

**PHARMACOKINETICS
SUPPLEMENTAL EDUCATIONAL OUTCOMES
BASED on CAPE 2004**

PHARMACEUTICAL CARE Provide pharmaceutical care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, economic, and professional issues, emerging technologies, and evolving biomedical, sociobehavioral, and clinical sciences that may impact therapeutic outcomes.

1. Evaluate the basic pharmacokinetics and pharmacodynamic properties of a drug and relate that to the manner in which the drug is used therapeutically.
2. Identify and explain the physical/chemical characteristics of a drug the influences its absorption, distribution and elimination.
3. Evaluate the primary and secondary drug information literature with regard to the pharmacokinetics and pharmacodynamics of drugs.
4. Estimate individual patient's kinetic parameters for any given drug from limited number of biological samples or from population kinetic data and patient characteristics.
5. Design dosage regimens based on the patient-specific or population (average) kinetic data.
6. Predict the effects of route and/or method of drug administration on the plasma concentration-time profiles using the individual or population (average) kinetic data and judge the appropriateness of dosage form and route of administration.
7. Predict the effects of changes in the pharmacokinetic parameters (due to drug interactions, disease states, or special populations) on the plasma concentration-time profile of drugs and modify, if necessary, the dosage regimen based on the altered kinetic parameters.
8. Explain the influence of transporters on the pharmacokinetics/pharmacodynamics of a drug and how to determine their influence in failure of drug therapy would be assessed.
9. Explain how the role of pharmacogenomics in pharmacokinetics/pharmacodynamics of drugs would be utilized with regard to individualizing dosage regimens and possibly predicting adverse drug reactions.

The supplemental outcomes were developed by Educational Outcomes and Objectives Supplements Task Force Members: Marc W. Harrold, Duquesne University (chair); Shelley Chambers Fox, Washington State University; Reza Mehvar, Texas Tech University Health Sciences Center; Nivedita K Pandit, Drake University; and Catherine A. White, University of Georgia.