



THE role of technology

Just as technology has changed our everyday world—imagine your life without the World Wide Web—it also has impacted pharmacy in all settings.

“You need to have decent knowledge of personal computers, which, fortunately most kids have today,” says Paul W. Jungnickel, an associate dean/professor at the Harrison School of Pharmacy at Auburn University. “If you have basic skills, you can learn the specific programs.”

Less than 10 years ago, pharmacists had to check prescription compatibility manually to ensure one drug would not cause death or sickness when mixed with another. Labels were typed manually—a long and arduous process. Computer systems have had a dramatic impact on day-to-day operations. One of the biggest changes is that retail pharmacists are able to use computers to check for drug interactions. The advanced computer systems implemented at retail today also confirm that patients have up-to-date insurance. This saves millions of dollars and hours of time. New information, such as product recalls, pricing

changes and new pharmacy launches, also are communicated via computer.

In hospitals, bar codes are used to dispense medication, identify patients and reorder medications. Personal digital assistants also are now used commonly by pharmacists for product information and other data.

Other digital innovations include:

- **E-PRESCRIPTIONS:** Ever look at your physician’s handwriting? Errors in reading prescriptions are a huge, potentially life-threatening problem. Technology has come to the rescue. New systems allow physicians to key in prescriptions to devices, such as personal data assistants or pagers, that transmit the prescription directly to the pharmacist.

Currently, about 30% of a pharmacist’s time is spent receiving and clarifying prescriptions on the phone. Electronic prescribing can reduce that time so pharmacists have more time to consult with patients. At the same time, it can slice the number of errors. In one test, electronic prescribing cut mistakes by 55%.

- **CENTRAL FILL:** With the growth of mail-order and Internet pharmacy has come the need to fill each bottle of pills at warp speed. Today, there are machines capable of quickly

counting and filling prescriptions. Many retailers, in fact, are starting to purchase filling machines that process prescriptions at one central location and then distribute the filled bottles to retail stores. This scenario might suggest pharmacists aren’t needed. However, experts say the opposite is true. Pharmacists are needed for quality control of the automated process.

- **INVENTORY CONTROL:**

Although a pharmacist’s main goal is to serve patients, most have some business responsibilities, such as ordering pharmaceuticals. The use of hand-held ordering devices and computerized inventory systems has made this process easier and more efficient.

- **RESEARCH:** The use of computers to study drug composition or to learn more about diseases is having a profound impact on the science of pharmacy. And technology is allowing pharmacists to do more than ever. Says Jungnickel, “One of the things that is amazing to me is how many positions now are filled with a pharmacist who knows technology instead of the post being manned by an M.D.”

As you can see, technology is rapidly expanding the career options available in the pharmaceutical field. New systems are tools that make working in a pharmacy more effective—and exciting—than ever.