**Adverse drug reactions and drug safety**

**Learning outcome objectives**
Upon successful completion of this lesson, you should be able to:
1. Discuss why adverse drug reactions and drug safety practices are important.
2. Demonstrate an understanding of common terminology and vocabulary used to describe adverse drug reactions, medication errors and aspects of drug safety.
3. Describe ways to detect, prevent and manage some of the most common serious adverse drug reactions.
4. List and describe the characteristics of key resources and healthcare services that pharmacists can use to understand and potentially prevent adverse drug reactions.
5. Use an algorithm to evaluate the causal relationship between an administered medication and an adverse reaction in a specific patient.
6. Interpret scientific studies and the statistical calculations used to describe and identify adverse drug reactions in the general population.
7. Identify the main causes of adverse drug reactions.
8. List actions and strategies that pharmacists can use to prevent adverse drug reactions.
9. Contribute to Canada’s national pharmacovigilance program, Canada Vigilance.
10. Demonstrate effective communication skills specific to adverse drug reactions when communicating with patients and other healthcare professionals.

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Barbara Cadario is a clinical assistant professor in the Faculty of Pharmaceutical Sciences at the University of British Columbia (UBC). She holds a Bachelor of Science degree and a Pharmacy degree from the University of Toronto, and a Masters degree in Pharmacology and Toxicology from UBC. Her specialty areas are adverse drug reactions and drug safety. She was the coordinator for Health Canada’s regional centre for adverse drug reaction monitoring in British Columbia for nine years.

**Expert Reviewer:** Robert Valuck, Ph.D.
Robert Valuck received a Bachelor of Science degree in Pharmacy from the University of Colorado, and Masters and Ph.D. degrees in Pharmacy from the University of Illinois at Chicago. He is an associate professor at the University of Colorado’s School of Pharmacy, teaching a required Pharm.D. course in biostatistics, and graduate (Ph.D.) courses in research design and pharmacoepidemiology. Dr. Valuck has also worked in the area of drug safety and ADRs, including ADR causality assessment, drug interactions, and adverse effect signal detection for psychotropic drugs, statins, acid suppressants and oral hypoglycemic agents.