 with a target of 6 or higher. Rite Care Pharmacy's turnover rate is below expectations.

273.(b) The Prescription Drug Plan Finder is located at www.Medicare.org. The web site allows patients to enter the medications they are currently taking. Patients can compare up to three plans side by side. The web site shows a list of plans in area that include the patient current medications in their formulary sorted by the lowest cost of the drugs the patient is currently taking. Patients can also sort plans based on premiums, deductibles, and other benefits. The site also identifies plans accepted by the patient's preferred pharmacy or other nearby pharmacies.

274.(c) The t-test is most commonly used to test the significance of a difference between two group means. A t-test concerns a number of procedures concerned with comparing two averages. It can be used to compare the difference in weight between two groups on a different diet, or to compare the proportion of patients suffering from complications after two different types of operations, or the number of traffic accidents on two busy junctions. The t-test gives the probability that the difference between the two means is caused by chance. To test the significance, one needs to set a risk level (called the alpha level). In most social research, the "rule of thumb" is to set the alpha level at .05. This means that five times out of a hundred you would find a statistically significant difference between the means even if there were none (i.e. by "chance"). It is customary to say that if this probability is less than 0.05, that the difference is "significant," and the difference is not caused by chance.

275.(b) The Orange Book is updated monthly and published yearly.

276.(c) The retailer is obligated to enter the name of the product and quantity sold and to check information entered by the purchaser against a photo ID. The photo ID must be one issued by a state or the federal government, a passport, or an Alien Registration Receipt Card or Permanent Resident Card ("Green Card"). Each record must be retained for a period of 2 years after entry.

277.(d) The frequency of distribution can be bell shaped, skewed, U shaped and or J shaped.

278.(c) Do not refill the drug. No prescription may be knowingly filled or refilled for a patient if the prescription was written for prior use by a prescriber who is deceased or no longer in practice.

279. (a) $E = \frac{Q}{P}$ where:

E = Coefficient of elasticity
Q = % of sales quantities change
P = % of price change

In our example, the sales quantities of Bengay have been changed from 50 to 110 (120% change), and the price of balm has changed from 4.5 to 2.75 (61%). Therefore the coefficient of elasticity would be:

$= \frac{120}{61} = 1.96$

280.(b) Positively skewed. The frequency distribution of a sample is calculated by = Mean - Median (Mode).

= 90-80 = +10

If the value of (mean-mode) is negative, the frequency distribution of the sample would be negatively skewed. If the value is positive, then the frequency distribution of the sample would be positively skewed.

281.(b) Acid Test ratio can be calculated by dividing the sum of cash and accounts receivable by the current liabilities.

$$= \frac{150{,}000 + 35{,}000}{90{,}000} = 2.05$$

282.(a) 252.The mean blood pressure for Mr. Jacob can be calculated as follows:

$$\frac{325 + 240 + 270 + 180 + 245}{5} = 252$$

283.(b) The range of a set can be calculated by the difference between the highest value and the lowest value of the experiment.

= 140 - 110
= 30

284.(a) One tailed t-test. A one- or two-tailed t-test is determined by whether the total area of alfa is placed in one tail or divided equally between the two tails. The one-tailed t-test is performed if the results are interesting only if they turn out in a particular direction. The two-tailed t-test is performed if the results would be interesting in either direction. The choice of a one- or two-tailed t-test affects the hypothesis testing procedure in a number of different ways. In the above example the professor wants a class to be able to score at least 70 on the test. That means 70 or more. Therefore, a one-tailed test would be implied. It would have been a two-tailed t-test if the professor wants the class to be able to score 70 or more but not less than 50.

285.(d) The acceptable ratio of Net profit to net sales generally lies between 5 to 7%.

286.(a) The resultant mixture should be classified as a Schedule II controlled drug. Under the CSA, the maximum permissible quantity of morphine is 0.5 mg/ml to be classified as a Schedule III controlled substance. The compounded mixture contains 4 mg of morphine per ml of solution, therefore it should be classified as a Schedule II controlled substance.

287.(d) Just as the Medicare prescription drug benefit has 6 classes that require inclusion of all or substantially all of the medications contained within them, there is also a list of medication classes that are excluded from Medicare Part D coverage. These classes are:

1. Benzodiazepines.
2. Barbiturates.
3. Non-prescription drugs (with the exception of insulin, insulin syringes, gauze and alcohol swabs).
4. Rx vitamin and mineral products (with the exception of prenatal vitamins and fluoride preparations).
5. Agents used for symptomatic relief of coughs and colds.
6. Agents used for cosmetic purposes or hair growth.
7. Agents used to promote fertility.
8. Agents used for anorexia, weight loss, or weight gain.

288.(c) The Orange Book is published yearly.

289.(d) Adderall (Amphetamine) is a Schedule II controlled prescription that cannot be refilled under any circumstances. The prescription is written for a 90-day supply of medication and third party insurance has agreed to pay for 30 days worth of medication. In this case, the patient has to pay out-of-pocket for the 60-day supply of the medication.

290.(b) Fixtures and equipment would be considered fixed assets of a pharmacy.

291.(d) Hospital care accounts for $382.8 billion (or 37.6 percent) of all personal healthcare expenditures. Physician services come next, accounting for $229.5 billion (or 22.5 percent). Nursing-home care accounts for $87.8 billion (or 8.6 percent), whereas home healthcare accounts for $35 billion.

292.(a) The category of toxic substances most frequently involved in reported fatalities was antidepressants, followed by analgesics, stimulants, street drugs, gases and fumes.

293. (b) Codein sulfate is classified as a Schedule II controlled substance.

294.(c) The acceptable net profit to net worth ratio for a 10-year-old pharmacy would be 15%. The target value for this ratio would be 20%. A 40% figure can be achieved in a new pharmacy.

295.(d) Retailers must maintain a logbook of information on transactions involving PSE. The logbook (NOT notebook) may be in either printed or electronic form, and the retailer must provide notice to the purchaser that misrepresentations or false statements may subject the purchaser to criminal penalties and specify the maximum fine and term of imprisonment. This logbook information is required by federal law and may be provided to federal authorities in accordance therewith. Under 18 USC § 1001, anyone who makes a materially false, fictitious, or fraudulent statement to the US Government is subject to criminal penalties. Penalties may include a fine of up to $250,000 and/or imprisonment for up to 5 years. This part of the Act becomes effective on September 30, 2006. The logbook must contain the following information for each sale:

1. Purchaser's name and address;
2. Date and time of sale;
3. Name of product sold;
4. Quantity sold; and,
5. Purchaser's signature.

296.(a) The drug benefit, which began on January 1, 2006, is provided by private "at risk" entities called Prescription Drug Plans (PDPs). The U.S. was divided into 34 geographic PDP regions. Each region contains one or more states. In addition, there are five U.S. territories including the U.S. Virgin Islands, Guam, American Samoa, Commonwealth of Puerto Rico, and the Commonwealth of Northern Marianas, which are included in the Medicare Part D program. A PDP may apply to provide prescription coverage for as many or as few regions as they desire.

297. (b) The mean blood pressure of the patient can be calculated as follows:

$$\frac{75 + 92 + 60 + 110 + 95 + 79}{6}$$

$$= 85.16$$

298.(d) All. The following factors generally cause patients' noncompliance:

1. Advancing age
2. Duration of therapy
3. Number of drugs in the regimen
4. Frequency of administration
5. Drug-induced side effects
6. Relief of symptoms
7. Fear of drug dependency
8. Unpalatable dosage form
9. Absence of viable patient-physician relationship
10. Excessive waiting to see the physician or pharmacist
11. Nature of the illness (e.g. psychiatric disorders)
12. Cost of the medication.

299.(c) The Act allows for the sale of pseudoephedrine (PSE) only from locked cabinets or behind the counter. The law:

1. Limits the monthly amount of PSE that an individual may purchase;

2. Requires individuals to present photo identification to purchase such medications; and,

3. Requires retailers to keep personal in formation about these customers for at least two years after purchase of the products.

300. (c) 70%

The retail price of a drug is $110, therefore the mark-up on prescriptions would be $45 ($ 110 - $ 65).

For a $ 65 drug, $ 45 would be the mark-up. For a $100 drug ?

45 x 100 / 65 = 69.23% mark-up

301.(b) I and II only. A prescription may not be issued so that a prescriber can obtain a supply of controlled substances for the purpose of general dispensing to their patients. Therefore a prescription written for "office stock" or "medical bag" is not valid. The appropriate way for a prescriber to acquire such controlled substances is to use the ordering and invoicing methods commonly used to transfer controlled substances between registrants. For Schedule II controlled substances, this will require the use of a DEA form 222.

302.(a) 40. The bulk bottle of Cephalexin has an expiration date of Jan/05, which indicates that the drug will be expiring on January 31, 2005. The prescription is presented on January 20 and is written for 10 days, therefore the pharmacist can fill the whole supply of the drug.

303.(a) Hypodermic needles are characterized by their different points. A long-bevel or long-taper needle is used for local anesthesia, aspirating, hypodermoclysis and subcutaneous administration. A short-bevel needle is used for intravenous administration, infusion and transfusions. A special short-bevel needle is employed for intradermal and spinal administration.

304.(c) The following requirements apply to the dispensing of non-prescription controlled substance products:

1. The dispensing must be done by a pharmacist and not by a non-pharmacist employee, although the payment for the product may be received by a non-pharmacist.

2. The pharmacist must assure the medical necessity for the product.

3. Not more than 240ml. or not more than 48 solid dosage units of any substance containing opium, and not more than 120ml, or not more than 24 solid dos age units of any substance containing codeine, may be dispensed to the same purchaser in any 48-hour period.

4. The purchaser (not the patient) must be at least 18 years old.

5. The pharmacist must require the purchaser to provide identification.

A bound record book must be maintained by the pharmacist, recording the name and address of the purchaser, name and quantity of the controlled substance purchased, date of each sale, and initials of the dispensing pharmacist.

305.(b) Liquidity generally expresses a pharmacy's ability to meet its current liabilities.

306.(c) Medication Therapy Management is a distinct service or group of services that optimize the therapeutic outcomes for individual patients. Medication Therapy Management services are independent of, but can occur in conjunction with, the provision of a medication product.

307.(d) The t distribution is suitable for a statistical test comparing two means. The F distribution is used to compare two variances.

308. (b) The degree of freedom for a t distribution can be calculated by n-1:

= 100-1
= 99.

309.(c) The degree of freedom in Chi-square can be calculated by using the following formula:

DF = (number of rows - 1) x (number of columns - 1)
DF = (3 - 1) x (4 - 1)
DF = (2) x (3)
DF = 6

310.(a) Pharmacists always prefer to buy drugs with an AAC (Actual Acquisition Cost) lower than their AWP (Average Wholesale Price). AAC is defined as the actual price pharmacists pay when purchasing drugs. AWP is defined as a published wholesale price for drugs. AWP is generally used to determine prices of prescription drugs. Pharmacists prefer to buy drugs at a lower price than the AWP.

311.(b) Mean = 588

$$= \frac{350+420+530+600+620+635+700+850}{8}$$

= 588

312.(a) Community pharmacists are positioned to be integral members of the primary healthcare team because they can identify under-treated patients and patients at risk for improper management. They can also offer education and advice to patients in areas such as cardiovascular disease and smoking cessation. Pharmacists are currently educating patients on the risks and benefits of treatment, adverse drug events/effects, drug interactions, monitoring, and encouraging compliance. In some instances, this role can be expanded to include authorizing pharmacists to decide if refills should be given, a practice that is currently used by several pharmacists working in physician's offices.

313.(c) The cane provides a means to transfer weight off the weak limb. If patients carry their cane on the same side as their weak limb, the base of support will be narrow (i.e. the distance between cane tip and the weak limb is small); they will have to transfer weight from side to side, increasing the possibility of falling. If they carry the walking cane on the side opposite the weak limb, the base of support will be wide and the center of gravity can move primarily forward rather than side to side. They use the cane together with the weak limb, alternatively swinging the strong limb through for the next step.

314.(d) Notes payable beyond 1 year are considered current long-term liabilities of the pharmacy. Accounts payable, accrued expenses and notes payable within 1 year are considered current liabilities of the pharmacy.

315.(a) DEA 224a form should be used for renewal of registration. Below is the list of forms and their uses:

Forms	Uses
DEA 222	For purchase of Schedule II controlled substances
DEA 224	New registration
DEA 225	New registration
DEA 363	New registration
DEA 224a	Renewal of registration
DEA 225a	Renewal of registration
DEA 363a	Renewal of registration
DEA 106	Theft or stolen of controlled substances

DEA 41 Disposal or destruction of controlled substances
FDA-2635 Consent to Treatment with an Approved Narcotic Drug

316.(b) The mean of binomial distribution can be calculated by:

Mean = n x p
= 100 x 0.2
= 20

317.(b) Inventory turnover rate generally describes the efficiency of a pharmacy. It is generally calculated by dividing the cost of the goods sold by the average of beginning and ending inventory.

318.(b) The inventory turnover rate can be calculated by dividing cost of goods sold by the average of beginning and ending inventory.

Cost of goods sold = $400,000
Beginning inventory = $175,000
Ending inventory = $140,000

$$\text{IN TOR} = \frac{\text{cost of goods sold}}{\frac{\text{beg inv + end inv}}{2}} = \frac{400{,}000}{\frac{175{,}000 + 140{,}000}{2}} = 2.54$$

319.(d) Patient: "I will take the medicine. I just don't like that I have to take it to be okay." Choice "a" would be too harsh and may result in a resistance (by not taking medication). Choice "b" and "c" will keep the patient at ease and may result into noncompliance. A pharmacist should respond: "I believe that taking the medicine is the best decision for controlling your blood pressure."

320.(d) Everyone has the need to feel appreciated, respected, and protected. These are called face needs. When people are challenged, face may be threatened. As a result, defensiveness may occur. There are two types of face that need to be protected. They are autonomy face and competence face. When they are threatened, effective communication becomes very difficult. Motivational interviewing was developed to not threaten either type of face. A few examples will help clarify. A patient says, "I don't want to quit smoking." The pharmacist responds, "Don't you know that smoking is bad for you and can make your heart problems worse?" This response, even if said politely, violates competence face. A motivational interviewing response would be, "What would make you consider quitting?" or "What would have to happen for you to consider quitting?"
Another patient says, "I just don't know if I want to take this medicine. I don't know if it really works." The pharmacist responds, "Well, you really need to take this if you want to get your blood pressure down." This response violates autonomy face. A motivational interviewing response would be, "What would make you feel more confident that the medicine really is working?" or "What would have to happen for you to believe that the medicine was working?" Note that in all of the motivational interviewing responses, defensiveness on the part of the patient would not be engaged.

321.(b) Pharmacists have demonstrated effective collaborative practice models in the areas of primary care and family medicine. Depression and chronic pain management are successful models whereby pharmacists are utilized in the team, improving patient outcomes and decreasing costs. One study for depression in a large nonprofit staff-model HMO allowed pharmacists to have limited prescribing privileges to modify dosages of antidepressants, to start adjunctive therapy,

and to make recommendations to the primary care provider (PCP). The PCP referred all patients in the intervention group to the pharmacist-managed clinics, where they completed an interview and followed up with the pharmacist at 6 weeks and 24 weeks (telephone contact occurred in the meantime). Success of primary care pharmacists was supported by a higher level of adherence, higher overall satisfaction, and a decreased number of PCP visits, justifying the potential role of pharmacists in primary care.

322.(c) The Pearsonian coefficient can be calculated by the following formula:

$$3\ \frac{\text{(Mean - Median)}}{\text{Standard deviation}} = 3\ \frac{(145 - 125)}{110}$$

$$= 0.54$$

323.(a) The reproducibility of results of a number of experiments is generally known as precision.

324.(d) All. The paired t-test is generally used when measurements are taken from the same subject before and after some manipulation such as injection of a drug. For example, you can use a paired t-test to determine the significance of a difference in blood pressure before and after administration of an experimental pressor substance. You can also use a paired t-test to compare samples that are subjected to different conditions, provided the samples in each pair are identical otherwise. For example, you might test the effectiveness of a water additive in reducing bacterial numbers by sampling water from different sources and comparing bacterial counts in the treated versus untreated water sample. Each different water source would give a different pair of data points. This differs from the independent two sample t-test in that each of two different treatments is applied to single group of a patients. For example, in bioavailability study, a generic drug is compared to a standard drug in the same group of 20 patients, whereas in a two sample t-test this would be two different group of 20 patients.

In a two independent sample t-test, the variability is a result of the difference among different experimental environments (for example, two different groups of patients may react to the drug in different ways); whereas in a paired t-test, the variability results from differences within experimental units (for example, we will use effects of the drug on the same 20 patients). Therefore, the paired sample t-test has advantages of reduced variability.

It also requires less experimental material (for example, to conduct two independent sample t-tests we require 40 patients, whereas to conduct paired t-tests we only require 20 patients).

A disadvantage of paired t-tests is that if treatments cannot be applied concurrently it may prolong the experimental time and increase the chances of patients' dropout rate (for example, we want to compare bioavailability of a generic drug to a standard drug via an oral route; patients have to wait for a considerable time in order to avoid carry-over effects of the previous experiment).

325.(c) The private insurance companies account for the most healthcare expenditures (32.6%) followed by Medicare (18.8%), out-of-pocket (17.4%), and Medicaid (14.8%).

326.(a) The ratio of net sales to inventory can be calculated as :

$$= \frac{150{,}000}{50{,}000}$$

$$= 3$$

327.(d) The FTC (Federal Trade Commission) prevents misleading advertising of OTC products. It is also responsible for handling unfair business practices.

328.(b) The acid test generally measures a pharmacy's liquidity.

329.(c) The Kefauver-Harris Amendment is also know as the Drug Efficacy Amendment. This law requires that all marketed drugs in the US have to be safe as well as effective. This act also gives the power to the FDA to regulate advertising of prescription drugs. It also provides the GMP (Good Manufacturing Practice) guideline to manufacturers to manufacture drugs in US.

330.(a) Among cases that occur outside the home, the garage and automobile are common sites of accidental poisoning in young children.

331.(b) Patients who reside in the LTC setting are also eligible for a transition period during their first 90 days of coverage in a new PDP. However, due to the complicated nature of these patients, Part D plans are required to allow multiple transition fills within this 90-day period. Furthermore, due to the fact that LTC facilities often dispense medications on a 31-day cycle, PDPs are required to allow up to a 31-day supply of medication per fill. Again, medications that require prior authorization, step therapy, or are non-formulary are eligible for these transition fills, whereas Medicare Part D excluded medications are not. Another differentiating factor of the LTC transition requirement is that an emergency supply beyond the first 90 days of coverage is required. This emergency fill is available to LTC beneficiaries any time during their eligibility in quantities up to a 31-day supply. This will prevent any delay in LTC beneficiaries receiving their medications, and allow time for a formulary exception request.

332.(b) There are currently many barriers for pharmacists who try to provide cognitive services and the primary reason is the lack of adequate reimbursement and compensation. In the community, pharmaceutical care and associated cognitive services are typically included in the dispensing fee. Pharmacists are not typically reimbursed for the time spent with a patient beyond the dispensing of the medication. In one survey, pharmacists were less likely to spend more time with patients because there was not enough time to do so. However, the survey results also indicated that if pharmacists were reimbursed for their time spent, it would be more likely that they would take more time with patients. Another factor is that pharmacists had no incentive/reward from their employers, making these services less likely to exist.

333.(c) The sum of all the probabilities (failure and success) in binomial distribution is equal to 1, therefore if the probability of success is p = 0.7, the probability of failure (q) should be 0.3.

$$p + q = 1$$
$$q = 1-p$$
$$= 1-0.7$$
$$= 0.3$$

334.(c) A percentage of the costs of each service that must be paid by the insured along with the insurance policy payment (e.g. a payment of 80 percent of the cost by the insurance and 20 percent of the cost by the consumer) is defined as coinsurance, whereas money the patients must pay before the insurance policy provides benefit is defined as deductible. A flat fee paid for each type of service (e.g. the patient pays $20 for each physician's visit or $10 for each prescription filled) is known as co-pay. An additional insurance policy taken by many of the elderly to cover the Medicare deductibles and co-payments is defined as Medigap.

335.(b) When the hypothetical value of a parameter is the same as the observed value of a parameter, the error should be considered beta error.

336.(b) In the current Medicare model, a pharmacist receives reimbursement for services only if meeting the Healthcare Financing Administration (HCFA) criteria for reimbursement even if the pharmacist provided the same services of a physician, nurse practitioner (NP), or physician assistant (PA). Even after the criteria are met, reimbursement is only given at the lowest rate known as "incident-to." These services are billed under Part B, but reimbursement is given to the physician under whom the pharmacist is billed. These services can be performed in a physician's office, whether the office is located in a separate building or is an office within an institution or a patient's home. A physician must personally perform the initial service and continue to remain actively involved throughout the course of treatment. The physician does not have to be physically present while the patient's service is being rendered but must be available for assistance and to provide direct supervision. This means that a physician must be present with a pharmacist for a home visit if he/she were to bill under "incident-to." Four general "incident-to" rules set by the Centers for Medicare and Medicaid Services (CMS) must be satisfied in order for a pharmacist to receive reimbursement. The service must be:

1. An integral part of a physician's diagnosis or treatment;
2. Provided under the direct supervision of a physician;
3. Performed by an employee of the physician; and
4. Something ordinarily done in a physician's office or physician-directed clinic.

337. (b) $37.50

$$R = \frac{C}{P}$$

R = Retail price of drug
C = Cost of drug
P = Cost complement in %

Therefore the retail price of insulin would be:

$$= \frac{11.25}{0.30}$$

$$= \$37.50$$

Cost complements % + % mark-up = 100%

338. (c) Two independent sample t-tests should be performed to find the clinical significance of drug A over the placebo. Another example would be the dissolution of tablets prepared by a marketed formulation that is compared to the dissolution of tablets prepared from an experimental formulation. These types of designs differ from the one-sample test in that averages are obtained from two groups for the purposes of comparison, whereas in a one-sample test the average of a single group is compared to some hypothetical value. To make it more clear take the following example. Let's say we have a marketed drug with a label potency of 500 mg. We randomly pick 30 tablets to find out the actual potency of the marketed product. In this type of test we compare the mean values of 30 tablets with some hypothetical value (in our example it should be 500 mg). This is called simple t-test. Now let's say we want to compare a drug A effect on 20 patients over its placebo effect on 20 different patients. This type of study requires two independent sample t-tests.

339.(d) All. Cognitive services are a component of pharmaceutical care that pharmacists have been providing for many years. Cognitive services are defined as "services provided by the pharmacist for the patient or healthcare professionals for the purposes of promoting optimal health and/or drug therapy; not necessarily drug-product-related." These services primarily focus on optimizing a patient's drug therapy and ensuring appropriateness, safety, and efficacy.

340.(c) An acid test generally measures the liquidity of the pharmacy. It can be calculated by dividing the sum of cash and accounts receivable by the current liabilities.

341.(a) Barriers to establishing pharmacists as collaborative service providers are similar to those faced by NPs and PAs in the past. Mainly, these include physician and nursing opposition as well as certain pharmaceutical driven challenges. In a survey to pharmacy state organizations, 41% of responders stated medical associations or physicians as the largest barrier. Difficulty in educating healthcare professionals about pharmacists' capabilities (16%), pharmaceutical manufacturers (16%), nursing associations (9%), and lack of pharmacist lobbying (9%) were among the other barriers mentioned.

342.(d) All. A certified pharmacy technician can perform the following duties:

1. Taking a stock bottle from the shelf for a prescription.
2. Reconstituting medication.
3. Initiating and receiving refill authorization requests.
4. Preparing and packaging prescriptions.
5. Loading bulk unlabeled drugs into an automated dispensing system provided a pharmacist verifies that the system is properly loaded prior to use.
6. Affixing prescription labels and auxiliary labels to a prescription container.
7. Entering prescription data into a data processing system.

343.(b) Waxman-Hatch (Drug Price Competition and Patent Restoration Act) inspired the FDA to publish an up-to-date list of all marketed drug products through the Orange Book.

344.(c) The Act specifies training requirements for store personnel. Retailers must train all individuals who deliver PSE-containing products to purchasers, and cashiers who receive payments for them, to ensure that these persons understand the requirements that apply. Retailers must also certify that all store employees who conduct PSE sales have been trained and submit a "self-certification" to the Department of Justice. Certifications must state that the retailer understands the legal requirements and agrees to comply with them. The retailer will be required to retain a copy of both the self-certification and records evidencing the employee training. The Department of Justice will issue regulations establishing criteria for filing certifications for employee training. State and local officials will have access to certifications. Retailers will be permitted to file self-certification via an Internet site to be established by the DEA. Separate certifications are required for each place of business, although training may be conducted centrally. Training applies to the location and not the individual. Periodic recertification is required to cover new employees.

345.(c) The compounded mixture should be classified as a Schedule III controlled drug. The amount of codeine present in the final mixture is 0.74 gms (500 mg plus 240 mg). It has been stated under the CSA that

if a mixture contains less than 1.8 gms of codeine per 100 cc, it should be classified as a Schedule III controlled substance.

346.(c) To be valid, a prescription for a controlled substance must be issued for a legitimate medical purpose by a prescriber acting in the usual course of professional practice. The prescriber is responsible for the proper prescribing of controlled substances. However, a corresponding responsibility rests with the pharmacist who dispenses the prescription. An order for a controlled substance that purports to be a valid prescription, but is not issued in the usual course of professional practice, is not a prescription. Any pharmacist who knowingly dispenses controlled substances pursuant to a purported prescription, as well as the prescriber issuing the prescription, is subject to criminal and/or civil penalties and administrative sanctions.

347.(c) Pharmacists are in a unique position to assist patients in taking medicines properly and moving them toward healthy behaviors and outcomes. Compliance is the extent to which patients follow advice given to them by healthcare providers, whether the advice concerns taking medications, making lifestyle changes, or other interventions. While studies estimate that 50-60% of patients are noncompliant with their medication regimens, compliance with lifestyle changes is even lower, at 30%. Of all patients, 30-40% fail to follow preventative regimens, and 20-30% fail to follow curative (relief of symptoms) medication regimens. Moreover, when long-term or chronic care medication is prescribed 50% fail to adhere. Each year millions of people suffer from drug-related morbidity and mortality as a result of noncompliance.

348. (d) All. Fentanyl, dextroamphetamine and hydromorphone are schedule II controlled substances. These substances require an exact count when taking inventory.

349.(b) Each trial in a Binomial experiment comes out a success or failure. The repeated trials are independent of previous experiments. The experiments generally consist of "n" repeated trials. The probability of success remains constant from trial to trial. An example of this is tossing a quarter for "n" times to get heads (tails would be considered a failure) each time.

350.(d) All. Methylphenidate, Pentobarbital, Secobarbital and Amobarbital are classified as Schedule II controlled substances. They require a DEA 222 order form. However, Schedule II barbiturates such as Pentobarbital, Amobarbital and Secobarbital are classified as Schedule III controlled substances when combined with Aspirin or Acetaminophen or when they are formulated as suppository dosage form.

351.(b) According to the American Association of Colleges of Pharmacy, clinical pharmacy is defined to be "an area within the pharmacy curriculum which deals with patient care with emphasis on drug therapy; development of a patient-oriented attitude; acquisition of new knowledge and learn a skill to optimize patient communications."

352.(d) All. A collaborative drug therapy management agreement may authorize a pharmacist to implement, modify or discontinue a drug therapy that has been prescribed for a patient, order associated laboratory tests, and administer drugs, all in accordance with a patient-specific written protocol. In instances where drug therapy is discontinued, the pharmacist shall notify the treating physician of such discontinuance no later than twenty-four hours from the time of such discontinuance. Each protocol developed, pursuant to the collaborative drug therapy management agreement, shall contain detailed direction concerning the actions that the pharmacist may perform for that patient.

470.(b) To be classified as schedule V, the maximum permissible quantity of Codeine is 2 mg/ml (Not more than 200 mg/ 100 cc).

471.(b) Every two years the FDA visits drug manufacturers' premises to ensure that they meet GMP guidelines.

472.(c) The cascade of emotions that might affect a patient or responsible caregiver after discovering a dispensing error typically occurs in the order of confusion, anxiety, fear and anger. From the pharmacist's point of view, a range of emotions are also experienced including confusion, anxiety about what will happen, a fear of law suit, board or college of pharmacy punishment, and often irritation and anger over the frustration of having one's life disrupted.

473.(b) Cognitive barriers in counseling patients are due to a lack of pharmacist training and confidence. Pharmacists are often reluctant to engage patients in counseling because of doubt in their consultation abilities and pharmaceutical knowledge. Deficient communication skills decrease the quality and likelihood of such interactions. Cultural and language differences are also classified as cognitive barriers.

474.(d) All. Healthcare plans must establish Medication Therapy Managements (MTMs) for individuals who:

1. Have multiple chronic diseases;
2. Take multiple covered Part D drugs;
3. Are likely to incur costs above a certain level.

The services may be furnished by pharmacists, and MTM programs must be developed by consulting practicing pharmacists.

475.(a) The above DUR study is defined as Prospective DUR since it has been done at the time of dispensing.

476.(a) The sublingual form of Nitroglycerine is exempt from the requirements of the CFR. This drug is too small and it is practically impossible to imprint an identification code on tablets.

477.(a) Only patients and prescribers can request the dispensing of drugs without a CRC.

478.(a) New drugs are generally classified in two categories: Type-P or Type-S. Drugs classified under Type-P are given priority. To be classified under Type-P, the drug must meet one of the following criteria:

1 The drug must be more superior in its class than the currently marketed drugs.

2 The new drug must have the unique ability to treat symptoms or diseases for which there are no drugs in the market.

Type-S category is described as Standard Review. The products classified under this category have been cleared more slowly compared to Type-P.

479.(b) The Sherman Antitrust Act has been introduced to prevent restrain of trade or the establishment of monopolies. According to this law, companies or groups of companies may not have agreements among themselves that may affect the general public or restrain trade. The above illustration is considered as price fixing.

480.(d) Under FDA guideline for compounding prescription, the quantity of compounded products should be limited to filling the current and refill requirement of the prescription.

481.(c) According to a recent survey, households with the highest mean income used or preferred mail order or online pharmacies most often. Below is the list of pharmacy type with household mean income:

Household Mean Income (Thousands)	Pharmacy Type
67	Mail order/online
62	Food based pharmacies (e.g. Giant, Safeway, etc.)
61	Chain pharmacies (e.g. Rite Aid, CVS, etc.)
60	Clinic based pharmacies
59	Mass merchant pharmacies (e.g. Walmart, Costco, etc.)
59	Independent pharmacies

482.(d) "I guess you're pretty frustrated that the medication didn't work." Answer "a" offers a solution, answer "b" is placating and answer "c" disregards the uniqueness of the patient's medication experience.

483.(b) The Dingle Bill Act (Prescription Marketing Act) prevents the reselling of wholesale purchased drugs at higher prices to individual institutions or pharmacies.

484.(a) Having products for sale in a patient counseling area may increase the number of customers nearby and reduce the sense of privacy for patients who are being counseled.

485.(d) Pharmacists have and will continue to make errors; however, incorporating counseling into a pharmacist's daily routine can reduce these errors. In fact, a study that looked at outpatient medication errors showed that 89% of errors were detected during pharmacist consultations with a patient. Patient counseling is a valuable tool, which can drastically reduce medication errors and decrease the chance that the pharmacists will make the error themselves.

486.(d) A PPI (Patient Package Insert) contains the following:

1. Therapeutic indication;
2. Adverse reactions;
3. Dosage administration;
4. Dosage of drug;
5. Drug interactions.

It does not contain any information regarding pricing of the drug.

487.(b) An orphan drug is defined as a drug that is used for the treatment of rare disease.

488.(d) All the above mentioned cautionary statements are required on an OTC Ipecac syrup bottle.

489.(b) Effective patient communication is central to being able to provide pharmaceutical care; identifying patient issues and needs, developing and communicating solutions and ensuring patient agreement and understanding are essential skills for pharmacists today. Some of the more tangible benefits patients experience when pharmacists use effective communication are:

1. Improved adherence with medication use;
2. Increased satisfaction with their relationship with the pharmacist;
3. Greater likelihood that patients will ask for help when it is needed, resulting in fewer unaddressed side effects and adverse effects;
4. Improved patient trust in pharmacist advice and education.

490.(d) All. Environmental barriers may include accessibility to the pharmacist, lack of a quiet, private space in which to speak with patients, or lack of time to engage in meaningful discussion with patients. One way for the pharmacist to identify environmental barriers is to place him- or herself in the patient's shoes. Suggestions to overcome environmental barriers affecting communication include:

1. Reduce the number of products for sale near the counseling area to reduce the number of customers nearby and increase the sense of privacy for patients who are being counseled.

2. Place a computer terminal near the patient counseling area to reduce walking and increase access to needed information.

3. Reduce the number of items on the counter where the pharmacist will be engaged in a patient interview to reduce the distractions and create a professional atmosphere.

4. Use support staff such as technicians and assistants effectively, to free up time to speak with patients.

491(d) All. Hastily written prescriptions can also cause problems when a zero or decimal point is not utilized or put in the proper place. Not only can hard to read prescriptions be a problem but the use of abbreviations can lead to errors since many are not standardized or can have multiple meanings. According to the USP MEDMARX error reporting program, nearly 19,000 errors due to abbreviations as a cause were reported over a four-year period; however, only 0.55% of these errors were harmful.

492.(b) Physicians and pharmacists in many states are already using electronic data interchange (EDI) technology to transmit prescriptions for non-controlled substances. However, this technology cannot be used for controlled substances. Current DEA regulations specifically require that a pharmacist must have the original physical prescription slip prior to dispensing Schedule II controlled substances (with exceptions for long-term care facilities and emergency dispensing). Prescriptions for substances on Schedules III through V can be transmitted orally but must be reduced to writing by the pharmacist prior to filling. Until the DEA finalizes its EPCS (Electronic Prescribing Controlled Substances) rules, there are three methods available to transmit controlled substance prescriptions: written, oral, and faxed. Apomorphine is not a controlled substance.

493.(d) All. Electronic prescribing (EP) is the totally electronic transmission of prescription information from a prescriber's software application to a pharmacist's practice management system. There are a number of important stakeholder groups that stand to benefit from the adoption and utilization of e-prescribing, but the stakeholders of primary importance are patients, pharmacists, and prescribers. In addition to these three primary interest groups, prescribers, patients and pharmacists, there are other stakeholders who have an interest in seeing e-prescribing move forward. These include large employers, healthcare plans, pharmaceutical manufacturers and payers.

494.(b) Management by objectives (MBO) is defined as a process whereby the superior and subordinate managers of an organization jointly identify its common goals, define each individual's major area of responsibility in terms of results expected of him/her, and use these measures as guides for operating the unit and assessing the contribution of each of its members. The primary effects of management by objectives are tangible re-

sults in the form of profit, increased sales, growth, and lower costs. The secondary effects are less tangible, but very valuable in that management itself becomes more efficient and more responsive to the needs of the firm, its employees, and society. Public and professional relations are also enhanced due to these secondary effects. Tertiary effects are seen in improved employee morale, improved service, improved delegation, and a happier business family. Employee relations are improved as measured in terms of turnover rate, tardiness and other measures of employee satisfaction.

495.(d) The most commonly cited reason for not getting prescribed medications filled is "did not need."

Reason for Non-compliance	Percentage
Pharmacist advice	0.9
Out of stock	2.9
Used OTC product instead	10.7
Changed by Doctor	12.6
Other	13.6
Side effects	18
Insurance did not cover	19.7
Too costly	29.9
Did not need	38.3

496.(d) The NDC consists of 10 or 11 numbers. The first five numbers represent the manufacturer, the middle four numbers represent the product ID (includes the name and strength of drug), and the last two numbers represent the package ID of the drug.

497.(d) All. It is important to note that the MMA (Medicare Modernization Act) does not require that e-prescribing be used by prescribers or pharmacists who serve Medicare beneficiaries at any point in the future. Rather, it specifies a process through which standards for an e-prescribing program will be developed, adopted, recognized, or modified by the Secretary of HHS, and will be followed by all prescribers, pharmacies, and pharmacists who serve Medicare beneficiaries with Part D benefits. The MMA states that information should be made available on:

1. The drug being prescribed or dispensed and other drugs on the patient's medication history, including drug-drug interactions, warnings or cautions, and when indicated, dosage adjustments.

2. Eligibility and benefits, including formulary, tiered formulary, and prior authorization requirements.

3. The availability of lower cost, therapeutically appropriate alternatives (if any) for the drug prescribed.

4. The patient's medical history related to a covered Part D drug being prescribed or dispensed, upon request of the prescriber or pharmacist involved.

498.(c) Medicare is Title XVIII of the Social Security Act. It was first proposed in 1965. It provides medical coverage to people over 65 years of age. It is funded by the Health Care Financing Administration (HCFA). In 1972, disabled persons under age 65 and those with end-stage renal disease become eligible for coverage. Services also expanded to include some chiropractic services, speech therapy and physical therapy.

In the same year, a Supplemental Security Income (SSI) program was established for the elderly and disabled poor. SSI recipients are automatically eligible for Medicaid.

499.(d) According to a recent health survey, approximately 50% patients preferred not to be contacted by any means for reminding them of their refill.

Refill Reminder Methods	Preferred (%)
Don't want to be contacted	50
Personal call	16
Letter	13
E mail	10
Automated phone call	8
Other	3

500.(b) I and II only. Characteristics of Forged Prescriptions:

1. The prescription looks "too good"; the prescriber's handwriting is too legible.

2. Quantities, directions, or dosages differ from usual medical usage.

3. The prescription does not comply with the acceptable standard abbreviations or appears to be a textbook presentation.

4. The prescription appears to be photocopied.

5. Directions are written in full with no abbreviations.

6. The prescription is written in different colored inks or written in different handwriting.

7. The prescription has apparent erasure marks.

501.(b) One of the major barriers to continuous quality improvement identified in the field of pharmacy is that pharmacists and pharmacy managers have traditionally acted on the attitude "if it's not broke, don't fix it."

502.(d) The post marketing survey of new drug is carried out in Phase IV clinical trial. This phase deals with the post marketing experience of a newly introduced drug.

503.(d) TRICARE is the health care program for active duty and retired members of the uniformed services, their families, and survivors. TRICARE's primary objectives are to optimize the delivery of health care services in the military's direct care system for all Military Health System (MHS) beneficiaries and attain the highest level of patient satisfaction through the delivery of a world-class health care benefit. TRICARE brings together the health care resources of the Army, Navy, and Air Force and supplements them with networks of civilian health care professionals to provide better access and high quality health care services while maintaining the capability to support military operations.

TRICARE Prime is a managed care option similar to a civilian health maintenance organization (HMO). This option requires enrollment. Active duty service members are required to enroll in Prime. Active duty family members, retirees and their family members are encouraged, but not required, to enroll in Prime. However, to receive the TRICARE Prime benefit, they must reside where TRICARE Prime is offered. If enrollment for TRICARE Prime and TPR/TPRADFM is received by the 20th of the month, it is effective the first day of the next month. For instance, if an enrollment is received by March 20, coverage will begin April

1. If a family enrolls March 25, they will be covered under the TRICARE Prime benefit starting May 1. If an individual un-enrolls from TRICARE Prime, he or she is locked out for 12 months.

TRICARE Prime offers less out-of-pocket costs than any other TRICARE option. Active duty members and their families do not pay enrollment fees, annual deductibles or co-payments for care in the TRICARE network. Retired service members pay an annual enrollment fee of $230 for an individual or $460 for a family, and minimal co-pays apply for care in the TRICARE network. TRICARE Prime offers a "point-of-service" option for care received outside of the TRICARE Prime network, but point-of-service care requires payment of significant out-of-pocket costs.

TRICARE Prime enrollees receive most of their care from military providers or from civilian providers who belong to the TRICARE Prime network. Enrollees are assigned a primary care manager (PCM) who manages their care and provides referrals for specialty care. All referrals for specialty care must be arranged by the PCM to avoid point-of-service charges.

TRICARE Extra and TRICARE Standard are available for all TRICARE-eligible beneficiaries who elect or are not able to enroll in TRICARE Prime. Active duty service members are not eligible for Extra or Standard. There is no enrollment required for TRICARE Extra or Standard, no annual enrollment fees, no enrollment forms. Beneficiaries are responsible for annual deductibles and cost-shares. Beneficiaries may see any TRICARE authorized provider they choose, and the government will share the cost with the beneficiaries after deductibles.

TRICARE Extra is a preferred provider option (PPO) in which beneficiaries choose a doctor, hospital, or other medical provider within the TRICARE provider network. Network providers can be located by calling the local TRICARE service center or visiting their Web page.

TRICARE Standard is a fee-for-service option. You can see an authorized TRICARE provider of your choice. Having this flexibility means that care generally costs more. TRICARE Standards include:

1. Network pharmacy access within 2 miles of 90% of the beneficiaries in urban areas.

2. Network pharmacy access within 5 miles of 90% of beneficiaries in suburban areas.

3. Network pharmacy access within 15 miles of 70% of beneficiaries in rural areas.

504. (a) The following are pharmacist service improvement techniques. These include:

1. Be available to answer questions in a timely and dependable manner.
2. Take the time to explain problems with date and references to support advice, rather than informing the physician that an error has been made.
3. Suggest several alternatives rather than one recommendation, allowing the physician to make an informed final decision.
4. Continue to provide services such as warning of potential drug abuse/mis use, prescription errors, and drug interactions.

505. (c) The CPSC (Consumer Product Safety Commission) is responsible for implementation of the PPPA (Poison Prevention Packaging Act).

506. (c) Patients also have the right to obtain a copy of their pharmacy records. If a pharmacist receives a request, they have 30 days to provide the patient with a copy. Patients can also request a change to their records. It's best

to ask the patient to put the request in writing and include the reason for the change. A pharmacist must act within 60 days to determine whether the change is appropriate and then correct the records if necessary.

507.(b) When faced with a stressful situation, research and clinical practice shows that it is not unusual to over-generalize, to think the worst, or to look at events in extreme and absolute ways. Such thinking patterns are defined as "irrational thinking." This is not crazy or delusional thinking, but thinking patterns that prevent us from obtaining a balanced perspective on events. There are different types of irrational beliefs. "The old ways of doing things are always best" (living in past) would be defined as stoppers irrational belief. Stoppers keep us from taking actions, hold us back and otherwise make us behave as we always have. It gives us a good excuse for doing nothing. "Only totally incompetent people make mistakes" (perfectionism) is an example of drivers irrational belief. Drivers keep us from a natural pace. While often rewarded in daily life, they may lead us to become fatigue, exhausted, and frustrated. "This is the most horrible thing that could ever happen to me" (overestimate) is an example of distorters irrational belief. Distorters lead to false impression about people, other events and ourselves. They add confusion to our lives and keep us from obtaining a good idea of what is happening to us.

508.(c) The quantity of Oxycodone should be limited to treatment for emergency situations. This could be a 2-day, 3-day, 24-hour or other supply. The oral prescription should be immediately reduced to writing. The pharmacist must make a reasonable effort to identify the legitimacy of the prescriber.

509.(c) Pharmacists need to take responsibility for their behavior, particularly in choosing the content provided to patients and the manner in which it is provided. To help pharmacists ensure effective communication, consider the five "S's". Be sincere, keep communication simple, short and specific, and lastly, summarize. These five "S" words will ensure pharmacists' information in a manner that is clear and specific and supported with summary statements to reinforce important points.

510.(a) I only. The HIPPA mentions who a pharmacist can give information to, and who it cannot be given to. One concept is that information can be disclosed to another health care provider as long as the other health care provider has a treatment relationship with the patient and has informed the patient of his or her own privacy policy. In the above choices, the patient's insurance payer requires a minimum amount of information about processing claims. For example, if you are submitting a claim for a prescription for a patient, and the payer does not need to know the diagnosis, do not provide the diagnosis.

511.(d) Ambien (Zolpidem) is classified as a benzodiazepine. It is indicated for the treatment of insomnia. It is a Schedule IV controlled substance. It cannot be refilled more than 5 times within six months from the date the prescription was issued.