Pharmacy Technician Certification Board®

Current Knowledge Areas		Current Knowledge Area Description	Updated Knowledge Areas*	Updated Knowledge Areas Description
Domain 1.0 Pharmacology for Technicians	1.1	Generic and brand names of pharmaceuticals	1.1	Generic names, brand names, and classifications of medications
	1.2	Therapeutic equivalence	1.2	Therapeutic equivalence
	1.3	Drug interactions (e.g., drug-disease, drug-drug, drug-dietary supplement, drug-OTC, drug-laboratory, drug-nutrient)	1.3	Common and life-threatening drug interactions and contraindications (e.g., drug-disease, drug-drug, drug-dietary supplement, drug-laboratory, drug-nutrient)
	1.4	Strengths/dose, dosage forms, physical appearance, routes of administration, and duration of drug therapy	1.4	Strengths/dose, dosage forms, routes of administration, special handling and administration instructions, and duration of drug therapy
	1.5	Common and severe side or adverse effects, allergies, and therapeutic contraindications associated with medications	1.3	Common and life-threatening drug interactions and contraindications (e.g., drug-disease, drug-drug, drug-dietary supplement, drug-laboratory, drug-nutrient)
			1.5	Common and severe medication side effects, adverse effects, and allergies
	1.6	Dosage and indication of legend, OTC medications, herbal and dietary supplements	1.6	Indications of medications and dietary supplements
			1.8	Narrow therapeutic index (NTI) medications
Domain 2.0 Pharmacy Law and Regulations	2.1	Storage, handling, and disposal of hazardous substances and wastes (e.g., MSDS)	2.1	Federal requirements for handling and disposal of non-hazardous, hazardous, and pharmaceutical substances and waste
	2.2	Hazardous substances exposure, prevention and treatment (e.g., eyewash, spill kit, MSDS)	2.1	Federal requirements for handling and disposal of non-hazardous, hazardous, and pharmaceutical substances and waste
	2.3	Controlled substance transfer regulations (DEA)	2.2	Federal requirements for controlled substance prescriptions (i.e., new, refill, transfer) and DEA controlled substance schedules
	2.4	Controlled substance documentation requirements for receiving, ordering, returning, loss/theft, destruction (DEA)	2.3	Federal requirements for controlled substances (i.e., receiving, storing, ordering, labeling, dispensing, reverse distribution, take-back programs, loss or theft of, and destroying)

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	2.5	Formula to verify the validity of a prescriber's DEA number (DEA)		
	2.6	Record keeping, documentation, and record retention (e.g., length of time prescriptions are maintained on file)	2.3	Federal requirements for controlled substances (i.e., receiving, storing, ordering, labeling, dispensing, reverse distribution, take-back programs, loss or theft of, and destroying)
	2.7	Restricted drug programs and related prescription-processing requirements (e.g., thalidomide, isotretinoin, clozapine)	2.4	Federal requirements for restricted drug programs and related medication processing (e.g., pseudoephedrine, Risk Evaluation and Mitigation Strategies [REMS])
	2.8	Professional standards related to data integrity, security, and confidentiality (e.g., HIPAA, backing up and archiving)		
	2.9	Requirement for consultation (e.g., OBRA'90)		
	2.10	FDA's recall classification	2.5	FDA recall requirements (e.g., medications, devices, supplies, supplements, classifications)
	2.11	Infection control standards (e.g., laminar air flow, clean room, hand washing, cleaning counting trays, countertop, and equipment) (OSHA, USP 795 and 797)	3.6	Hygiene and cleaning standards (e.g., handwashing, personal protective equipment [PPE], cleaning counting trays, countertop, and equipment)
	2.12	Record keeping for repackaged and recalled products and supplies (TJC, BOP)		
	2.13	Professional standards regarding the roles and responsibilities of pharmacists, pharmacy technicians, and other pharmacy employees (TJC, BOP)		
	2.14	Reconciliation between state and federal laws and regulations		
	2.15	Facility, equipment, and supply requirements (e.g., space requirements, prescription file storage, cleanliness, reference materials) (TJC, USP, BOP)		
3.0 Sterile and Non-Sterile Compo	3.1	Infection control (e.g., hand washing, PPE)	3.6	Hygiene and cleaning standards (e.g., handwashing, personal protective equipment [PPE], cleaning counting trays, countertop, and equipment)

	3.2	Handling and disposal requirements (e.g., receptacles, waste streams)	2.1	Federal requirements for handling and disposal of non-hazardous, hazardous, and pharmaceutical substances and waste
	3.3	Documentation (e.g., batch preparation, compounding record)		
	3.4	Determine product stability (e.g., beyond use dating, signs of incompatibility)	1.7	Drug stability (e.g., oral suspensions, insulin, reconstitutables, injectables, vaccinations)
			1.9	Physical and chemical incompatibilities related to non-sterile compounding and reconstitution
	3.5	Selection and use of equipment and supplies	4.3	Equipment/supplies required for drug administration (e.g., package size, unit dose, diabetic supplies, spacers, oral and injectable syringes)
	3.6	Sterile compounding processes		
	3.7	Non-sterile compounding processes	4.1	Procedures to compound non-sterile products (e.g., ointments, mixtures, liquids, emulsions, suppositories, enemas)
Domain 4.0 Medication Safety	4.1	Error prevention strategies for data entry (e.g., prescription or medication order to correct patient)	3.2	Error prevention strategies (e.g., prescription or medication order to correct patient, Tall Man lettering, separating inventory, leading and trailing zeros, bar code usage, limit use of error-prone abbreviations)
	4.2	Patient package insert and medication guide requirements (e.g., special directions and precautions)	2.4	Federal requirements for restricted drug programs and related medication processing (e.g., pseudoephedrine, Risk Evaluation and Mitigation Strategies [REMS])
	4.3	Identify issues that require pharmacist intervention (e.g., DUR, ADE, OTC recommendation, therapeutic substitution, misuse, missed dose)	3.3	Issues that require pharmacist intervention (e.g., drug utilization review [DUR], adverse drug event [ADE], OTC recommendation, therapeutic substitution, misuse, adherence, post-immunization follow-up, allergies, drug interactions)
	4.4	Look-alike/sound-alike medications	3.1	High-alert/risk medications and look-alike/sound-alike [LASA] medications
	4.5	High-alert/risk medications	3.1	High-alert/risk medications and look-alike/sound-alike [LASA] medications

	4.6	Common safety strategies (e.g., tall man lettering, separating inventory, leading and trailing zeros, limit use of error prone abbreviations)	3.2	Error prevention strategies (e.g., prescription or medication order to correct patient, Tall Man lettering, separating inventory, leading and trailing zeros, bar code usage, limit use of error-prone abbreviations)
Domain 5.0 Pharmacy Quality Assurance	5.1	Quality assurance practices for medication and inventory control systems (e.g., matching National Drug Code (NDC) number, bar code, data entry)	4.4	Lot numbers, expiration dates, and National Drug Code (NDC) numbers
	5.2	Infection control procedures and documentation (e.g., personal protective equipment [PPE], needle recapping)	3.6	Hygiene and cleaning standards (e.g., handwashing, personal protective equipment [PPE], cleaning counting trays, countertop, and equipment)
	5.3	Risk management guidelines and regulations (e.g., error prevention strategies)	3.4	Event reporting procedures (e.g., medication errors, adverse effects, and product integrity, MedWatch, near miss, root-cause analysis [RCA])
			3.5	Types of prescription errors (e.g., abnormal doses, early refill, incorrect quantity, incorrect patient, incorrect drug)
	5.4	Communication channels necessary to ensure appropriate follow-up and problem resolution (e.g., product recalls, shortages)	3.4	Event reporting procedures (e.g., medication errors, adverse effects, and product integrity, MedWatch, near miss, root-cause analysis [RCA])
	5.5	Productivity, efficiency, and customer satisfaction measures		
Domain 6.0 Medication Order Entry and Fill Process	6.1	Order entry process		
	6.2	Intake, interpretation, and data entry	4.2	Formulas, calculations, ratios, proportions, alligations, conversions, Sig codes (e.g., b.i.d., t.i.d., Roman numerals), abbreviations, medical terminology, and symbols for days supply, quantity, dose, concentration, dilutions
	6.3	Calculate doses required	4.2	Formulas, calculations, ratios, proportions, alligations, conversions, Sig codes (e.g., b.i.d., t.i.d., Roman numerals), abbreviations, medical terminology, and symbols for days supply, quantity, dose, concentration, dilutions

	6.4	Fill process (e.g., select appropriate product, apply special handling requirements, measure, and prepare product for final check)	4.3	Equipment/supplies required for drug administration (e.g., package size, unit dose, diabetic supplies, spacers, oral and injectable syringes)
	6.5	Labeling requirements (e.g., auxiliary and warning labels, expiration date, patient specific information)		
	6.6	Packaging requirements (e.g., type of bags, syringes, glass, pvc, child resistant, light resistant)	1.10	Proper storage of medications (e.g., temperature ranges, light sensitivity, restricted access);
			4.3	Equipment/supplies required for drug administration (e.g., package size, unit dose, diabetic supplies, spacers, oral and injectable syringes)
	6.7	Dispensing process (e.g., validation, documentation and distribution)		
Domain 7.0 Pharmacy Inventory Management	7.1	Function and application of NDC, lot numbers and expiration dates	4.4	Lot numbers, expiration dates, and National Drug Code (NDC) numbers
	7.2	Formulary or approved/preferred product list		
	7.3	Ordering and receiving processes (e.g., maintain par levels, rotate stock)		
	7.4	Storage requirements (e.g., refrigeration, freezer, warmer)	1.10	Proper storage of medications (e.g., temperature ranges, light sensitivity, restricted access)
	7.5	Removal (e.g., recalls, returns, outdates, reverse distribution)	4.5	Procedures for identifying and returning dispensable, non-dispensable, and expired medications and supplies (e.g., credit return, return to stock, reverse distribution)
Domain 8.0 Pharmacy Billing and Reimbursement	8.1	Reimbursement policies and plans (e.g., HMOs, PPO, CMS, private plans)		
	8.2	Third party resolution (e.g., prior authorization, rejected claims, plan limitations)		
	8.3	Third-party reimbursement systems (e.g., PBM, medication assistance programs, coupons, and self-pay)		
	8.4	Healthcare reimbursement systems (e.g., home health, long-term care, home infusion)		

	8.5	Coordination of benefits		
Domain 9.0 Pharmacy Information System Usage and Application	9.1	Pharmacy-related computer applications for documenting the dispensing of prescriptions or medication orders (e.g., maintaining the electronic medical record, patient adherence, risk factors, alcohol drug use, drug allergies, side effects)		
	9.2	Databases, pharmacy computer applications, and documentation management (e.g., user access, drug database, interface, inventory report, usage reports, override reports, diversion reports)		

***Note**: A blank in the Updated Knowledge Area Description column indicates that the knowledge has been removed from the updated PTCE Content Outline based on the findings of the most recent job analysis. Knowledge removed from the updated PTCE Content Outline may be addressed by other CPhT program requirements, such as education/training requirements. Knowledge removed from the updated PTCE Content Outline may also be incorporated into other PTCB certification programs. Example: Knowledge of the sterile compounding process is part of the new Certified Compounded Sterile Preparation Technician™ (CSPT™) program.