Pharmacy Informatics

Holland Code: CIR

Background

It is impossible to imagine a pharmacy practice environment that is not heavily supported by information technology (IT). As the first health care profession to widely adopt computers, pharmacy has a history of utilizing IT to support patient care. Pharmacy informatics is a unique field that brings people, information, and systems together to support safe and effective medication-related outcomes. Pharmacy informaticists work collaboratively with other pharmacists, physicians, nurses, information systems personnel, and a variety of other health care professionals. At the end of the day, pharmacy informaticists' goal is to ensure that appropriate systems are in place to support an informed practice environment. These systems include e-prescribing, computerized prescriber order entry (CPOE), electronic medical records (EMR), bar code dispensing and administration systems, and automated dispensing cabinets, to name just a few.

All PharmD programs are required to provide pharmacy informatics education. Some programs provide elective and experiential pharmacy informatics education. PharmD graduates can also pursue additional education and training through residencies, fellowships, and graduate school. Pharmacy informaticists are employed by hospitals, information systems companies that support acute and ambulatory care, governmental agencies, colleges of pharmacy, knowledge vendors (First DataBank, Multum, etc.), and a variety of other opportunities. Through their involvement with the systems that support patient care, pharmacy informaticists are able to have a broad impact on patient care.

Pharmacists' responsibilities

Pharmacists have unique, comprehensive knowledge about the safe and effective use of medications. More importantly, pharmacists understand core pharmacy operations and have developed expertise in end-to-end medication-use management, including communication with other information systems. Pharmacists provide the expertise to effectively translate and seamlessly communicate the language of medication use across the continuum of care. They can interpret and implement requirements to ensure the safe and comprehensive communication of medication orders. An experienced pharmacist is skilled in the use of electronic medication-order-entry systems and has knowledge of human factor issues (e.g., interpretation of ambiguous clinical data) and the development of interfaces to disparate applications and systems.

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Currently, there are many paths to becoming a pharmacy informaticist, with a growing number of training and residency programs focusing on this area. Although some pharmacy informaticists have formal academic or experiential training, the typical pharmacy informaticist is a pharmacist who has knowledge of computer systems, medication-use processes, safety issues, clinical management of medications, drug distribution, and administration and has developed extensive expertise in using technology to support these activities. Pharmacy informaticists are well suited to address the myriad issues involved with health care technology initiatives and provide leadership in the field of medical informatics. The pharmacy informaticist's responsibilities include active participation and leadership in all medical informatics activities that support medication use; education of pharmacy students, pharmacists, pharmacy technicians, health care colleagues, and administrators; and research on the core areas of medical informatics.

How to learn more about pharmacy informatics

- ✓ Talk with the Informatics professor at your school; seek out and interview working professionals.
- ✓ Take any didactic informatics electives your school offers.
- ✓ Try to think "out of the box" to distinguish human error from technological malfunction.
- ✓ Ask questions about the technology used in the pharmacy environment in which you may work.
- ✓ Consider an elective experiential rotation focusing on pharmacy informatics.
- ✓ If you are considering a residency, look for an institution with elective rotations in informatics or sites with a PGY-2 Informatics Pharmacy Residency.

Adapted from the American Association of Colleges of Pharmacy and American Society of Health-System Pharmacists