Pharmacists as Providers

For Patients

Pharmacists:
The Medication Experts

Pharmacists are the medication experts on the health care team, with the most advanced knowledge of medication therapy of any health professional. The doctorate program completed by pharmacists takes a minimum of six years. In addition, many pharmacists complete post-doctorate education, including specialized residency and fellowship training programs, based on their area of interest.

Pharmacists practice in hospitals/health-systems, communities, long-term care facilities, physician offices and as consultants making contact with patients in almost every aspect of health care. In addition to the services listed above, pharmacists are uniquely qualified to perform a variety of other patient care services, including medication compounding, nuclear pharmacy, and health care medication utilization management.

Learn more about various areas in which pharmacists provide direct patient care by reading through the topics listed on the next page.

Anticoagulation

Asthma

Cancer

Cardiac Care

Diabetes

Emergency Medicine

Geriatrics

HIV/AIDS

Immunizations

Intensive Care

Nephrology

Organ Transplant

Osteoporosis

Pain Management

Pediatrics

Pharmacy Technician Practice

Point-of-Care Testing

Public Safety

Anticoagulation

Introduction to Anticoagulation (Thinning of the Blood)

Medications that are given to patients to thin their blood are called anticoagulants. These drugs are used to help keep patients from getting blood clots that travel through the body and experiencing strokes. Each patient reacts differently to blood thinning medication so it is important for patients to be watched closely by their pharmacist and doctor. Too little of the drug may lead to thickening of the blood while too much may increase the risk of bleeding. Blood tests are the routine way to determine the right amount of blood thinners for most patients to take. In addition, there are many interactions with other medicines, herbs, supplements and even foods that must be evaluated when managing anticoagulants.

What a Pharmacist Provides

Pharmacists assist physicians in the regular monitoring of each patient, working with doctors to make changes to the medications when needed. Pharmacists may also draw blood to determine proper dosing of anticoagulants using a point-of-care blood testing device. Patients taking blood thinners need to be concerned about problems that could happen if they stop an old medication, take new medicines, change their diet or miss doses of their medication. Pharmacists assist patients while in the hospital as well as out of the hospital. Pharmacists also educate patients, families and caregivers on how medications work, how important it is for patients to take their medications on time. Sometimes pharmacists also help with insurance issues, payment issues and follow up to make sure patients are taken care of.

Pharmacists assist physicians in the regular monitoring of each patient, working with doctors to make changes to the medications when needed.

Asthma

Introduction to Asthma (Long-term Lung Disease)

Asthma is a disease in the lungs that can cause patients to experience sudden and random periods of wheezing, a hard time catching their breath, tightness in the chest and coughing. Many patients feel like they have asthma often enough that normal daily tasks are hard to complete. Patients do not have to feel this way. Many times, if they use their medication as directed by their pharmacist and doctor, they can avoid problems.

What a Pharmacist Provides

Pharmacists can help patients by talking about medications that can help them feel better, improve their breathing and release any tightness they may be feeling in their chest. Once a doctor decides that a patient has asthma and treatment has been started, pharmacists can help by educating patients on how to prevent asthma attacks. These services are offered in the hospital as well as in local, community pharmacies and health clinics. By having a pharmacist help with asthma medications, patients can often lead a healthier and happier life.

Pharmacists can help patients by talking about medications that can help them feel better, improve their breathing and release any tightness they may be feeling in their chest.

Cancer

Introduction to Cancer

Cancer occurs when cells in the body grow out of control. The cause of cancer is not fully understood, but it has been shown that various exposures and lifestyles, in addition to genetics, can increase a person's risk for some types of cancer. A number of treatment options exist for cancer, including removal, freezing the cancer cells, radiation and treatment with medications. Medications used to treat cancer are referred to as chemotherapy. Traditional chemotherapy works by stopping fast-growing cells. Some newer chemotherapy drugs have been developed to be more selective when attacking cancer cells; these agents tend to have fewer side effects. Unfortunately, these targeted chemotherapy agents are not yet available for all types of cancer. Cancer treatment is difficult to manage and it requires a team of health care professionals who work in different areas to help take care of the patient, making sure each patient gets the individual attention they need.

What a Pharmacist Provides

Pharmacists serve as a safety check during all steps of cancer treatment, making sure that the best combination and dosages of medications are being given to the patient for their type of cancer. Pharmacists verify that the medications are correctly prepared by pharmacy technicians and safely given to the patient by nurses. Pharmacists may also suggest to physicians that a medication dose needs to be adjusted, a medication should be stopped or that medications for other health concerns should be given. Pharmacists are constantly striving to eliminate any potential for error by creating built-in safety checks. As the medication experts, pharmacists are highly involved in educating nurses, physicians and patients regarding cancer medications. Pharmacists are also sometimes involved in studying new medications to treat cancer. In addition, pharmacists play a key role in the testing of medications, allowing new treatments to be discovered.

Pharmacists serve as a safety check during all steps of cancer treatment, making sure that the best combination and dosages of medications are being given to the patient for their type of cancer.

Cardiac Care

Introduction to Cardiac Care

The human heart pumps blood in order to deliver oxygen and nutrients to the rest of the body and removes waste. A strong heart is important for healthy living. Poor diet, lack of exercise, smoking and stress can lead to heart disease, which includes high cholesterol levels, high blood pressure, thinning of blood vessels, lack of oxygen to the heart (heart attack) and heart failure. Although deaths related to these conditions have recently declined, about 610,000 people die of heart disease every year, which is one in every four deaths. If heart disease were eliminated, the Centers for Disease Control and Prevention have calculated that life expectancy would increase by seven years.

What a Pharmacist Provides

Heart disease usually begins with high blood pressure, a silent but deadly condition. Once a patient has heart disease, their pharmacist can help them manage it by regularly taking their blood pressure. Pharmacists also look at blood work results to ensure a patient is on the best medications for them. Since several over-the-counter medications interact with heart disease medications, it is important for pharmacists to talk to patients and teach them about which products are safe to take and which ones to avoid. Pharmacists educate patients about the importance of avoiding foods high in saturated fat, limiting their salt intake and increasing their level of exercise as well as help a patient make these lifestyle changes. These lifestyle changes are crucial to managing and preventing heart attacks and strokes.

Since smoking may lead to heart disease, pharmacists help patients quit smoking. Pharmacists identify things that make it difficult for the patient to stop smoking, and develop a plan to quit, that frequently includes medications like gums or patches to overcome those difficulties. Together, the pharmacist and patient set a target quit date. Pharmacists support patients through follow-up phone calls and face-to-face visits. If changes to the plan need to occur, pharmacists work together with the patient to make changes so that the patient is successful in their plan and makes sure that the patient isn't experiencing any negative problems.

Once a patient has heart disease, their pharmacist can help them manage it by regularly taking their blood pressure.

Diabetes

Introduction to Diabetes

Diabetes is a disease where the body loses its ability to process and use sugar in a way that is healthy. This disease is passed on through families or it can be caused by lifestyle choice, or both. People at the greatest risk for getting diabetes are those over 40 years of age, who are overweight or who have a close family member diagnosed with diabetes. People who can't control their sugar levels by making lifestyle changes may have to take medications. Some of these medications come in a pill form and others need to be taken through a shot. People with diabetes will have to keep close track of sugar levels in their body to make sure their disease is getting better and not worse. It's important for patients and health care team members to work together to manage diabetes to avoid long-term complications such as blindness, kidney failure, heart attacks, strokes and nerve damage that can result in amputations as well as premature death.

What a Pharmacist Provides

Pharmacists are an important part of the health care team in the management of patients with diabetes. Pharmacists work with patients and other health care providers to develop a treatment plan specific for each individual patient. Pharmacists educate patients on the changes diabetes is causing to their body and help them make adjustments to their diet and physical activity level to improve their health. Pharmacists also teach patients and other health care providers on the medications used to treat diabetes and help in selecting the best treatment option(s) for each individual patient. In addition, pharmacists teach patients how to manage their diabetes through self-monitoring of their blood glucose, recognizing signs of low or high blood sugar, and proper management and proper administration of medications, including how to self-administer insulin.

Pharmacists teach patients and other health care providers on the medications used to treat diabetes and help in selecting the best treatment option(s) for each individual patient.

Emergency Medicine

Introduction to Emergency Medicine

Patients in the emergency department are in need of urgent medical care for illnesses or injuries, many of which may be serious. Patients then receive care from a medical team that has special training in emergency medicine. After patients are initially cared for and treated in the emergency room, they will either be admitted to the hospital for further care, transferred to another medical facility for treatment that the hospital cannot offer, or sent home with any necessary prescriptions and instructions concerning their problem and follow-up care.

What a Pharmacist Provides

Emergency rooms can be hectic places, with many medications being given quickly to seriously ill patients. Pharmacists in this setting help by using their knowledge about medications to make sure that each patient gets the best therapy, based on his or her specific medical needs. Pharmacists make suggestions to doctors to help choose the best medication and dose for each patient based on age and other disease states. Pharmacists also review physician orders to make sure patients get the proper medication and avoid any problems that the medication may cause like side effects and allergic reactions. Pharmacists help to reduce medication errors and increase patient safety.

Pharmacists sometimes collect a complete list of all prescription, over-the-counter and herbal medications that patients may be taking at home. This helps to speed up the time the patient is in the emergency department and helps to make sure that patients are treated safely. Pharmacists in the emergency department help educate patients and other health care providers about safe and effective medication use. In addition, pharmacists are readily available to answer medication-related questions from physicians and nurses. They are also available to provide counseling on medications that patients may receive when they leave the hospital; making sure that each patient understands how to use his or her medicine. Pharmacists can help teach patients about their medications and possibly prevent future visits to the emergency room.

Pharmacists in this setting help by using their knowledge about medications to make sure that each patient gets the best therapy, based on his or her specific medical needs.

Geriatrics

Introduction to Geriatrics

Health care providers who care for the elderly work in the practice of health called geriatrics. The number of people over the age of 65 years is on the rise. By 2030, one in five Americans will be older than 65 years and by 2050, one out of every four adults will be 85 years or older. As people age, their bodies undergo changes that put them at risk for developing medical conditions that effect the heart, brain and other parts of the body as well as how they react to certain medications. Multiple medical conditions at once often means that elderly patients will end up taking an increased number of medications. They may be more sensitive to side effects seen with medications and often require lower doses than what is typically used in the younger adults.

What a Pharmacist Provides

Pharmacists play an important role in helping elderly patients stay as healthy as possible. Since elderly patients are often on many medications, pharmacists will obtain many details about a patient's medication history. This history also includes looking over all the medications the patient is taking for any drug interactions and making sure they are taking the right amount of medication. Pharmacists will also go over the medications with the patient to make sure they know why they are taking them, ask about side effects they may be experiencing, and ask if they have trouble remembering to take their medications or difficulty paying for their prescriptions. If a pharmacist finds any problems with the medications a patient is taking, they can recommend changes to the patient or to their doctor.

Pharmacists also talk with patients about any new medication the patient begins taking. They explain how the medication works, how the patient needs to take it and what may happen when the patient takes the medication. If patients are on many medications, the pharmacist may provide them with a pill box or create a calendar to assist the patient in taking all of their medications at the appropriate times. Some pharmacists also educate patients on prescription insurance coverage such as Medicare Part D so they can choose the plan that best fits their needs.

Pharmacists play an important role in helping elderly patients stay as healthy as possible. Since elderly patients are often on many medications, pharmacists will obtain many details about a patient's medication history.

HIV/AIDS

Introduction to HIV/AIDS

Human immunodeficiency virus (HIV) is one of the many viruses that infects humans. HIV infects the body and attacks the system of the body that protects against disease. HIV may be transferred through blood products, sharing needles, sexual contact and mother to child during birth. Acquired immunodeficiency syndrome (AIDS) occurs when a patient has a very weak immune system. A patient can have HIV without having AIDS. HIV affects people of every nationality, race, gender and age. In the United States, there are more than one million people living with HIV. While there is not yet a cure for HIV/AIDS, it can be managed using specialized medications. By taking medication every day, patients with HIV can suppress the virus and hopefully keep the disease from getting worse.

What a Pharmacist Provides

Taking HIV medications every day is the single greatest factor for staying healthy. Pharmacists can help patients understand the importance of their medication by teaching each patient about HIV/AIDS and how the HIV medications work to keep the virus from attacking their body as well as answer questions. This knowledge helps patients feel prepared and ready to begin treatment. All patients are different and it may take multiple teaching sessions before a patient feels prepared enough to begin taking their HIV medications as part of their daily routine. Pharmacists can also give patients tips to remember taking their medications by using pillboxes, timers, planners or alarm watches. Side effects are the most common reason for patients discontinuing medications on their own. Pharmacists who take care of HIV patients keep in close contact with each patient to help with any unwanted side effects.

Many HIV pharmacists are part of a well-rounded health care team. Specifically, they work closely with physicians and nurses in selecting the most appropriate care for the patient. By understanding the HIV medications the patient is taking and their history with these medications, the pharmacist helps other health care workers in creating a personal care plan for HIV patients. In the hospital, pharmacists ensure that patients receive the correct doses of the medications to prevent drug doses that are too low or too high. These pharmacists also assess for any dangerous mixing of drugs and other issues during the patient's time in the hospital. There are a few other disease states where medication regimens play such a critical role in the outcomes of patients. Pharmacists provide an essential role to allow patients to live much longer and with a greater quality of life than ever before.

Pharmacists can help patients understand this importance by teaching each patient about HIV/AIDS and how the HIV medications work to keep the virus from attacking their body as well as answer questions.

Immunizations

Introduction to Immunizations

The system of our body that protects against disease is made up of cells, glands, organs and fluids that are located throughout the body to fight germs and produces proteins called antibodies to fight them. The cells created are called "memory cells." Memory cells remember the original disease and then fight against it when the same type of disease attempts to re-infect a person, even after many years. This protection is called immunity. Vaccines contain the same substances or parts of substances that cause diseases, but the antigens in vaccines are either killed or greatly weakened. When they are injected, the patient's body begins to make antibodies or "memory cells" just like it would normally, to fight against the disease. The memory cells that remain in the patient's body keep the patient from getting sick.

What a Pharmacist Provides

Today, pharmacists are recognized as routine providers of flu shots as well as many other adult and adolescent immunizations such as tetanus, shingles and pneumonia. Pharmacists can talk to patients and figure out whether or not a vaccine is needed, screen for allergies and give the vaccine. They also offer supportive care and report that the vaccine was given to proper health authorities, similar to a clinic or doctor's office. Some pharmacies even offer "travel clinic" programs where specific immunizations can be recommended and administered as required for travel into foreign countries. Pharmacists carefully follow immunization guidelines recommended by the Centers for Disease Control and Prevention to ensure the appropriate use of the vaccines to get the best results.

Today, pharmacists are recognized as routine providers of flu shots as well as many other adult and adolescent immunizations such as tetanus, shingles and pneumonia.

Intensive Care

Introduction to Intensive Care

Every year, 2.1 million patients are admitted to an intensive care unit (ICU) in the hospital. These patients have serious and often multiple life-threatening problems that frequently require life-saving measures such as the use of a breathing tube or other procedures and medication therapies. ICUs are areas where patients receive quick, specialized and around-the-clock treatment from many different members of the health care team. The complex nature of treatment in ICUs requires extensive training of health professionals to provide the care necessary to manage these patients. Examples of common ICUs include cardiac, surgical, brain trauma, burn, oncology, pediatric and care for premature newborns.

What a Pharmacist Provides

Pharmacists review all patient medication orders and assure timely preparation and delivery of medication to the patient. More importantly, pharmacists are involved at the point of decision-making, participating on rounds with the medical staff and making suggestions on drug therapy before medication is even ordered. This active approach improves medication therapy management and reduces errors. ICU patients frequently have multiple diseases, which can effect the way the body uses the medication.

ICU pharmacists counsel patients, family members and/or caregivers on medications that the patient is prescribed to take upon release from the hospital. Pharmacists also provide education to other health care professionals, providing training or other educational talks to nurses and physicians. With the current experience of pharmacists in the ICU, many studies have shown a decrease in medication cost, length of ICU patient stay and adverse drug events.

Pharmacists are involved at the point of decision-making, participating in check-ins with the medical staff and making suggestions on drug therapy before medication is even ordered.

Nephrology

Introduction to Nephrology (Study of Kidneys)

Twenty million Americans (one in nine adults) suffer from chronic kidney disease (CKD), and another 20 million are at risk. The majority of kidney disease in the United States is caused by poorly-treated diabetes and high blood pressure. Half of the people who have advanced CKD don't even know it. If a patient has CKD and doesn't know and it goes untreated, it can lead to serious health problems, including end-stage renal disease (ESRD) requiring dialysis (pumping blood through a machine that works like a kidney) or replacement of the kidney (transplant). There are 350,000 Americans who have ESRD. Unless they receive a kidney transplant, they must receive dialysis therapy for the rest of their lives. Many aspects of kidney disease can cause poor quality of life for these patients.

What a Pharmacist Provides

Pharmacists have important roles in the treatment of patients with kidney disease. Pharmacists make sure that all doses of medications are properly adjusted for the patient's degree of kidney disease. Patients with kidney disease often have other serious medical conditions such as high blood pressure and diabetes. Because of these other diseases and the kidney disease itself, these patients are often on many medications, sometimes more than 10 different medications per day. Pharmacists have an important role in helping patients manage their various medications.

In the hospital setting, pharmacists are essential to assist in the medication management of any acute issues the patient is experiencing. Patients who are in the hospital may also suffer from acute kidney failure as a result of their current medical issues or treatments. Pharmacists adjust medication doses and therapy for these acute kidney failure patients to design the safest and most cost effective medication regimen.

Pharmacists make sure that all doses of medications are properly adjusted for the patient's degree of kidney disease.

Organ Transplant

Introduction to Organ Transplant

Organ transplantation is a complex process in which a whole or partial organ from one person is transplanted into another person to replace the recipient's damaged or failing organ. Solid organs, including liver, kidney, pancreas, heart and lung, are frequently transplanted to treat organ failure or to prolong and improve the quality of life. On average, nearly 29,000 solid organ transplants are performed in the United States each year.

What a Pharmacist Provides

Pharmacists are involved in helping to manage, monitor and recommend appropriate medications for transplant patients. Pharmacists are part of the transplant team and provide recommendations such as drug monitoring and information about potential side effects and mixing of medications. Pharmacists often design plans for transplant patients and will educate patients and their caregivers on the medications. Most transplant patients take 10 or more medications. The pharmacist reviews the medications with the patients, nurses and physicians to help prevent bad combinations of drugs or too much medication. Many of these medications and treatments are extremely expensive, and pharmacists also evaluate the therapy in order to get the most benefits of treatment while managing its costs. In addition, pharmacists evaluate medication therapy and ensure that the appropriate medications are prescribed for patients when they are discharged from the hospital.

Most transplant patients take 10 or more medications. The pharmacist reviews the medications with the patients, nurses and physicians to help prevent interactions and drug toxicities.

Osteoporosis

Introduction to Osteoporosis

Osteoporosis is a disease caused by low bone density and altered bone structure, which can make fractures more likely. Low calcium and vitamin D intake can increase the risk of developing the disease, but some medications and diseases can also cause low bone mass and cause osteoporosis. In the United States, it is estimated that eight million women and two million men are faced with the disease. Most people don't know they have osteoporosis until problems such as a bone fracture, shortened stature or a curved spine occur. These can be painful and decrease a patient's quality of life. Fractures commonly occur in the spine, hip, wrist and forearm (between the elbow and the wrist). A physical examination, height measurement, blood and urine tests, and bone densitometry (DXA) are required to diagnose osteoporosis.

What a Pharmacist Provides

Many pharmacies contain wellness centers to try to help fight the disease through early screening. Some pharmacies offer osteoporosis screening, including a DXA scan. After participating in this screening, pharmacists can direct patients to over-the-counter supplements or recommend medications to the patient's doctor. Pharmacists can help all individuals with changing their lifestyles to improve bone strength and prevent bone fractures. They can provide information and education on calcium- and Vitamin D-containing beverages and foods, as well as provide help with selecting the best calcium and Vitamin D supplements to meet the patient's needs. Pharmacists can help patients to quit smoking, which helps drop their osteoporosis risk. In addition, a pharmacist can look over a patient's medication list to identify medications that could cause or worsen osteoporosis. The pharmacist can then work with the patient's other health care providers to adjust treatment to reduce the risk of bone fracture.

Continuing to take medications as directed is often a challenge for patients. Pharmacists can identify and resolve problems, allowing the patient to more easily take their medications. Pharmacists play a role in treating and avoiding osteoporosis. Pharmacists are nearby in almost every community, providing a close location where patients can get care and reduce the risks associated with osteoporosis.

Pharmacists are nearby in almost every community, providing a close location where patients can get care and reduce the risks associated with osteoporosis.

Pain Management

Introduction to Pain Management

The number one reason patients seek medical advice is pain,. Pain management, however, can be complicated because each patient feels pain differently. Health care professionals must balance what patients tell them about their pain with what they know about the risks and benefits of medications and non-medication treatments. In addition, health care providers must know how to assess a patient's level of pain, have good understanding of the patient's personal background, and thoroughly communicate to the patient the goals of therapy. Because of complex issues, it is important that pharmacists and physicians work together to help manage patients' pain.

What a Pharmacist Provides

Pharmacists involved in pain management can help with a lot of things. Most pharmacists help by taking a medication history from new patients to get information necessary to help in their pain management. This medication history is important so that the team knows what the patient has already tried to control the pain, how the patient handled other therapies and what other medications they are on that may interact with pain management therapies.

An important part to pain management involves counseling the patient on the goals of treating them with medication and possible side effects as well as helpful hints to deal with these side effects. In the hospital, pharmacists look over patient charts on a regular basis to make sure that the medications the patients are on are going to work to help them feel better. For older patients, pharmacists must closely monitor treatment because older people usually have a lower ability to clear medications from their body. In the local pharmacy, pharmacists teach patients how to correctly give themselves injections, apply skin patches and inhale nasal sprays for pain relief. Communication between a pharmacist and patient is just as important to pain management as the medications.

Communication between a pharmacist and patient is just as important to pain management as the medications.

Pediatrics

Introduction to Pediatrics

Pediatric care is health care for those patients who are less than 18 years old, which includes infants, children and teenagers. Also called the pediatric population, they receive an average of four prescription medications per year. Choosing safe and effective medication therapy for children can be difficult for many reasons.

One challenge is that around 40 percent of medications prescribed for infants and children do not have U.S. Food and Drug Administration approval for their age group (meaning we do not have as much information about its use in children). A second challenge is that children cannot be treated as "small adults." In fact, their bodies use medications very differently due to their quick growth and development. Once a correct dose is selected, medications are not always available in a way that a child can take.

What a Pharmacist Provides

Pharmacists are available at community pharmacies to help parents with their children's medication. Pharmacists can counsel parents about what to look for after giving a medication. They can also share what to do if a child does experience a bad reaction from a medication. The pharmacist can show parents how to give medications to children correctly. The pharmacist can also speak with parents about the correct use of over-the-counter medications. With the help of a pharmacist, parents can be sure their child is getting a safe dose of medicine when it is appropriate.

Within a hospital setting, some pharmacists focus on newborn and pediatric intensive care. Pharmacists check medication orders to make sure that each child has been prescribed the correct dose. A pharmacist also monitors for any interactions between medications that are being taken at the same time. Before a young patient leaves the hospital, pharmacists can provide education to the patient and their parents on the proper use of medication at home.

Pharmacists can also act as investigators in research projects that are being done to increase our knowledge of how medications work in infants and children, leading to better patient care.

With the help of a pharmacist, parents can be sure their child is getting a safe dose of medicine when it is appropriate.

Pharmacy Technician Practice

Introduction to Pharmacy Technician Practice

Pharmacy technicians are being called on to expand their role in the pharmacy as more demands are being placed on the pharmacist. Pharmacy technician practice has evolved, and now technicians are required to be licensed by the state of Michigan, which includes a certification exam and maintaining continuing education.

What a Pharmacy Technician Provides

In their traditional role in community and hospital settings, technicians help pharmacists prepare prescription medications, provide customer service and perform administrative duties, including the following key functions (responsibilities depend on the regulations of the state in which they practice): processing prescription requests; collecting patient information and maintaining patient profiles; collecting information from the prescriber; receiving medication orders and refills through various means; entering medication orders in the pharmacy computer system; preparing and packaging medications and other health care products; and compounding of preparations, including as creams, ointments and suppositories, and intravenous and other sterile products.

In addition, utilizing technology in the pharmacy and with intervention by a pharmacist, technicians assess prescriptions for missing information, duplicate therapies, potential allergic reactions or drug interactions. In order to serve patients and the pharmacy in the most efficient way, pharmacy technicians can also help patients with billing and reimbursement questions, interacting with their insurance company to identify a solution.

Today, the role of pharmacy technicians is increasing and they can be seen practicing in many unique areas. In nontraditional roles, pharmacy technicians may practice in areas such as research, law enforcement, teaching, manufacturing, insurance, disease state management, hospice care, health care administration, pharmacy informatics and nuclear pharmacy. Pharmacy technicians, in collaboration with pharmacists, practice diligently to make sure that patients stay safe and that pharmacists have the support they need to improve each patient's well-being.

Pharmacy technicians, in collaboration with pharmacists, practice diligently to make sure that patients stay safe and that pharmacists have the support they need to improve each patient's well-being.

Point-of-Care Testing

Introduction to Point-of-Care Testing

Most individuals, at some point, visit a doctor's office to determine if they have an infection. One way to test to see if patients have an infection is to perform point-of-care testing through the use of rapid diagnostic tests (RDTs). These allow health care professionals to quickly and efficiently decide whether patients are suffering from an infection like strep throat, influenza, hepatitis or human immunodeficiency virus. RDTs require a small amount of bodily fluid, most commonly obtained from the mouth, nasal cavity or blood. The information derived from RDTs allows providers to decide whether starting treatment is appropriate or if further testing is needed. These tests can be extremely useful in ensuring patients receive appropriate medical care in a reasonable amount of time.

What a Pharmacist Provides

Patients suffering from various infections often visit a retail pharmacy in search of over-the-counter remedies for their symptoms. Due to this fact, pharmacists are commonly the first health care provider that patients will come in contact with. Together with a physician, pharmacists can use RDTs, along with physical evaluation, in determining the appropriate course of treatment, such as medication or being referred to a physician.

The implementation of RDTs in the pharmacy is helping to decrease the overuse of antibiotics and the presence of disease within communities. Training for RDT use by pharmacists is increasing and allowing more and more of them to be available to the public, in turn creating healthier neighborhoods.

Training for RDT use by pharmacists is increasing and allowing more and more of them to be available to the public, in turn creating healthier neighborhoods.

Public Safety

Introduction to Public Safety

Pharmacists play an important role in the health and safety of the public. Two specific areas include medication safety and emergency preparedness (a state of readiness when tragedies that affect the public occur). Given the events of 9/11, along with recent natural disasters (e.g., Katrina, Sandy, 2009 H1N1 and Fukushima), health-systems and community pharmacies must always be ready to care for victims of terrorist attacks as well as natural disasters and diseases. Medication safety is also a public health concern. The Institute of Medicine and other organizations have estimated that medication errors happen often and have the potential to harm at least 1.5 million people each year, with most errors being preventable.

What a Pharmacist Provides

Pharmacists involved in emergency preparedness are well informed of the potential methods that may be used to conduct a terrorist attack. They fully understand what can happen to the people, along with the medications available to treat the victims of potential attacks. Pharmacists work with local hospitals and communities to make sure that procedures are in place, and participate in drills to test those procedures. Pharmacists are called upon to work with other emergency responders in managing drug therapy of individual victims. They also work with state and federal organizations to manage availability and distribution of medications in a timely manner and in the right amounts to certain areas should a disaster occur.

Pharmacists in the community setting participate in medication safety activities on a routine basis. Each day, pharmacists carefully check every prescription for accuracy and to make sure the dose is right for the patient. Medication safety pharmacists watch drug event reports created by workers within a health care system. They also watch medication recalls and safety alerts for the potential to impact patients at their practice sites. Medication safety pharmacists routinely review the safety news and information, closely examining errors that occur nationally for the likelihood of occurrence at their practice sites. Medication safety pharmacists are well-versed in quality and process improvement as well as technology (e.g., clinical decision support systems and "smart infusion pumps.")

The safety of the public is very important to pharmacists. Pharmacists work with all involved to make sure that the public is safe from natural and unnatural disasters as well as protecting the individual patient from medication disasters.

Pharmacists are called upon to work with other emergency responders to manage drug therapy for disaster victims.

MICHIGAN SOCIETY OF HEALTH-SYSTEM PHARMACISTS

MICHIGAN PHARMACISTS ASSOCIATION

408 Kalamazoo Plaza | Lansing, MI 48933

ph (517) 484-1466 | fx (517) 484-4893 | www.MichiganPharmacists.org