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CPhT CONNECT™

THE MAGAZINE FOR PHARMACY TECHNICIANS

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OPPORTUNITIES FOR CERTIFIED PHARMACY TECHNICIANS

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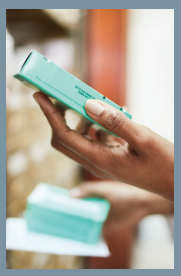

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PUBLISHER'S NOTE

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Mike Johnston, CPhT
Founder & CEO, NPTA

I am excited to announce the launch of the Board of Pharmacy Technician Specialties (BTPS), a new independent initiative from the National Pharmacy Technician Association.

With the launch of BPTS comes three advanced certifications for pharmacy technicians, including the CPhT-Adv and ten specialty certificates. The ultimate goal of this initiative is to increase accessibility to advanced credentials as well as making them more affordable for the everyday technicians.

You have the ability to advance your career, if you desire, but the truth is that it's going to take more than just passing some exams. Most employers are not going to start handing out raises or promotions as soon as you pass an exam or earn a digital badge...which is why we have launched the CPhT-Adv Challenge.

With the CPhT-Adv Challenge, you will gain access to advanced trainings, continuing education, exams and credentials, but also access to advice and coaching from some of the top pharmacy career coaches and mentors. It also means providing you with personalized support and an exclusive online community.

I am on a mission to help 1,000 CPhTs earn their CPhT-Adv before the end of this year.

Will you be one of them?

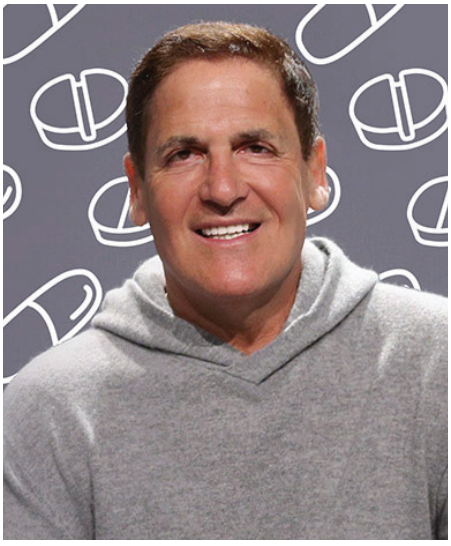
If you want to learn more about the CPhT-Adv Challenge, go to https://bit.ly/3GJhPMa

You can also read the cover story Affordable & Accessible Advancement Opportunities for Certified Pharmacy Technicians to learn more about BPTS. The Choice is Now Yours.

Mike Johnston, CPhT
Founder & CEO, NPTA

Nunquam non paratus.
Never unprepared.

NEWS BRIEFS



MARK CUBAN LAUNCHES ON-LINE COST-PLUS PHARMACY

The Mark Cuban Cost Plus Drug Company was recently launched with hopes to "disrupt and disable big pharma". The company will be offering more than 100 generic drugs direct to consumers. Cuban and his co-founder, Alex Oshmyansky, were frequently frustrated with the current system in place, such as how companies known as pharmacy-benefit managers (PBMs) manage drug benefits for employers, health insurers, and Medicare Part D prescription plans. One of the major benefits of Cuban's Cost Plus Drug Company is the ability to "bypass middlemen and outrageous markups", according to the company. One way they do this is by buying their drugs directly from the generic drug manufacturers. The pricing strategy Cost Plus Drugs follows is using the "prices set by the manufacturers plus a flat %15 margin and pharmacist fee".

As an example, Imatinib, which is used as a leukemia treatment, is priced at $9,657 per month. With Cost Plus Drugs, the price per month is $47. This is just one example of many drugs that will be significantly lower as compared to their retail counterparts.

In an interview, Oshmyansky stated, "We will do whatever it takes to get affordable pharmaceuticals to patients." Oshmyansky points out that the problem no one can afford to ignore is that there are many lifesaving drugs on the market that are being marked up and as a result, the average American cannot afford them. Cost Plus Drugs has been implemented to intervene and act as that outlet for consumers to get drugs at a cheaper price. To read more about the services Cost Plus Drugs will provide as well as interviews, click here.
Sources: https://bit.ly/3tSRrei

FDA APPROVES TWO PILLS FOR COVID-19

For some time now pharmaceutical companies have been working on an oral form of COVID-19 treatment. There are many benefits to providing a pill for the virus including for patients who are vaccine hesitant due to fear concerns about pain associated with the shot. As with all COVID treatments, researchers work towards common goals such as preventing hospitalization and/or death, limited side effects and convenience to the end user. As the news is flooded with stories of shortages for COVID treatments such as monoclonal antibody treatments, it seems to be welcoming to many to hear that the FDA has not only approved one oral pill, but two.

Many companies continue to develop monoclonals but for now, Pfizer and Merck expect to make their oral forms of treatment available as soon as January 2022. As the number of COVID cases continues to surge worldwide, especially with new variants such as Delta and Omicron, there is a dire need for more options to treat this devastating virus. Recently, the first pill approved by Pfizer, named Paxlovid, has been shown to reduce the risk of hospitalization among high-risk patients by 89% when taken within three to five days of onset of COVID symptoms in their studies. The FDA has approved this oral treatment for patients ages 12 and older at a high risk of severe illness from the virus. The Federal government is obtaining 265,000 Paxlovid treatment courses in January 2022 and about 10 million courses due by the end of summer 2022 as reported by the White House.

Following this approval, a panel of FDA experts voted 13 –10 to approve a second pill to treat COVID manufactured by Merck. In studies for this new drug Molunpiravir, effectiveness appeared to be a little less than the Pfizer pill. This pill was approved for the treatment of mild to moderate COVID in adults with high risk of severe illness from the virus. The Federal government has purchased 10 million Molnupiravir treatment courses with at least 3 million courses available in January 2022. France had placed a prepurchase order for the Merch antiviral but canceled after the data was shown that it only reduced the risk of hospitalization and death by 30%.

Understandably, there are concerns about the distribution of the limited supply or the oral pills given the number of people who could be in need. Some industry specialist's express hesitation for the Merck pill favoring the one produced by Pfizer. Although the logistics have not been worked out yet, people such as Dr Farrin Manian, an infectious disease specialist and chair of the department of medicine at Mercy Hospital St Louis, also expressed theoretical concerns that the Merck pill which attacks the virus's genes, could alter the genome of the patient's cells, leading to a possible increased risk of birth defects and cancer. The new antivirals are thought to benefit people who are not vaccinated against the virus and are at much greater risk of becoming seriously ill or dying.

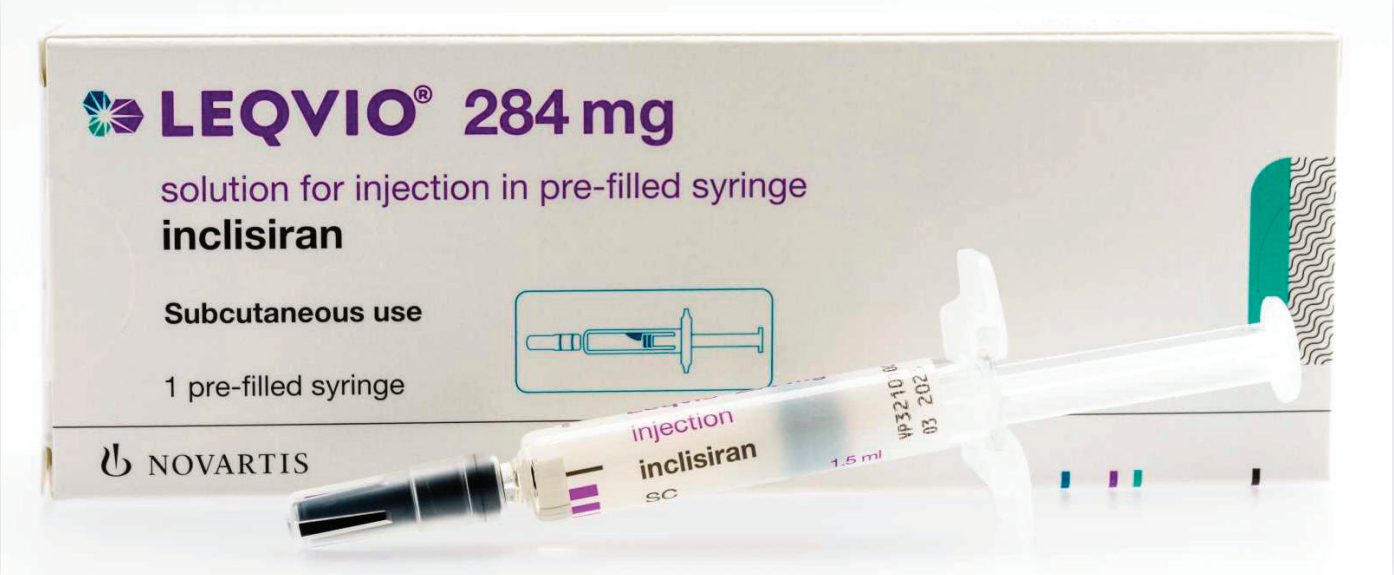
COVID-19 VIRUS SEEN LINKED TO ALTERED MENTAL STATUS, HEADACHES IN HOSPITALIZED CHILDREN

A new study shows that of the hospitalized children who either tested or were presumed positive for SARS-CoV-2, 44% developed neurological symptoms, which in turn caused them to require more intensive care than children who were positive and did not experience such symptoms. The neurologic symptoms experienced by these children were headaches or altered mental status, which is known as acute encephalopathy, according to studies conducted by the University of Pittsburgh Medical Center and the University of Pittsburgh School of Medicine. Ericka Fink, MD, pediatric intensivist at UPMC Children's Hospital of Pittsburgh and associate professor of critical care medicine and pediatrics at the University of Pittsburgh School of Medicine, said in a statement that the SARS-CoV-2 virus can affect pediatric patients in a variety of different ways.

Fink states that it can cause acute disease, or it can cause an inflammatory condition, or even multisystem inflammatory syndrome weeks after the virus has cleared in their system.

Researchers gathered this data from 1,493 children from 30 different pediatric critical care centers around the world. Of the pool, 86% were diagnosed with acute SARS-CoV-2 while the other 14% were diagnosed with MIS-C, a rare condition that is associated with COVID-19. The most common neurological symptoms associated with COVID-19 were acute encephalopathy, headaches, and seizures. On the other hand, the most common neurological symptoms associated with MIS-C were acute encephalopathy, dizziness, and headaches. Some of the rarer symptoms included loss of smell, psychosis, stroke, and vision impairment. Researchers are diligently working to complete a follow-up study to discover acute SARS-CoV-2 or MIS-C have lasting effects on children after they have left the hospital.

Sources: https://bit.ly/3tSRrei



NEW DRUG TO LOWER BAD CHOLESTEROL

Novartis has received FDA approval for their new drug aimed at reducing bad cholesterol. Leqvio (inclisiran) is intended as an adjunct to maximally tolerated statin therapy and a proper diet in adults diagnosed with heterozygous familial hypercholesterolemia (HeFH) and atherosclerotic cardiovascular disease. The first-of-its-kind, and only small interfering RNA (siRNA) treatment that reduces low-density lipoprotein cholesterol (LDL), Leqvio works by enhancing the liver's natural ability to prevent the production of a type of protein that causes high cholesterol levels in the blood. Leqvio works differently than other cholesterol treatments, by inhibiting the hepatic translation proprotein convertase subtilisin-kexin type 9 (PCSK9), thereby upregulating the number of LDL-receptors on the hepatocytes. Other cholesterol lowering drugs, such as statins work by slowing down the production of LDL-cholesterol in the liver, where it's made.

The Phase III ORION-9, -10, and -11 studies, involving 3,457 participants who had either HeFH or ASCVD with elevated LDL-C and were undergoing statin therapy showed on the 17th month, that patients had up to a 52% reduction in LDL-C versus those who took a placebo. Leqvio side effects reported include injection site reaction, diarrhea, urinary tract infection, chest cold, shortness of breath, and pain in the arms or legs. Less than two percent of the patients in this trial reported adverse effects such as cough, musculoskeletal pain, cold symptoms, headache and back pain. Leqvio could be convenient for many patients as it is only dosed twice yearly. It is supplied as a 284mg prefilled syringe given by subcutaneous injection by a healthcare professional. The second dose is given after three months then every six months thereafter. Patients should also be on a cholesterol lowering diet before beginning Leqvio and most likely will also be taking a statin. Leqvio syringes should be stored at controlled room temperatures between 20°C to 25°C (68°F to 77°F) with allowable excursions between. Leqvio should be available around January 2022.

DIFLUPREDNATE OPHTHALMIC EMULSION APPROVED

This past November saw the Abbreviated New Drug Application (ANDA) approval from the U.S. Food and Drug Administration (FDA) for difluprednate ophthalmic emulsion 0.05%. This first generic version of Durezol by Amneal Pharmaceuticals, Inc. is approved to treat inflammation and pain associated with ocular surgery. Difluprednate 0.05% is in a class known as topical corticosteroids which penetrates the corneal epithelium rapidly with low systemic absorption. Ophthalmic corticosteroids share similar potential side effects such as posterior subcapsular cataract formation; increase the hazard of secondary ocular infections, and delay healing with the increase in the incidence of bleb formation. There is also a chance that Glaucoma, a condition where the eyes optic nerve is damaged, can result from prolonged use of topical corticosteroids. Glaucoma results in increased pressure in your eye and could lead to permanent vision loss/total blindness. You may recall having glaucoma tests with your regular vision checkups. Difluprednate use contraindications include fungal disease of ocular structures, viral diseases of the cornea and conjunctiva and mycobacterial infection of the eye. Patients report adverse drug reactions as blepharitis; conjunctival edema; corneal edema; posterior capsule opacification; anterior chamber flare; ciliary and conjunctival hyperemia; anterior chamber cells and eye pain. Difluprednate ophthalmic is an emulsion (liquid) and is usually applied to the affected eye(s) 4 times a day beginning 24 hours after surgery and continuing for 2 weeks, and then 2 times a day for 1 week. Patients should not stop using this medication without consulting a provider as some conditions may become worse when the drug is suddenly stopped. If using another eye medication(s), patients should wait at least at least 5 to 10 minutes before applying other medications. Difluprednate ophthalmic should be kept in original container/box and out of reach of children. It should be stored at room temperature away from excess heat and moisture.

RESOURCES TO HELP WITH COVID-19 REIMBURSEMENTS

There are so many pharmacies involved with bringing the COVID-19 vaccine to the public. Many decisions were made, and many in health care, not just pharmacy, took on an impossible task without any idea of how they would be compensated for their time, the product, or anything else. It was all to be sorted out later. Some smaller, remote, and independent pharmacies began to report their inevitable closing due to a lack of financial support with the addition of pandemic duties. Even before the pandemic, many pharmacies were not all that profitable.

With insurance reimbursement rates becoming lower every year from state medical plans, the pandemic brought less traffic, more mail orders, and now the need to provide the vaccines to the public out of pocket at first with a promise of reimbursement. Pharmacies had to beef up staff or place greater demand of tasks on current staff. Pharmacy technicians took certifications to be able to administer vaccines to the public, sometimes with pay increases and many times not. Even though pharmacies do not have to purchase the vaccines, as the Federal Government supplies it for free, there is still the cost of preparation and administration and administrative duties such as scheduling and maintaining patient data.

After announcing a third dose of the COVID vaccine, CMS announced that it would pay for the booster shots. In addition, Medicare will continue to pay physicians, hospitals, pharmacies, and many other immunizers $40 for each dose of a COVID-19 vaccine given on or after March 15, 2021. These third doses will each its administration codes, according to CMS (go.cms.gov/3laqLkN).

Here are some updates on the vaccine and monoclonal antibody payments. For reimbursement, here's how the CMS refers to these COVID immunizations:

Pfizer: 0003A – Third dose. IM injection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (coronavirus disease [COVID-19]) vaccine, mRNA-LNP, spike protein, preservative-free, 30 mcg/0.3 mL dosage, diluent reconstituted.

Moderna: 0013A – Third dose. IM injection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (coronavirus disease [COVID-19]) vaccine, mRNA-LNP, spike protein, preservative-free, 100 mcg/0.5 mL dosage.

American Medical Association (AMA) and the Centers for Disease Control and Prevention (CDC) are collaborating to release multiple 2022 revisions to CPT codes, including 15 vaccine-specific codes. Medicare will cover mAb infusions for treating COVID-19 (when furnished consistent with their respective EUAs) the same way it covers and pays for COVID-19 vaccines. During the COVID-19 public health emergency (PHE). New COVID-19 treatments have been given New COVID-19 Treatments Add-On Payment (NCTAP) status. CMS issued an Interim Final Rule that established NCTAPs under IPPS. The payment policy remains in effect until the end of the COVID-19 PHE (go.cms.gov/3ngc3eK).

Sources: https://bit.ly/3tSRrei

FAST FOOD PACE PHARMACY BURNOUT

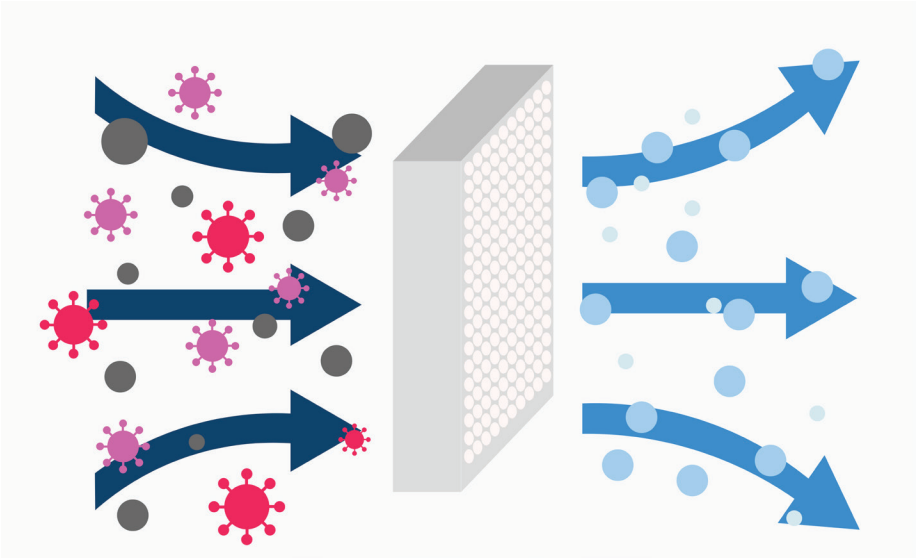
Gone are the days when the pharmacy was well-staffed, operations ran smoothly, and customers who may have shopped for birthday cards while picking up prescriptions were polite and happy.

Times have changed. An increase in prescriptions, drive-thru services, phones, faxes, the addition of health services, and now added duties of vaccines have brought more responsibilities to the pharmacy, but has the staffing and wages caught up? What once seemed like sufficient staffing and plenty of time to counsel has become total exhaustion, angry customers, extended hours, and other stressful endeavors. Pharmacists' roles have evolved over the years requiring higher degrees to practice, entering more clinical roles, collaborating more with healthcare providers in treatment and prescribing roles. Pharmacy technicians had to step up and increased their roles as a result. An estimated 155,000 pharmacists employed at chain drugstores work faster, check more orders, and perform a wider range of tasks with fewer support staff members at a pace that is a danger to patient safety. Estimates place above 415,000 pharmacy technicians in the United States working at these unsustainable paces right beside the pharmacists.

NBC news surveyed 31 pharmacists and pharmacy technicians from 15 states. For retail, the comments were not favorable. One pharmacy technician stated that fatal errors would inevitably occur due to doing too many things at once. In a 2019 National Pharmacist Workforce Study, more than 91 percent of pharmacists of retail pharmacists stated their workloads as "high" or "excessively high," the highest of any pharmacy type. In addition, they have added other stresses such as declining profit margins, corporate consolidations, fewer employment options, and stagnant wages as major contributors to the retail pharmacy environment today.

Pharmacy technicians feel the pinch as well. Some seek out better opportunities, often in health systems and/or more clinical positions, leaving behind retail pharmacies for good. Most changes being made to address this crisis seem small and won't affect pharmacy as a whole for a while. For example, in Ohio, the state Medicaid program is trying a new payment model to allow pharmacists to bill insurers for clinical services. Pharmacy entities such as trade groups fight for a national version of the provider status model. Many states are addressing labor standards. For example, California, Illinois, and Virginia have created new rules such as maximum shift lengths, mandatory safe staffing levels, and banning excessive metrics. According to the National Association of Boards of Pharmacy, about one-third of all states now have regulations addressing pharmacy working conditions.

Sources: https://bit.ly/3tSRrei



HEPA FILTER BENEFITS WITH CORONAVIRUS PARTICLES AND AIR POLLUTION

The world has gone through some crazy times over the last couple of years. Thanks to the global invasion of COVID-19 and the likes, people have had to place a barrier over their respiratory points of access to prevent succumbing to this deadly virus. Interestingly, after two long years one might wonder why not just one simple common type of mask stands out as the winner. People are wearing surgical masks, N95 masks, gaiters or some other piece of cloth on their face. And who get the virus does not seem to select based on what type of mask one wears. No, we know it depends on exposure. But still, there has been a lot of talk surrounding HEPA filters and their true ability in filtering out coronavirus. If this is the case, shouldn't all masks have HEPA filters? Do HEPA filters even really filter out coronavirus?Faye McNeill, a chemical engineering professor at Columbia, studies aerosol reactions at the molecular level. Living in the San Gabreal Mountains attending Caltech in the 1990s, Faye began to feel her asthma worsen as the smog only took the day off a few times a year, she ventured into research and became an exert pertaining to aerosols and microscopic particles in air such as dust, viruses and smog. In recent years, Faye has turned her focus towards indoor air quality post-COVID and the role of HEPA filters in relation to COVID.

Over the decades air pollution has become this hodgepodge of not-so-great stuff that increases asthma and other breathing problems in people. To help filter out some of the bad air in a home, people have turned to air purifiers. Some of which have the well-known HEPA filters to catch unwanted particles. In the age of COVID, many also wondered if HEPA filters help filter out COVID as well. Air cleaners must be able to remove small airborne particles (in the size range of 0.1-1 um) to be effective in removing viruses from the air. Manufacturers indicate particle removal efficiency for specific particle sizes (e.g. "removes 99.9% of particles as small as 0.3 um"), use the Clean Air Delivery Rate (CADR) rating system to rate air cleaner performance or indicate they use High Efficiency Particulate Air (HEPA) filters.

HEPA is the international standard used for filtering 99.97 percent of particles 0.3 microns in diameterhttps://news.columbia.edu/news/do-hepa-filters-really-catch-coronavirus-particles. Particles stick to the fibers of the filter based on inertia or ability to diffuse toward the fiber. As in the case with masks or filters, while breathing, respiratory droplets and its contents such as salt, proteins and other material which are a few microns in size are trapped by the HEPA filter. People should be aware, however that air purifiers help reduce airborne contaminants including viruses but cannot protect from the COVID-19 virus on their own. It is only one tool of many such as wiping down with proper materials such as bleach, soap and using sanitizers.

You can find HEPA filters in just about anything that has to do with air, breathing or other aerosol situations. Health systems use HEPA filters which have really had to do their job well since the overwhelming surge of COVID patients. Remember, although HEPA filters are a great tool for helping to reduce viruses such as those associated with COVID, they are not 100% effective and should only be one part of best practices.

IS A 90-DAY SUPPLY THE BEST OPTION TO IMPROVE MEDICATION ADHERENCE?

It is said that medication nonadherence results in nearly 100,000 deaths as well as billions in health care spending every year. Medication adherence is important for each medication to have the proper therapeutic effect in the patient. The implementation of a 90-day supply has been a popular approach to increase medication adherence. But would it be the best option for the patients?

90-day supplies could lead to cost-savings while potentially leading to reimbursement, which could allow health care providers to provide high-quality service to their patients. But there is an opposing view is that 90-day supplies could lead to less interaction with the patients which could leave the door open to patients continuing a potential poor medication-taking behavior. Ultimately, medication adherence is complex and not necessary a simple problem to fix or even understand. Some researchers believe that nonadherence comes down to the patient as there may be a consistent forgetfulness or maybe a lack of awareness to certain medications.

But this can't always be the case. It is very important for health care professionals to see their patients in order to intervene in these practices. The importance of having health care professionals providing that medication adherence is high, but there also needs to be a sense of trust and care between the two. As much as there is responsibility on the part of the health care professional, there is also responsibility on the patient's part to adhere to those requirements for certain medications and maintain a healthy and responsible regiment for taking their medication. At the end of the day, the idea of nonadherence is too complicated to simply be resolved by throwing a 90-day supply at it. Although it may be convenient for the patient, there are many other barriers that could hinder safe practices. To learn more about this, click here.
Sources: https://bit.ly/3tSRrei

MEN'S HEALTH

COLON CANCER IN MEN

BY CHLOE BLACK, CPhT-ADV

Colon cancer is the third most common type of cancer diagnosed each year in the United States. Colon cancer occurs in men and women but more commonly occurs in men. Statistics suggest that for every 100,000 men, about 43 will be diagnosed with colon cancer annually. Unfortunately, colon cancer is also the second most deadly cancer, with an average of 16 men out of every 100,000 diagnosed dying from it each year.

As with all cancers, colon cancers affects people differently. In some cases, these differences may be related to genetic differences such as anatomy or hormone levels. Lifestyle factors and differing levels in care can also influence how men or women develop cancer and experience different outcomes. Variations in diet, lifestyle choices, access to care, and cultural attitudes about cancer screenings may contribute to how colon cancer affects men and women differently. Furthermore, these factors can help explain why men have an increased risk of developing colon cancer.

Common Signs and Symptoms

The signs and symptoms of colon cancer are essentially the same for both sexes. However, a tumor's location may affect which symptoms a patient experiences. For instance, men are more likely to develop tumors in the lower digestive tract, which may cause bright red blood in the stool. On the other hand, tumors that are higher up may cause stools to be tarry or black. Though they may vary slightly based on the location of cancer in the colon, typical symptoms of colon cancer include:

- Blood in or on the stool
- Black or tarry stools
- Abdominal bloating, cramps, or pain
- Changes in bowel movement frequency
- Diarrhea
- Constipation
- Feeling that the bowel does not empty
- Narrow stools
- Fatigue
- Unintended weight loss
- Vomiting

Cancer Risk Factors in Men

Men of all ages develop colon cancer in greater numbers than women do. Some risk factors for colon cancer are unavoidable, such as age, genetics, and having a bowel-related disorder or a condition that causes the growth of polyps. Still, several lifestyle factors more common among men may help explain why men develop colon cancer more often than women, including:

- Tobacco use
- Alcohol consumption
- Consumption of red and processed meat

Even if a person does not engage in these behaviors or makes changes to their diet and starts exercising, the need for screening is still important.

Cancer Screening and Diagnosis

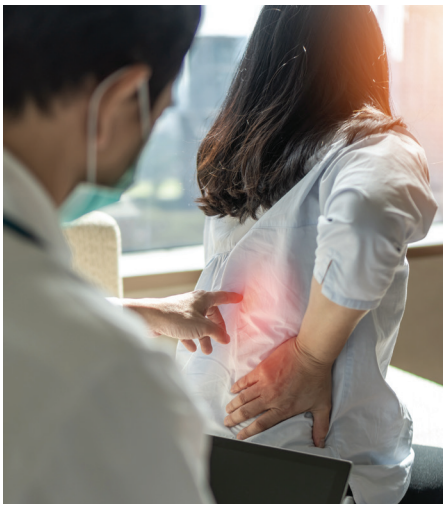
Early detection is vital for the successful treatment of colon cancer. Some of the more common types of colon cancer in men have easily recognized symptoms. As a result, many men find their cancer earlier than women. For instance, men are slightly more likely to be diagnosed with colon cancer at stage 1 than women. Overall, 18% of men are diagnosed at stage I compared to only 16% of women.

Even if diagnosed early, colon cancer is still more deadly in men than in women. For example, female hormones may offer some protection from colon cancer. Lifestyle choices, including avoiding obesity and getting enough exercise, may also play a role in this statistic. After all, men are more likely than women to be obese or lack active lifestyles, increasing their risk of colon cancer.While screenings are important to find colon cancer early, many Americans do not receive them. It's recommended that people begin screening as young as 45 years old but, almost 30% of adults have never been screened for colon cancer.

Screening methods for colon cancer may include stool tests, specialized X-rays, CT scans, and endoscopy tests such as sigmoidoscopies and colonoscopies. Only a colonoscopy offers the chance to see the entire length of the colon and the ability to remove any polyps. Colon cancer may be prevented with screening. After all, if a polyp is removed, it no longer has the chance to become cancerous. Colon cancer is quite treatable in its early stages, making early diagnosis critical for good outcomes. Colon cancer can also occur in people who have experienced no identifiable symptoms or have no apparent risk factors, making regular screenings even more vital. For these reasons, men must understand their risk of colon cancer by working with a health care provider.

Sources: https://bit.ly/3tSRrei

OSTEOPOROSIS IN WOMEN



BY MARISA DOAN, CPhT

What is Osteoporosis?
Osteoporosis is definited as a bone disease that materializes when bone mineral density and bone mass decreases or when the structural integrity of the bone changes, which leads to decreased bone strength that increases the risk of fractures. Furthermore, osteoporosis is known as a "silent" disease because patients do not notice symptoms until they break a bone. As a result, osteoporosis is the major cause of fractures in postmenopausal women and older men.

However, osteoporosis does have a few warnings signs:

1. Loss of height of about an inch or more
2. Change in posture
3. Shortness of breath
4. Bone fractures
5. Pain in the lower back

Who is at risk?
Many risk factors can increase your risk of developing osteoporosis. However, the disease is linked to gender, age, and ethnicity. Specifically, postmenopausal women and women over the age of 50 have the greatest risk of developing the disease. In the first 10 years after entering menopause, women undergo rapid bone loss due to menopause as it slows down the production of estrogen, a hormone that protects against excessive bone loss. Furthermore, Caucasian and Asian women are more likely to develop osteoporosis, but African-American and Hispanic women are still at risk. African-American women are more likely die after a hip fracture than Caucasian women, for example.

Other factors are also linked to osteoporosis, such as:

- Bone structure and body weight: Petite and thin people are at a greater risk vs those with more body weight and larger frames.
- Family History: You have a greater risk of developing osteoporosis if your parents or grandparents had signs, too
- Medical conditions or medications, such as:
  - Overactive thyroid, parathyroid, or adrenal glands
  - Weight loss surgery or organ transplant
  - Hormone treatment for breast or prostate cancer or a history of missed periods
  - Celiac disease or inflammatory bowel disease
  - Blood diseases such as multiple myeloma
  - Moreover, certain medications such as cancer medications, glucocorticoid steroids, medications for treating seizures, others can have side effects that may cause bone damage and lead to osteoporosis.

Since the risks are so great, you should consult with your healthcare provider and consider having an osteoporosis screening. Several tests can detect the disease. For example, a bone mineral density test, also known as dual-energy and X-ray absorptiometry (DEXA or DXA), scans a small amount of radiation used to determine the density of the bones of the spine, hip, or wrist. Regular X-rays only show osteoporosis when the disease is very far along. Women over the age of 65 should have a bone density test completed, although scan may be done at an earlier age for those who have many risk factors.

Management and Treatment: Medication, diet, and lifestyle changes can help you treat and manage osteoporosis.

Eating habits: Make sure your body has enough calcium and vitamin D. Good sources of calcium include low-fat dairy products, dark green leafy vegetables, broccoli, sardines and salmon with bones, and calcium-fortified foods such as soymilk, tofu, orange juice, cereals and bread. Likewise, good sources of vitamin D are sunlight, fatty fish, fish oils, egg yolks, and liver. The recommend calcium and vitamin intake varies by age, but females aged 51-70 should receive Calcium 1,200/Vitamin D 600 IU per day for both.

Lifestyle changes: Make sure you are active and avoid secondhand smoke. But if you smoke, try to quit. Furthermore, drink alcohol in moderation with no more than one drink a day for women. Plus, visit your doctor for regular checkups.

Exercise: Exercising makes your bones stronger during childhood and adulthood. But as you get older, exercising no longer increases bone mass. Instead, regular exercise can help you build muscle mass and strength and improve coordination and balance, which can lower your chances of falling. Exercising also improves your daily function and delays your loss of independence.

Medications: Several classes of medications can treat osteoporosis; your healthcare provider will determine which one is best for you.

Medications include:
Hormone and hormone-related therapy includes estrogen, testosterone, and the selective estrogen receptor modular raloxifene (Evista). This medication acts like estrogen with the bone and is taken every day. These medications are generally used for 5 years in the treatment of osteoporosis.

Bisphosphonates are considered antiresorptive drugs that stops the body from reabsorbing bone tissue. Several doses are available, including monthly, daily, weekly, and even yearly doses. Brands include Alendronate (Fosamax), Ibandronate (Boniva), Risedronate (Actonel, Actelvia), and Zoledronic Acid (Reclast). Boniva and Atelvia are the only two that are recommended for use by women only, while the others are recommended for use in both men and women. On the positive side, patients may be able to stop taking these medications 3 to 5 years after they begin.

Biologics, Denosumab (Prolia) are injections that are given every 6 months and often used when other treatments fail. Biologics can also be used in cases of reduced kidney function.

Anabolic agents are products that build bone in people who have osteoporosis. However, only three approved anabolic agents are available. Romososumab-aqqg (Evenity) is approved for postmenopausal women who are at high risk of a fracture; patients receive 2 consecutive injections once per month. Teriparatide (Forteo) and Abaloparatide (Tymlos) are injectable drugs give daily for 2 years.

In conclusion, take the proper steps to receive an osteoporosis diagnosis. If needed, follow up with the right treatment. Seek medical help when needed and make some lifestyle changes if need be.
Sources: https://bit.ly/3tSRrei

CPhT CONNECT™

THE *podcast* FOR PHARMACY TECHNICIANS

WITH MIKE JOHNSTON, CPhT

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OTITIS MEDIA IN CHILDREN

BY HOLLY E. BEAL RCPhT

Have you ever realized that nearly 80% of children experience a middle ear infection also Known as Otitis Media by the time they turn 3 years old?t This has been found to be true according to the Lucile Packard Children's Hospital at Stanford. As a mother who has once been exhausted due to lack of sleep and overwhelmed with hospital and doctor visits. I was relived to learn there was a solution and my child no longer had to suffer. I soon discovered that Otitis media usually occurs when infections that cause sore throats, colds, and/or other upper respiratory related problems spread to the middle ear through the eustachian tube. Due to this personal experience of mine, I quickly grew passionate about this topic.

Children often suffer more frequently from Otitis Media than adults do because of their immune system, adenoids, and eustachian tubes. Children's immune system are still developing at this age and cannot fight the infections like adults can. The adenoids which are located in the back of the upper part of the throat near the eustachian tubes are much larger in children than adults which can interfere with the eustachian tube opening. The smaller the tubes are the harder it is for the infection to reach the middle ear. Adenoids also help fight off infections. The eustachian tubes in children are often shorter than in adults. This can allow more bacteria to reach the middle ear more frequently and faster through the shortness of the passageway of the eustachian tube which then the infection can develop.

So, by now you are probably wonder how can I tell if my child or any other child is suffering from this irritating infection called Otitis Media especially at such a young age? And is it really that serious? The truth is that it can be very difficult to detect because at this age most children cannot communicate verbally to let you know their ears are bothering them. To put you at ease even though children cannot communicate verbally there are still quite of few ways they can communicate to you physically that something is wrong which are but not limited to difficult sleeping, hard of hearing, fever, pulling on their ears, and clumsiness. Now with that being said I have shared some helpful ways that you can use when trying to detect the physically signs in children who may be experiencing Otitis Media but are too young to express themselves verbally.

Some children may develop unusually sleep patterns which then can also cause irritability. You also may notice that the child is not responding to your voice like they have been. A fever can always be a helpful indicator that something is wrong. A lot of times when young children feel a discomfort in their ears, they will begin pulling at them sometimes it may only be one ear and/or other times it may be both ears. Another physically sign that you may pick up on when a child has an ear infection is their balance maybe they are more clumsy than usual and its alarming. These are all signs that the child may be experiencing symptoms of a middle ear infection also known as Otitis Media and you should seek medical attention sooner than later.

Otitis Media is a serious disorder among young children and should never go untreated. If the infection goes untreated it can cause permanent loss of hearing and could even affect the central auditory nervous system. The good news is there is several types of treatment available for Otitis Media that can be used to prevent the long-term effects and/or permanent damage. The doctor will determine the best line of treatment based off the severity of the condition which is why its important to seek medical attention as soon as the symptoms start to surface. Treatment for a middle ear infection could possibly involve immunizations that fight against viral infections and the use of medication such as antibiotics in the form of drops and/or oral, analgesics, or antipyretics. If the condition persist surgery is another form of treatment that maybe an option as well. The adenoids can be removed, and tubes placed in the ears which typically fall out on there on overtime but could help prevent reoccurring ear infections.

Overall, due to the large impact that Otitis Media has had on a yearly basis there is still a large amount of research and studies being done to help prevent diagnose and treat this disorder. Bur in the meantime let's be honest no one wants to experience this irritating disorder among our children but if this is inedible it's our job to make sure we are educating ourselves on how to spot the symptoms when they surface, get medical treatment, and take precautionary measure so the conditions don't keep reoccurring in our children. There may be some changes that need to be made in the environment that our children are in on a daily basis as well but by making the changes our children will be less prone to the Acute Otitis Media that can be a parent's worst nightmare for their infant or toddler. As we work together to create a heathier environment for our lives just know that it is creating a more memorable childhood for all our children.
Sources: https://bit.ly/3tSRrei

AFFORDABLE AND ACCESSIBLE ADVANCEMENT OPPORTUNITIES FOR CERTIFIED PHARMACY TECHNICIANS

WRITTEN BY EDGAR GALVAN

The National Pharmacy Technician Association has long been the industry leader in advanced training programs and specialty certifications for pharmacy technicians, such as their sterile compounding program where NPTA has trained and certified more than 13,000 individuals. BPTS's new certifications and certificates expand on NPTA's mission to support, educate, and advocate for pharmacy technicians.It was recently announced that NPTA has launched a new independent initiative, The Board of Pharmacy Technicians Specialties (BPTS). With this new initiative, there are three advanced certifications for pharmacy technicians, including CPhT-Adv, as well as ten specialty certificates. This initiative will increase accessibility to credentials that will validate the skills and knowledge for pathways to advance the careers of pharmacy technicians, enhance patient care, and strengthen the workforce for pharmacies.

The two main reasons for the launch of this initiative are **accessibility** and **affordability**.

Accessibility

BPTS credentials will be available to ALL certified pharmacy technicians, including CPhTs certified by the National Healthcareer Association as well as the Pharmacy Technician Certification Board. BPTS also has set eligibility requirements to be more closely aligned with those expected of board-certified pharmacists, where individuals are encouraged but not required to take specific training programs, as long as they have adequate work experience.

Affordability

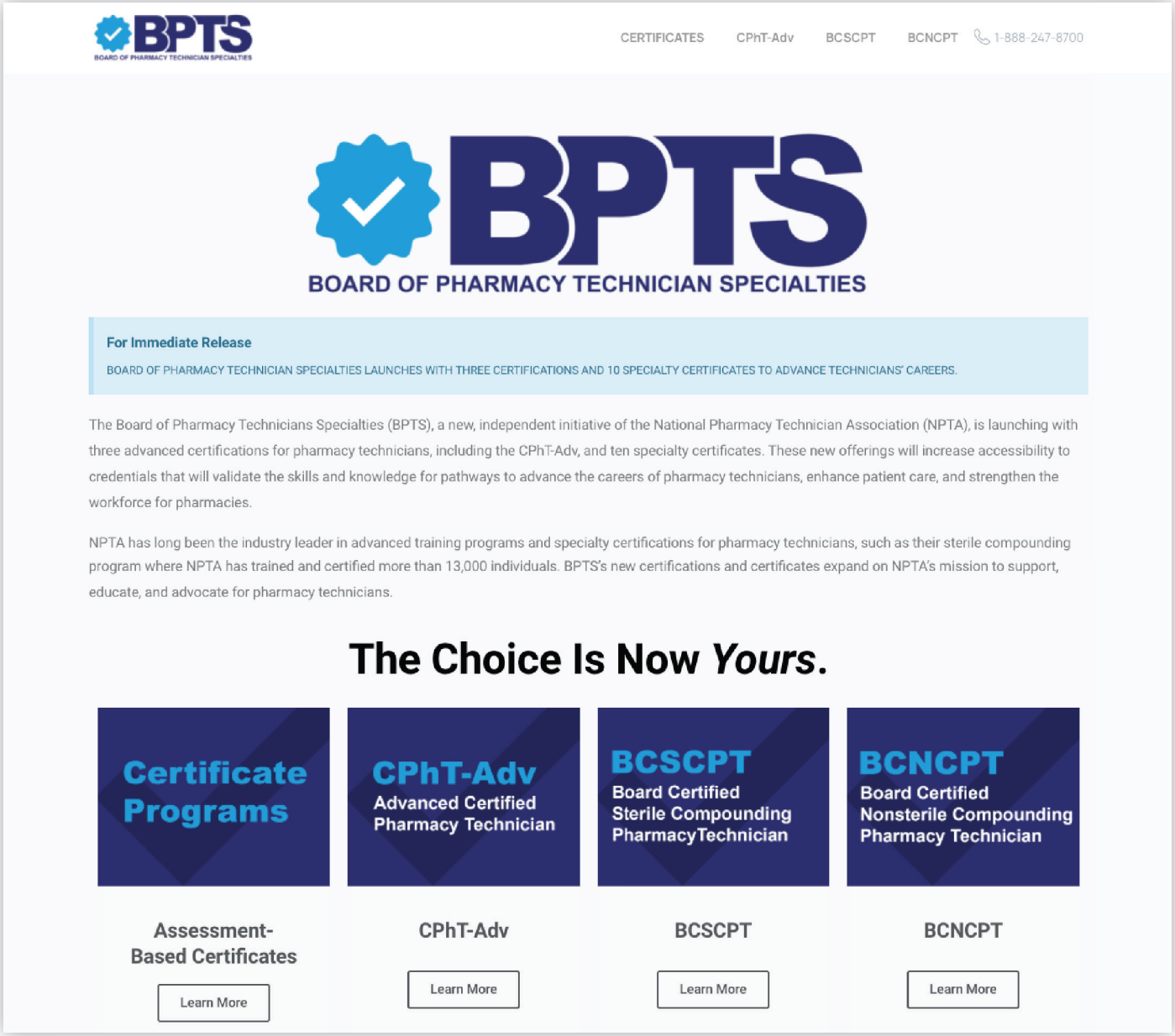
BPTS exams will start at only $49 – which is nearly **half the price** of industry alternatives. In addition, BPTS exam fees will include one additional retake at no extra charge, if needed.

Not sure what to get certified in? Want to be certified in more than one program? BPTS has several specials being offered for you to get the most for your buck! Whether you want just one program, five, or even ten, you can check those bundles out by clicking here. This initiative is about advancing you and giving you every opportunity to do so without breaking the bank.

Programs Offered by BPTS

With BPTS comes three distinct advanced certifications as well as ten specialty certificates. The three advanced certifications are:

- Advanced Certified Pharmacy Technician (CPhT-Adv)
- Board Certified Sterile Compounding Pharmacy Technician (BCSCPT)
- Board Certified Nonsterile Compounding Pharmacy Technician (BCNCPT)



CPhT-Adv Program

The Advanced Certified Pharmacy Technician program (CPhT-Adv) allows individuals who are certified pharmacy technicians with at least two years of experience to gain this certificate. Certified pharmacy technicians can currently demonstrate advanced training through certificates and specialized certifications in the following areas:

- Billing & Reimbursement
- Controlled Substances Diversion Prevention
- Hazardous Drug Management
- Immunization Administration
- Medication History
- Medication Therapy Management
- Point-of-Care Testing
- Regulatory Compliance
- Supply Chain Management
- Technician Product Verification
- Sterile Compounding
- Nonsterile Compounding

Candidates must be an active CPhT (through either NHA or PTCB) and have a minimum of two years of supervised pharmacy experience.

Candidates must also have completed any four assessment-based specialty certificates or completed any three assessment-based specialty certificates plus one of the BCSCPT, BCNCPT, or CSPT certifications.

BPST will also recognize PTCB Specialty Certificates, however the candidate must have earned at least one specialty certificate from BPTS.

To learn more about the Advanced Certified Pharmacy Technician program (CPhT-Adv), visit https://bpts.org/credentials/advanced-certified-pharmacy-technician-cpht-adv/.

BCSCPT Program

The Board Certified Sterile Compounding Pharmacy Technician program (BCSCPT) allows individuals who are certified pharmacy technicians with at least two years of experience in compounding sterile preparations to gain this certificate. After earning your certificate, you will demonstrate your expertise in:

- Regulations and guidelines for sterile compounding
- Facilities & engineering controls for sterile compounding
- Equipment & supplies for sterile compounding
- Sterile compounding calculations
- Hand-hygiene and garbing procedures for sterile compounding
- Aseptic technique
- Quality assurance and quality control in sterile compounding
- Medication safety considerations for sterile compounding

Candidates must be an active CPhT (through NHA or PTCB). Candidates must also either complete a BPTS-Recognized Board Certified Sterile Compounding Pharmacy Technician plus at least one year or 1,000 hours of experience in compounding sterile preparations OR have at least two years or 2,000 hours of experience in compounding sterile preparations.

To learn more about the Board Certified Sterile Compounding Pharmacy Technician program (BCSCPT), visit https://bpts.org/credentials/board-certified-sterile-compounding-pharmacy-technician/.

BCNCPT Program

The Board Certified Nonsterile Compounding Pharmacy Technician program (BCNCPT) allows individuals who are certified pharmacy technicians with at least two years of experience in compounding nonsterile preparations to gain this certificate. After earning your certificate, you will demonstrate your expertise in:

- Regulations and guidelines for nonsterile compounding
- Facilities, equipment, and supplies for nonsterile compounding
- Nonsterile compounding calculations
- Nonsterile compounding technique best practices and SOPs
- Quality assurance and quality control in nonsterile compounding
- Medication safety considerations for nonsterile compounding

Candidates must be an active CPhT (through either NHA or PTCB). Candidates must also either complete a BPTS-Recognized Board Certified Nonsterile Compounding Pharmacy Technician plus at least one year or 1,000 hours of experience in compounding nonsterile preparations OR have at least two years or 2,000 hours of experience in compounding nonsterile preparations.

To learn more about the Board Certified Nonsterile Compounding Pharmacy Technician program (BCNCPT), visit https://bpts.org/credentials/board-certified-nonsterile-compounding-pharmacy-technician/.

Ten Specialty Certificates

In addition to the three advanced certifications for pharmacy technicians are the ten specialty certificates.

Billing & Reimbursement Certificate

This certificate demonstrates your proficiency in managing insurance billing and reimbursement in a pharmacy setting. After earning this certificate, individuals will be able to demonstrate their expertise in:

- Insurance programs and eligibility requirements
- Claim processing and adjudication
- Prior authorizations
- CMS audits and contract compliance

Individuals will also be able to demonstrate advanced knowledge, skills, and abilities in:

- Types of insurance programs
- Processing insurance claims
- Adjudicating insurance claims
- Requesting and processing prior authorization
- Compliance with insurance contracts
- Insurance audits

Candidates must be an active CPhT (through either NHA and PTCB) while also either completing a BPTS-Recognized Training Program for Billing & Reimbursement OR have a minimum of one year or 1,000 hours of supervised pharmacy experience related to Billing & Reimbursement.

Controlled Substances Diversion Prevention Certificate

This certificate demonstrates an individual's proficiency in the prevention of controlled substances diversion. After earning this certificate, individuals will be able to demonstrate their expertise in:

- Consequences of diversion
- Signs of impaired health-care workers
- Areas of vulnerability in procurement, preparation, and dispensing, prescribing, administration, and waste/removal processes
- Types and functions of security control measures, devices, and software to detect and prevent diversion
- DEA requirements for registration, record keeping, and conducting physical inventories
- Identifying suspicious date patterns, product tampering, and fraudulent prescriptions

Individuals will also be able to demonstrate advanced knowledge, skills, and abilities in:

- Common signs of controlled substances diversion
- Consequences of controlled substance diversion
- Federal regulations and requirements pertaining to controlled substances
- Best practices of controlled substance diversion prevention programs
- Controlled substance diversion surveillance
- Controlled substance diversion investigations

Candidates must be an active CPhT (through either NHA or PTCB) while also either completing a BPTS-Recognized Training Program for Controlled Substances Diversion Prevention OR have a minimum of one year or 1,000 hours of supervised pharmacy experience related to controlled substances diversion prevention.

Hazardous Drug Management Certificate

This certificate offers individuals the chance to demonstrate their knowledge on the requirements for managing and handling hazardous drugs as well as show that they are prepared to help ensure the safety of themselves, their facilities,

their co-workers, and their patients. After earning their certificate, individuals can demonstrate their advanced knowledge, skills, and abilities in:

- Features and characteristics of facilities and engineering controls
- Processes and procedures for cleaning facilities where hazardous drugs are handled
- Personal protective equipment (PPE) requirements
- Procedures for transporting, receiving, and handling hazardous medications
- Dispensing final dosage forms
- Federal regulations pertaining to the disposal of hazardous drugs

Candidates must be an active CPhT (through either NHA or PTCB) while either completing a BPTS-Recognized Training Program for Hazardous Drug Management OR have a minimum of one year or 1,000 hours of supervised pharmacy experience related to hazardous drug management.

Immunization Administration Certificate

This certificate will offer individuals the opportunity to demonstrate their proficiency in pharmacy-based immunization services. After earning their certificate, they can display their expertise in:

- Vaccine preventable diseases
- Pharmacy-based immunization services
- Storage and handling of vaccine inventory and supplies
- Immunization administration best practices and SOPs
- Vaccine safety and adverse events

Candidates must be an active CPhT (through either NHA or PTCB) as well as either completing a BPTS-Recognized Training Program for Immunization Administration OR have a minimum of 1 year or 1,000 hours of supervised pharmacy experience related to immunization administration.

Medication History Certificate

This certificate gives individuals an opportunity to demonstrate their understanding of best practices and SOPs for conducting timely, accurate medication histories. After earning this certificate, individuals can show their expertise in:

- The process of conducting medication histories
- The medication reconciliation process
- Medication adherence and non-adherence
- Patient safety measures

Candidates must be an active CPhT (through either NHA or PTCB) as well as either having completed a BPTS-Recognized Training Program for Medication History OR have a minimum of one year or 1,000 hours of supervised pharmacy experience related to medication histories.

Point-of-Care Testing Certificate

This certificate gives individuals the opportunity to show their understanding of pharmacy-based point-of-care testing. After earning this certificate, individuals can show their expertise in:

- POC Testing Regulations
- PPE and Safety for POC Testing
- POC Testing Directions and Record Keeping
- POC Testing sample collections, including nasopharyngeal swabs, nasal (turbinate level) swabs, throat swabs, finger pricks for blood collection and oral swabs

Candidates must be an active CPhT (through either NHA or PTCB) as well as either having completed a BPTS-Recognized Training Program for Point-of-Care Testing OR have a minimum of one year or 1,000 hours of supervised pharmacy experience related to point-of-care testing.

Technician Product Verification Certificate

This certificate gives individuals the opportunity to demonstrate their understanding of patient safety and best practices. TPV involves going through final verification processes with a focus on accuracy and avoiding dispensing errors. After earning this certificate, individuals will be able to show their expertise in:

- Technician Product Verification best practices and SOPs in community pharmacies
- Technician Product Verification best practices and SOPs in health-system pharmacies
- Fundamentals of the dispensing process
- Patient safety
- Quality assurance

Candidates must be an CPhT (through either NHA or PTCB) while either completing a BPTS-Recognized Training Program for Controlled Substance Diversion Prevention OR completing a State Board of Pharmacy approved TPV program OR having a minimum of one year or 1,000 hours of supervised pharmacy experience related to tech-check-tech or technician product verification (TPV).

Other certificate programs that are offered by BPTS, but not available at this time are:

- Medication Therapy Management Certificate
- Demonstrates a candidate's proficiency in Medication Therapy Management.
- Regulatory Compliance Certificate
- Demonstrates a candidate's proficiency in understanding and navigating the extensive regulatory requirements for pharmacies.
- Supply Chain Management Certificate
- Demonstrates a candidate's proficiency in pharmacy-related purchasing and inventory management.

While these specialty certificate programs' exams are not available to be taken until March 2022, candidates can still apply online for whichever certificate they desire at bpts.org.

The main goal of BPTS is to help 1,000 CPhTs advance to CPhT-Adv and help take their career to the next level before the end of this year. Want to make that choice to progress your career? Want to advance on your time for more value? Make the choice to advance today by choosing the certificate(s) that best suit you!

You can apply for exams now at bpts.org.
Sources: https://bit.ly/3tSRrei

PURCHASING SKILLS 101

AN OVERVIEW OF PURCHASING SKILLS IN THE PHARMACY

WRITTEN BY CASSI PROSPER, CPhT

I have been involved in pharmacy purchasing for over a decade. As the years have passed, the obstacles of raw material shortages and manufacturing delays, coupled with increasing drug prices, have brought a great deal of stress to the task. Being a Pharmacy Buyer (or purchasing agent as it is referred to in many facilities) requires great communication skills and a positive can-do attitude, along with the ability to think critically and act quickly.

Purchasing pharmaceuticals and pharmacy supplies often calls for a full-time buyer or pharmacy procurement officer/technician. Larger facilities may have a team of buyers working together to keep the pharmacy stocked. Large health systems may also have buyers on a corporate level that help to secure shortage items and or negotiate discount pricing. The day-to-day tasks of a pharmacy purchasing agent (or pharmacy buyer) include receiving and putting away drug and supply orders as well as placing orders to obtain more pharmaceuticals and supplies.

In addition to these basic functions, the purchaser is often also responsible for following budgetary restraints and reporting purchasing to management.

This might seem simple enough, but in today's times of increasing shortages, keeping the pharmacy stocked takes creativity, perseverance, and teamwork.

What is a pharmacy buyer or purchasing agent?

Pharmacy buyers work in many different types of facilities, including medical centers, hospital pharmacies, health groups or any other organization that provides pharmacy services. In these workplace scenarios, a pharmacy buyer will most likely work at a pharmacy facility. On a corporate or health system level, a pharmacy buyer will most likely work from home or from a centralized office, but not directly in the pharmacy.

I currently work at a health system community hospital where I am a full-time buyer. A typical day starts with a visual review of medication and supply shelves to ensure adequate stock for the day. Then, I compile a list of supplies or medications that may need to be restocked or ordered. I review the wholesaler's website to see if any previously back ordered items might be available. It is usually best to look first thing in the morning, as they say, the early bird gets the worm! I then read and respond to emails, and usually finish just in time to receive my morning order of items I had purchased from the wholesaler the day before.

I put away the order (ensuring to rotate stock), and if items are shorted or unavailable, I then look into other ways of procurement. It is also crucial to ensure all medications are scanned into the electronic health system and any automated dispensing system, otherwise we may run into issues as technicians try to fill the Automated Dispensing Machines or as a nurse scans to administer medication to a patient. I then review all recall notices and check our inventory for potentially affected products, and report and return as necessary.

Once I ensure our pharmacy is absent of recalled products, I review our infusion schedule and work with our infusion pharmacist to order any specialty medications that may be needed. I might then have time to work on miscellaneous reports, review charges, 340B compliance records, or code invoices. Lunch is often followed by another quick review of pharmacy shelves and restocking of necessary items. Next, I receive and put away all pharmacy deliveries from the shipping dock.

I submit our daily order through our wholesale company and follow up on any items that may be out of stock at our local warehouse and may have manufacturing delays. This typically leaves me rushing to get things done within an eight-hour shift, and on many days work from one day spills into the next. Being a pharmacy buyer or purchasing agent takes many skills. Today, I would like to share with you some skills to be successful in this position.

As I mentioned earlier, it is the pharmacy purchaser's responsibility to ensure the drug inventory is adequate tomeet the needs of day-to-day operations, confirm drug products and corresponding barcodes are entered into the formulary database for patient safety, and monitor and communicate drug shortages with the appropriate staff.

It is also often the responsibility of the pharmacy buyer to assist with drug formulary review and find cost savings through high drug cost reviews and operational changes. In addition, pharmacy buyers must ensure compliance with regulatory requirements, optimize inventory management with par level adjustments, and maintain good working relationships with key stakeholders.

Many of you may be asking what a few of these terms are, like what is a par level?

Well, this is part of inventory management.

A par level is an inventory management method through which you determine the minimum and maximum amount of stock that you always need to have on hand. When stock numbers drop below par level, you know that ordering more of that particular item is imperative or you risk running out. To determine the par levels for each medication, you must review how much of the medication is used on a daily, weekly, or monthly basis. Keep in mind that medication use can vary depending on the time of year. For example, in the winter months, a pharmacy may use a lot of cough syrup. In the summer months, though, the use of that same cough syrup will reduce drastically, if used at all.

Timing is one of the crucial building blocks of inventory management. If you know how much of each drug your pharmacy uses on average, you can set par levels for your inventory. This process takes a lot of time setting up, but it saves so much time moving forward and allows others to assist with purchasing tasks during a buyer's time off.It is extremely important that a pharmacy buyer optimize medication inventory par levels to avoid stockouts and reduce waste. The effort to reduce excess inventory while still keeping the pharmacy adequately stocked is a daunting task that is most successful when an analytical approach is taken.

The pharmacy buyer is also often responsible for overseeing the annual medication inventory. Once a year, typically at the end of the calendar year, most pharmacies usually conduct an annual inventory. During this inventory, all pharmacy inventory is counted (including overstock areas and ADM inventory). This data is used to analyze pharmacy inventory movement and optimization. In addition, a pharmacy buyer must oversee controlled substances ordering and the required documentation. All controlled substances should be monitored very closely and have real-time accurate inventory. Ensuring adequate stock is similar to that of other non-controlled medications, and most buyers typically use the same par system regardless of if the medication is controlled. Purchasing and receiving controlled drugs require additional steps. When purchasing CII medications, the purchase order must be accompanied by a DEA 222 form or a Controlled Substance Ordering System (CSOS) verification. The signer of the 222 or CSOS forms must have current power of attorney with the pharmacy. Controlled medication orders should not be received into inventory by the purchaser and the receipt of controlled substances should be signed for by a pharmacist. Pharmacy buyers are also responsible for recording necessary information for compliance with the Drug Supply Chain Security Act. The Drug Supply Chain Security Act was enacted by congress in 2013 to combat counterfeit drugs. The act now requires that all prescription medications have a pedigree. Many of you are probably scratching your heads, thinking "pedigree?!....isn't that for dogs?!?".

Well it is the same concept; the pedigree shows where the medication came from and the Drug Supply and Chain Security Act ensures that a drug is tracked from the procurement of the raw materials all the way down the chain until it gets to the final dispensing pharmacy.

To comply with the act, all manufacturers, wholesalers, and pharmacies are responsible for ensuring the medication purchased has the proper pedigree and to track and update that pedigree as it moves through the supply chain.

As a pharmacy buyer, it is imperative that you are able to show proof of purchase from reputable suppliers who can show a chain of custody for all dispensed medications. This is known as "track and trace documentation."

It is also the responsibility of a pharmacy buyer to ensure all medication barcodes are in the formulary database, automated dispensing machine (ADM) formulary, and electronic health record (EHR) to ensure that the correct medication is dispensed.

Resourcefulness

Although most medications are orderable through a primary wholesaler, some medications must be ordered through outside vendors or directly from the manufacturer. Pharmacy buyers must be familiar with the types of drugs that require this special ordering. In the event that a buyer wants to purchase a new medication and it is not available at the wholesaler, then the pharmacy buyer should research who makes the product and reach out to the manufacturer to learn how to procure the product. In some cases, there may be special ordering requirements that must be met such as registration by the prescriber, patient, and/or pharmacy. Once the pharmacy buyer has learned about the requirements to purchase, they can work with their managers and administration staff to complete any contracts and meet other registrational criteria. A buyer might sometimes also be responsible for coordinating medication procurement for local clinics, EMS, and fire departments. To assist in the current pandemic, local hospitals are overseeing county health allocations and assisting with getting these medications to their communities. In addition, when formulary changes are made, a buyer is typically responsible for formulary change management. When medications are added to the formulary, they ensure that new formulary medications are procured and entered into all appropriate systems, such as the Automated Dispensing Machine (ADM) and Electronic Health Record (EHR). When medications are removed from the formulary, they ensure that the medication is deleted from all formulary references and remove the medication from the formulary stock. Many buyers will try to return unopened products to the wholesaler for credit and short-dated products to the manufacturer for partial credit.

Revenue & Expense

Revenue and expense parameters as well as budgetary benchmarks are the bain of every pharmacy buyer's existence. It is difficult enough to maintain an adequately stocked pharmacy. However, with the recent COVID shortages, it has become increasingly hard to stay within an administration's budgetary restrictions. Nevertheless, a good pharmacy buyer must do their best to mitigate expenditures and reduce spending during a pandemic of shortages. Maximizing inventory turns and avoiding medication waste is crucial, and it is important to utilize your facilities' analytics tools, national benchmarking, and machine learning algorithms to target medication waste within your pharmacy and ADM stock. This often means adjusting your minimum and maximum par levels for high or low use medications (via report analysis) as well as moving the most refilled medications to larger pockets in the ADM.

Managing shortages is no small endeavor. Shortages of medicinal products and supplies happen on a daily basis, and some of these shortages can last several years before an ample supply is readily available.These shortages can happen for many reasons, including natural disasters affecting manufacturing or transportation, raw material shortages, or manufacturing delays due to the shortage of workers in the U.S. It is crucially important that pharmacy buyers monitor, communicate, and manage drug shortages on a daily basis. Managing drug product shortages is particularly complex for

practitioners in hospitals and other acute care settings because these facilities routinely treat patients with acute or emergent conditions and use a significant number of medically necessary or single source products.

Pharmacy staff are challenged during drug product shortages to ensure the provision of seamless, safe, and therapeutically equivalent drug therapy, preferably at comparable costs, which makes this challenge even more daunting.

It is not rare for a medication to seemingly be readily available one day and the next it is completely out of stock via wholesalers. Often, the manufacturers are also out of stock or safeguarding the inventory they might have, leaving pharmacy buyers to quickly come up with a way to procure the medication from other channels or to work with their clinical pharmacist to procure an alternative medication. When a wholesaler is out of stock and medication cannot be obtained directly through a manufacturer, there are a few additional options such as borrowing from another facility that may have excess stock or purchasing from secondary distributors. Once you have exhausted all of the options mentioned above to procure medication, then you must notify the appropriate parties within your facility (usually a clinical pharmacist) so that you can assist in a plan to conserve the product left in stock and determine options for an alternative therapy.

Purchasing Skills and Pharmacy Bills

A pharmacy buyer needs to be able to think critically and be a problem solver. There is often little to no notice that a drug is in shortage. It is often in stock one day and out of stock the next. It is crucial that a pharmacy buyer has a process in place to evaluate the pharmacies' use of the medication and seek alternative sources to purchase from in a timely manner. The pharmacy buyer must then ensure that inventory status (including stock on hand and day supply in inventory) and procurement options are communicated to the appropriate parties (often the pharmacy director and clinical pharmacist), they will then assist the buyer by suggesting alternative therapies and conservation efforts for the shortage medication. The pharmacy buyer must be able to keep the pharmacy stocked with needed medications and supplies while also being mindful of the budgetary restraints and inventory management. With expertise in purchasing, pharmacy buyers have several responsibilities, including inventory and budget management.

The pharmacy buyer manages the drug inventory, adjusting par levels as needed to meet the demands of the department to avoid stockouts and decreasing medication waste. They must monitor and anticipate drug shortages and develop solutions before drug stocks are critically depleted. Pharmacy buyers ensure all medication products and corresponding barcodes are correctly entered into all electronic systems. The pharmacy buyer must also be familiar with the alternative procurement methods for specialty and shortage medications.

To be successful in this position, a technician must have an interest in purchasing and possess effective communication skills.

To be a successful pharmacy purchaser or buyer, you must be able to solve problems, process information quickly, adapt, and build cooperative relationships.

THE DRUG SUPPLY CHAIN SECURITY ACT

Author: Hannah McSweeney, CPhT

This author has no conflict of interest to declare in conjunction with this continuing education activity.

LEARNING OBJECTIVES:

At the completion of this activity, the participant will be able to:

- Define and establish the purposes of both titles under the Drug Quality and Security Act
- Explain the distribution chain
- Further investigate the electronic guidelines for Act II
- Identify exemptions and procedures during public health emergencies

Faculty: Hannah McSweeney, CPhT

Contact Hour(s): 2.0

Activity Type: Knowledge-Based Home Study

Instructional Methods: Independent Self-Study + Post-Test

Target Audience: Certified Pharmacy Technicians

Cost: NPTA Elite/CE+ Members: FREE; NPTA Insiders/Non-Members: $10

Disclosures: The CE faculty, reviewers and planning committee members have all reported no actual or potential conflict of interest in relation to this program. This program received no commercial support and has been peer-reviewed to ensure non-commercialization.

ACPE UANs: 0384-0000-22-1116-H03-T

Release Date: 03/10/2022 Expiration Date: 03/10/2025

Completion of the post-test with minimum passing score of 70% is required to be awarded CPE contact hours.

Participants are allowed a total of two attempts to pass the post-test.

Please allow up to 10 business days for the credit to appear in your NABP CPE Monitor account.

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THE DRUG SUPPLY CHAIN SECURITY ACT

The Drug Supply Chain Security Act (DSCSA) was passed in Congress and signed into action by President Obama on November 27, 2013. The Act is Title 2 of the Drug Quality and Security Act (DQSA) and amended the Federal Food, Drug, and Cosmetics Act. It is currently being implemented in phases spanning from 2013 to 2023.

TITLE 1 OF THE DQSA

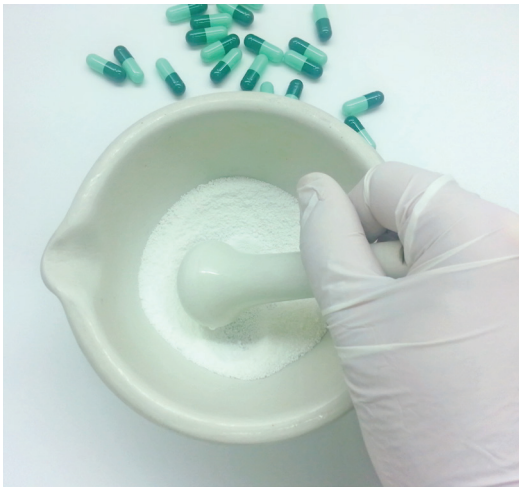
Title 1 of the DQSA is the Compounding Quality Act (CQA), which was established after the 2012 New England compounding center meningitis outbreak that killed 64 people and infected 793. Glen Chin was the supervising pharmacist for the New England Compounding Center (NECC), and in October 2017, a federal judge sentenced him to 8 years in prison. According to the FDA, he was convicted of "77 counts, including racketeering, racketeering conspiracy, mail fraud and introduction of misbranded drugs into interstate commerce with the intent to defraud and mislead" (United States Department of Justice, 01/31/2019).

The sentence came after the fungal meningitis outbreak in which several patients received doses of preservative-free methylprednisolone acetate. Chin manufactured three lots of the contaminated medication, or an estimated 17,000 vials containing over 18 different types of fungi, one of which was meningitis.An FDA report stated that "In doing so, Chin ignored NECC's own drug formulation worksheets and standard operating procedures. Specifically, he improperly sterilized the MPA, failed to verify the sterilization process, and improperly tested it to ensure sterility. Despite knowing these deficiencies, Chin directed the MPA to be filled into thousands of vials and shipped to NECC customers nationwide" and... "Chin directed the shipping of drugs prior to receiving test results confirming their sterility, and he directed NECC staff to mislabel drugs to conceal this practice. He also directed the compounding of drugs with expired ingredients, including chemotherapy drugs that had expired several years prior. Chin prioritized drug production over cleaning, directed the forging of cleaning logs, and routinely ignored mold and bacteria found inside the clean rooms. Lastly, for more than three years, Chin, along with co-conspirators, utilized a pharmacy technician whose license had been revoked by the Massachusetts Board of Pharmacy to compound highly sensitive cardiac drug solutions, and took steps to conceal the technician's presence inside the clean room from state regulators" (United States Department of Justice, 01/31/2019). Due to Chin's blatant disregard for patient safety and rules throughout several processes in the distribution chain, he set in motion the push the FDA needed to enact the new set of laws. These laws are now known as the Compounding Quality Act (Title I) and the Drug Supply Chain Security Act (Title II) under the Drug Security and Quality Act. Title 1 allows the FDA to regulate and monitor the manufacturing of compounded drugs and prohibits the reselling of drugs that are labeled "not for resale." Through the standards set out under Title I, the FDA is now able to keep a better watch over the integrity of compounded pharmaceuticals and, in turn, patient safety. During this incident, many organizations worked together to identify patients who were affected, medications that were improperly compounded, lapses in distribution packaging and safety, and more, which led to the creation of Title II.Title I creates a voluntary compliance regime where compounding pharmacies that voluntarily register as "outsourcing facilities" will be subject to oversight by the FDA in much of the same way that traditional pharmaceutical manufacturers are monitored.

THE DRUG SUPPLY CHAIN SECURITY ACT

COMPOUNDING

There are two main types of compounding: sterile and non-sterile. Compounding is the practice of combining active ingredients with non-active ingredients and can be tailored to an individual's needs. Non-sterile compounding is defined by USP <795> as the process of combining, admixing, diluting, pooling, reconstituting other than as provided in a manufacturer's labeling, or otherwise altering a drug or bulk drug substance to create a non-sterile preparation. Sterile product compounding is further defined by USP <797> to include any manipulation of a sterile or no sterile product intended to produce a sterile final product. Nonsterile compounding can include several different dosage forms, including tablets, capsules, extended-release oral medications, liquids, gels, ointments, creams, foams, suppositories, shampoos, lip balms, torches, lollipops, and some liquid suspensions. Some compounding pharmacies may also make prescriptions for pets such as cats and dogs. Non-sterile product compounding is not as stringent but still maintains its own sets of rules set forth in USP <795>. Licensing and training to compound non-sterile items vary by state boards and are not performed in a cleanroom. Sterile product and IV admixture compounding, however, follows an entirely different set of rules through USP <797> including sterile garbing procedures and cleaning procedures. Furthermore, everything must be done in a sterile environment like a clean room unless you are using a glovebox or an isolator. During sterile product compounding, much higher importance is placed on procedures because of the route of administration and the higher risk of infection. Products that can be made from sterile product compounding include eye drops, injections such as intramuscular medications or epidurals, and IV medications such as antibiotics or specialty infusions delivered through fluids.



TITLE 2 OF THE DQSA

Title 2 of the Drug Quality and Security Act is titled the Drug Supply Chain Security Act and establishes product tracing, product identifier, authorized trading partner, and verification requirements for manufacturers, repackagers, wholesale distributors, and dispensers to facilitate the tracing of products through the pharmaceutical distribution supply chain. The DSCSA also outlines critical steps to build an electronic, interoperable system by November 27, 2023, that will enable the identification and tracing of certain prescription drugs as they are distributed within the United States. An example of an "electronic interoperable system" can be seen as "each transaction of product, trading partners (manufacturers, wholesale distributors, dispensers, and repackagers) are required under section 582 of the FD&C Act to capture, maintain, and provide subsequent purchasing trading partners with transaction information, transaction history, and a transaction statement (product tracing information) and to notify FDA and certain immediate trading partners when they have determined that a product in their possession or control is an illegitimate product" (The Pew Charitable Trust, 04/2014). The FDA states that in 2018, manufacturers and repackagers were required to begin affixing or imprinting a product identifier to each package and homogenous case of a product intended to be introduced in a transaction into commerce. Once products have product identifiers affixed or imprinted on them, manufacturers and repackagers are required to verify products using the product identifiers in the circumstances specified in the DSCSA.In addition, sections 583 and 584 of the FD&C Act (21 U.S.C. 360eee-2 and 360eee-3) direct the FDA to establish national licensure standards for wholesale distributors and third-party logistics providers and require that these entities report licensure and other information to the FDA annually.

Most of the pilot programs that started in 2019 used a blockchain system as their "electronic interoperable system" that had to be created. Blockchain was originally a database designed only for cryptocurrency. However, in 2013, the Ethereum blockchain was created when a

developer combined blockchain and web coding. Since then, blockchain has been adapted for several other areas of the internet and business besides cryptocurrency. Basically, blockchain is a database that stores encrypted blocks of information or data and then chains them together to form a single chronological source of truth for the data. The system is typically decentralized and therefore transparent to the public. However, with HIPPA standards, the companies in the pilot project programs found a workaround or altered the code. Because blockchain systems are transparent, there is a ledger of changes that preserves the integrity of the transaction. Blockchain is usually the best option to use in coding because it reduces the risk of fraud and takes transparency to the next level. Because blockchain systems are decentralized, it creates an added security measure since no one computer or organization owns the chain (which is several blocks). Rather, it creates a distributed ledger via nodes connected to the chain. Each participant in the system is given a unique alphanumeric identifier. Any time a change is made to the chain, it can be seen within the ledger.

WHAT THE ACT ESTABLISHES

The Act established requirements and standards for drug manufacturers, wholesalers, dispensers, and repackagers.

- Manufacturers, wholesalers, dispensers, and repackagers are required to ensure that all prior transactions of information is provided at each transfer of ownership.
- In the event of a recall or for the purpose of investigating a suspect product or an illegitimate product, manufacturers, wholesale distributors, dispensers, and repackagers are required to provide, within a reasonable time, the applicable transaction documentation requested by the Secretary or other appropriate federal or state official.
- Manufacturers and repackagers are required to affix or imprint a product identifier on each package and homogenous case intended to be introduced in a transaction into commerce except for products that are required to have a standardized numerical identifier. However, wholesalers and dispensers are not required to affix or imprint a product identifier on each package and homogenous case.
- Manufacturers, wholesale distributors, dispensers, and repackagers are all required to ensure that each of their trading partners is authorized.
- Manufacturers, wholesale distributors, dispensers, and repackagers are required to implement systems to: (1) investigate suspect products; and (2) handle illegitimate products, including through quarantine, disposal, and appropriate notice to the Secretary and, as necessary, trading partners.
- Manufacturers, wholesale distributors, and repackagers are required to verify returned products before further distribution.

The definition of a suspect product determined by Public Law 113-54, 127 STAT. 602 states that a:

"SUSPECT PRODUCT.—The term "suspect product" means a product for which there is reason to believe that such product:

(A) is potentially counterfeit, diverted, or stolen;

(B) is potentially intentionally adulterated such that the product would result in serious adverse health consequences or death to humans;

(C) is potentially the subject of a fraudulent transaction; or

(D) appears otherwise unfit for distribution such that the product would result in serious adverse health consequences or death to humans." (Public Law 113-54, 127 STAT. 602)

It is estimated that the enhanced drug distribution security requirements at the level of package tracing will be in effect by November of 2023. However, before these implementations, pilot projects, public meetings, final guidelines, recommendations necessary for adoptions, and the establishment of licensing standards for wholesale distributors and third-party logistics distributors must first be set by the FDA.

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BLOCKCHAIN SYSTEMS

THE DISPENSING CHAIN

Each part of the drug supply chain has tasks and regulations to meet, with deadlines for each. The steps follow the natural order of the distribution supply chain process that moves from manufacturer to repackager to wholesale distributors and ends with dispensers.

MANUFACTURING

The first step of the chain, the manufacturers, create and produce prescription medications for patients and consumers like doctor offices and hospitals. As of January 1, 2015, manufacturers can only engage in sales transactions with the appropriately licensed or registered trading partners. They must provide transaction information (what drugs were shipped, when, and to whom), transaction history, and a transaction statement for all sales. They must also provide this information to regulators during a recall or investigations of suspect products. Manufacturers must have systems in place to investigate products suspected of being potentially counterfeit, diverted, or otherwise unsafe. If a suspect product is identified, it must be quarantined, and the transaction history or transaction information must be validated. Records of an investigation must be kept for 6 years. And finally, manufacturers must have systems in place to remove from distribution products identified as potentially suspect and to notify trading partners. If a manufacturer identifies an illegitimate product, or if there is a high risk of illegitimacy, the manufacturer must notify the FDA and all immediate trading partners within 24 hours. As of November 27, 2017, manufacturers must put a unique product identifier on each drug package and sealed homogeneous case. Product identifiers are used to verify a drug's legitimacy. Once the system is fully implemented by 2023, the product identifiers will enable product tracing in the event of a recall or the identification of a suspect product. Manufacturers must provide transaction information (what drugs were shipped, when, and to whom), transaction history, and a transaction statement (confirming that the manufacturer is licensed and did not knowingly supply false information) in an electronic document to trading partners for all sales. Manufacturers must respond to requests from trading partners that they verify a product identifier within 24 hours of receipt or another reasonable time to be determined by the FDA. Manufacturers must verify the product identifier, which includes the standardized numerical identifier, or SNI, for a product they suspect is counterfeit, diverted, or otherwise unsafe. And manufacturers must verify the product identifier, including the SNI, of the returned product intended for resale. Finally, by November 27, 2023, manufacturers must exchange transaction information and statements in an interoperable electronic manner, and transaction information must include product identifiers. Manufacturers must put in place systems and processes for electronic package level verification and provide traceability information to allow regulators to have access to a drug's full distribution history during a recall or when investigating suspect products.

REPACKAGING

Repackagers take medications from manufacturers and repack and/or relabel the pharmaceuticals in order to better supply trading partner demands. As of January 1, 2015, repackagers may engage in sales transactions only with appropriately licensed or registered trading partners (just like manufacturers).

Repackagers must not accept ownership of a product unless the previous owner provides the transaction information, transaction history, and a transaction statement for all sales. They must also provide this information to regulators during a recall or investigations of suspect products.Repackagers must have systems in place to investigate products suspected of being a potentially suspect product. If a suspect product is identified, it must be quarantined and the applicable transaction history or transaction information must be validated. Records of an investigation must be kept for 6 years. Repackagers must have systems in place to remove from distribution a product identified as potentially suspect and must notify trading partners. If a repackager identifies an illegitimate product, it must notify FDA and all immediate trading partners within 24 hours. As of November 27, 2018, repackagers must put a unique product identifier on each drug package and sealed homogeneous case, and it must be associated with the original manufacturer's product identifier. These identifiers will be used to verify a drug's legitimacy and enable product tracing in the event of a recall or the identification of a suspect product.

Repackagers must respond to requests from trading partners for a product identifier within 24 hours of receipt or another reasonable time to be determined by the FDA. Repackagers must verify the product identifier, which includes the standardized numerical identifier, or SNI, for products they suspect are counterfeit, diverted, or otherwise unsafe. Repackagers must verify the product identifier, including the SNI, of the returned product intended for resale. And by November 27, 2023, repackagers must exchange transaction information and statements in an interoperable electronic manner, and transaction information must include product identifiers. Repackagers must put in place systems and processes for electronic package level verification and provide traceability information to regulators to permit the creation of a drug's full distribution history when investigating a suspect product or during a recall.

WHOLESALE DISTRIBUTORS

Wholesale distributors purchase pharmaceuticals from manufacturers, repackagers, or other wholesale distributors, and provide them to a variety of customers in the supply chain, including pharmacies, hospitals, and long-term care or other medical facilities. They, too, have similar requirements that align with their operations as of January 1, 2015.

Wholesalers may engage in sales transactions only with appropriately licensed or registered trading partners. Wholesalers must not accept ownership of a product unless the previous owner provides the transaction information, transaction history, and a transaction statement for all sales (with some exceptions). Wholesalers must also provide this information to regulators during a recall or when investigating suspect products.

Wholesalers must have systems in place to investigate products that they suspect are potentially counterfeit, diverted, or otherwise unsafe. If a suspect product is identified, it must be quarantined, and the transaction history or transaction information must be validated. Records of an investigation must be kept for 6 years. Wholesalers must have systems in place to remove from distribution any product identified as potentially suspect, and to notify trading partners of the same. If a wholesaler identifies an illegitimate product, they must notify the FDA and all immediate trading partners within 24 hours. As of November 27, 2019, wholesalers may engage only in transactions of products encoded with unique product identifiers, which will be used to verify a drug's legitimacy and enable product tracing in the event of a recall or the identification of a suspect product. Wholesalers may accept returned products for resale only if they can associate the returned product with the original transaction information and transaction statement for that product.

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Wholesalers must verify the product identifier, which includes the SNI, for products they suspect are potentially counterfeit, diverted, or otherwise unsafe. Wholesalers must verify the product identifier, including the SNI, of returned products intended for resale. And by November 27, 2023, wholesalers must exchange transaction information and statements in an interoperable electronic manner, and the transaction information must include product identifiers. Wholesalers must put in place systems and processes for electronic package level verification and provide traceability information to regulators to permit access to a drug's full distribution history when investigating a suspect product or during a recall.

DISPENSERS

Dispensers are the final step in the distribution chain and are recognized as anyone authorized by the government to dispense or administer prescription medications to patients such as physicians, pharmacies (retail, long-term care, etc.), hospitals, and more. As of January 1, 2015, dispensers may only engage in sales transactions with appropriately licensed or registered trading partners. Dispensers must only accept products with the transaction information, transaction history, and a transaction statement. This information must be provided for all sales, except when dispensing to patients, returning products, or selling to another dispenser fulfilling a specific patient need. They must give this information to regulators during recalls or when investigating suspect products, with exceptions. Dispensers must investigate products suspected of being potentially counterfeit, diverted, or otherwise unsafe. If a suspect product is identified, it must be quarantined and the applicable transaction history or transaction information must be validated.

Records of an investigation must be kept for 6 years. Dispensers must have systems in place to remove from distribution any product identified as potentially counterfeit, diverted, or otherwise unsafe, and they must notify trading partners of the same. If a dispenser identifies an illegitimate product, it must notify the FDA and all immediate trading partners within 24 hours. As of November 27, 2020, dispensers may engage in transactions only if a product is encoded with a unique product identifier, which will be used to verify a drug's legitimacy and enable product tracing in the event of a recall or identification of a suspect product. Dispensers must verify the product identifier, which includes the SNI, for products they suspect are potentially counterfeit, diverted, or otherwise unsafe at the package level for at least three packages or 10% of suspect products, whichever is greater. And by November 27, 2023, dispensers must exchange transaction information and statements in an interoperable electronic manner, and transaction information must include product identifiers.Dispensers must put in place systems and processes for electronic package level verification and provide regulators with traceability information to allow for access to a drug's full distribution history during a recall or when investigating a suspect product.

According to the FDA, On September 24, 2019, it published the Wholesale Distributor Verification Requirement for Saleable Returned Drug Product—Compliance Policy guidance (the 2019 Compliance Policy), where FDA announced a 1-year delay in enforcement of the requirement for wholesale distributors to verify saleable returned product as required under section 582(c)(4)(D) of the FD&C Act. This final guidance addresses the readiness of wholesale distributors to comply with the requirement to verify the product identifier upon receipt of a returned product that the wholesale distributor intends to re-dispense or further distribute. In the years since the passage of the DSCSA, the FDA has received comments and feedback from dispensers expressing concern with readiness for implementation of certain requirements under section 582 of the FD&C Act, including the verification requirements addressed in the compliance policy. Specifically, dispensers have described challenges with the implementation of these provisions in the DSCSA due to the time necessary to develop technologies and processes that support a robust verification system. Due to these concerns, the FDA has decided not to take action against any wholesale distributors that have not complied until November 27, 2023. The compliance policy that was established in 2019 by the FDA, however, does not include requirements set forth by section 582 of the FD&C Act.

DSCSA IMPLEMENTATION TIMELINE

The FDA has provided a 15 step DSCSA implementation timeline over a ten year period. To date, the timeline has been successfully implemented and completed with a few delays due to the coronavirus pandemic.

The first step is to, "issue a notice of public docket to collect stakeholder comments on the standards for the interoperable exchange of transaction information, history, and statements in paper or electronic format" (FDA, 11/272013). The first step has a planned implementation date of 02/20/2014. The second step listed is to, "publish draft guidance for the interoperable exchange of transaction information, history, and statements in paper or electronic format" (FDA, 11/27/2013), and should be completed by 11/27/2014. Step three is to, "publish guidance on processes for waivers, exceptions, and exemptions" (FDA, 11/27/2013), by 11/27/2015. Step four also shares this implementation date to, "publish the final guidance on grandfathering product" (FDA, 11/27/2013). Step five is to, "conduct a technology and software assessment on the feasibility of small dispensers to conduct drug tracing at the package level" (FDA, 11/27/2013). Step six was planned to be implemented by the FDA by 05/27/2014 and, "published guidance on the identification of suspect products and the termination of notifications of illegitimate products for finished human prescription drugs (FDA, 11/27/2013). Steps seven and eight were to, "conduct at least five public meetings and to establish one or more pilot projects in coordination with stakeholders to explore and evaluate methods to enhance the safety and security of the supply chain (FDA, 11/27/2013). Step nine is to, "publish final guidance on the system attributes necessary to enable secure tracing at the package level" (FDA, 11/27/2013), with a target date of 11/27/2022. Step ten is to, "publish final guidance on the standards for interoperable data exchange to enhance the secure tracing of products at the package level" (FDA, 11/27/2013), with the same proposed target date as step nine (11/27/2022). Step eleven plans to, "develop regulations establishing an enhanced drug distribution security system for the interoperable electronic tracing of products at the package level" (FDA, 11/27/2013), and was to be accomplished by 11/27/2021. Step twelve, "establishes a system for wholesale drug distributors reporting to the FDA and public databases with licensing information" (FDA, 11/27/2013), and was to be completed by 1/1/2015. Step thirteen, "developed regulations establishing the standards for licensing of wholesale drug distributors" (FDA, 11/27/2013), and was to be completed by 11/27/2015. Step fourteen, "established a system for third-party logistic providers reporting to the FDA" (FDA, 11/27/2013), and was one of the first steps completed on 11/27/2014.And finally, step fifteen, "developed regulations establishing the standards for licensing of third-party logistic providers" (FDA, 11/27/2013), also completed by 11/27/2015.

PILOT PROGRAMS

Part of the DSCSA's implementation process are pilot projects. The FDA's DSCSA Pilot Project Program is intended to assist drug supply chain stakeholders, including FDA, in developing the electronic, interoperable system that will identify and trace certain prescription drugs as they are distributed within the United States. After the conclusion of the pilot projects, the FDA will release a final program report that will allow other entities to benefit. These interoperable systems are meant to be in full effect and enforced by the FDA by the end of 2023. The FDA has chosen 20 different companies and entities in many different sections of the supply chain to show diversity. These companies include: AmerisourceBergen/

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Xavier Health, Cardinal Health, Franciscan Missionaries of Our Lady Health System, GS1, IBM/KPMG/Merck/Walmart, Icon Indices, IDLogiq, KitCheck, LSPediA, MediLedger, Optel, The Optimal Solution, Pharmaceutical Distribution Security Alliance, PriMed Pharmaceuticals, Providence Health Technologies, rfxcel, Rymedi, Sanifi, TraceLink, and UCLA Health. These projects began in 2019 and most are lasting for around six months. The FDA has yet to release a final report on the current pilot project programs, however, Cardinal Health has concluded their study and reported their findings. The Cardinal Health regulatory manager Maryann Nelson shared at the 2019 Channel Management Forum an update on the DSCSA. She shared that as of November 2019, wholesale distributors will only be able to trade in serialized product unless grandfathered, manufacturers must now be able to determine whether the product identifier affixed to a package corresponds to the NDC, serial number, lot number and expiration date they have assigned to the product. Verification requests must be responded to within 24 hours. Also starting in November, before re-distributing a saleable returned product, a wholesale distributor must verify the product identifier on each package or homogenous case. The preferred options to verify saleable returns are for manufacturers to send serialized data with each shipment or to use a verification routing service (VRS). And finally, manufacturers and wholesale distributors are required to have systems in place to quarantine and investigate suspicious products, as well as processes to quarantine, disposition and notify partners of illegitimate products. She mentions that the FDA has given further clarification on topics such as grandfathering: any product packaged by the manufacturer before November 27, 2018 is considered grandfathered or exempt from being serialized and may be sold until expiration date, serialized products, and waivers, exceptions, and exemptions from serializing. Nelson has identified potential upcoming challenges and explained that, "...the Healthcare Distribution Alliance (HDA) has been facilitating a VRS Task Force which has designed the solution architecture and messaging standard for the VRS – but interoperability among multiple service providers is not yet proven. Lack of governance and conflicting interpretations of requirements makes industry-wide readiness for November 2019 uncertain at best." And under the FDA's Product Identifier Draft Guidance, "This guidance does not recognize that industry has widely adopted GS1 standards, where a product's GTIN (with embedded NDC), serial number, lot number and expiration date are encoded in the GS1 2D DataMatrix. Issued just two months before the serialization deadline, it made alignment difficult because most manufacturers were already serializing product using GS1 standards." This is an issue that the FDA fails to mention as a shortcoming and could explain why so many in the distribution process are finding it extremely difficult to adjust within the timeframes given. Phase II for Cardinal will be the next step in DSCSA—enhanced drug distribution security—which will be implemented in November 2023. At that point, data must be exchanged in a secure, interoperable, electronic manner. Industry has begun discussion around the formation of a governance body—an independent, balanced, sector-neutral entity that can develop and advance a shared vision for DSCSA interoperability.

PUBLIC HEALTH SERVICE ACT

Before delving into the exclusions and exemptions brought about by COVID-19, we must first discuss the Public Health Service Act or the PHSA. The PHSA provides the legal authority for the Department of Health and Human Services to respond to public health emergencies. This authorizes the HHS Secretary to lead federal public health and medical response in public health emergencies, determine that a public health emergency exists, and assist states in their response activities. Once the HHS Secretary determines that a public health emergency exists, the Secretary is authorized, consistent with the Secretary's other authorities, to respond to the public health emergency. These authorities include making grants, contracting, and investigating the cause, treatment, or prevention of the disease or disorder underlying the public health emergency. The Secretary may use funds from the Public Health Emergency Fund when funds are appropriated for it. Over time, Congress has added other authorities to the PHSA, the Social Security Act (SSA), the Federal Food, Drug, and Cosmetic Act

(FFDCA), and other laws administered by the Secretary that allow the Secretary to take certain discretionary actions once a public health emergency is determined under Section 319. The Secretary may also waive or modify certain requirements under Medicare, Medicaid, CHIP, and HIPPA, exempt a person from select agent requirements for 30 days, waive certain prescription and dispensing requirements under the FFDCA, adjust Medicare reimbursements for certain Part B drugs, waive certain Ryan White HIV/AIDS grant program requirements, make temporary personnel appointments for up to one year, and grant extensions or waive sanctions relating to the submission of data or reports. A Section 319 determination (declaration of public health emergency) remains in effect for 90 days or until the Secretary determines that the emergency no longer exists, whichever occurs first. If the same or additional conditions continue to warrant a public health emergency, the Secretary may renew the determination for additional 90-day periods.

EXEMPTIONS DURING COVID AND PUBLIC HEALTH EMERGENCIES

The declaration of the COVID-19 public health emergency under section 319 of the PHSA automatically triggered two statutory provisions in the FD&C Act under which, for the duration of the declaration, certain DSCSA requirements do not apply to a range of product distribution activities to address the public health emergency. These automatically-triggered statutory provisions are as follows: the exemption of certain product distribution activities from the definition of transaction under FD&C Act and the exclusion of certain product distribution activities from the definition of wholesale distribution under the FD&C Act. As a result of this statutory exemption and exclusion, the DSCSA requirements do not apply to the following types of product distribution activities conducted during the COVID-19 public health emergency: the distribution of covered COVID-19 products, to address the public health emergency; and certain distribution activities, with respect to other affected products, which are directly impacted by the COVID-19 public health emergency and which meet emergency medical needs. The "FDA interprets the above exemption and exclusion to apply to products distributed to address the COVID-19 public health emergency, including product that was already in distribution in the supply chain at the time the COVID-19 public health emergency was first declared. We note that neither the exemption nor the exclusion applies to a drug shortage unless it is caused by the public health emergency" (U.S. Department of Health and Human Services, Food and Drug Administration, Center for Drug Evaluation and Research, Center for Biologics Evaluation and Research, 04/2020). Therefore, trading partners engaging in the distribution of covered COVID-19 products or distribution activities directly impacted by the COVID-19 public health emergency are not required to comply with the product tracing and product identification requirements in the DSCSA that are triggered by a "transaction" during the COVID-19 public health emergency. However, if a trading partner is distributing products during the COVID-19 public health emergency for purposes other than emergency medical reasons, they must comply with all applicable DSCSA requirements with respect to the distribution of such products. In the context of COVID-19, the exemption provided under the transaction definition is limited to distributions of products for emergency medical reasons during the COVID-19 public health emergency. It is important to note that the exemption described above does not extend to the DSCSA requirements that are not triggered by a "transaction." DSCSA requirements related to wholesale distribution do not apply to distribution activities that address the COVID-19 public health emergency.

This means that entities engaging in the distribution of covered COVID-19 products or certain distribution activities directly impacted by the COVID-19 public health emergency are not required to comply with the DSCSA's licensure provisions and reporting requirements under section 503(e) of the FD&C Act or the wholesale distributor requirements under the DSCSA during the COVID- 19 public health emergency. The exclusion from wholesale distribution for emergency medical reasons, including a public health emergency declaration pursuant to section 319 of the PHS Act, should not affect the ability of States to require licensure of such entities as wholesale distributors under State law. Entities engaged in the distribution of covered COVID-19 products during the COVID-19 public health emergency should maintain the security of the supply chain as these products are distributed to address the urgent public health need.

To the extent that compliance with DSCSA requirements covered by an exemption or exclusion is not a barrier to the timely distribution of covered COVID-19 products, entities should continue to comply with those requirements during the COVID-19 public health emergency. The FDA also states that "Although the requirements to trade only with authorized trading partners still apply in most circumstances during the COVID-19 public health emergency, the FDA generally does not intend to take enforcement action against trading partners during the COVID-19 public health emergency for engaging in either of the following activities:

THE DRUG SUPPLY CHAIN SECURITY ACT

• COVID-19-related distribution involving entities that would otherwise meet the definition of wholesale distributor under the DSCSA, except that—as a result of the exclusion from the definition of wholesale distribution for emergency medical reasons—these entities would not be considered wholesale distributors because they are currently engaged in distributing product for emergency medical reasons resulting from COVID-19.

• Distributions involving other trading partners that are not authorized solely because of circumstances directly related to the COVID-19 public health emergency, but are working with or have been permitted by respective State authorities to operate during the COVID-19 public health emergency, if compliance with the authorized trading partner requirements under the DSCSA would pose a barrier to timely distribution of needed products during the COVID-19 public health emergency" (U.S. Department of Health and Human Services, Food and Drug Administration, Center for Drug Evaluation and Research, Center for Biologics Evaluation and Research, 04/2020).

A requirement set forth in the DSCSA states that trading partners must ensure that their trading partners are properly licensed and registered with the FDA and local authorities. After all, during the pandemic, many companies have tried to falsely advertise or distribute medications with the intent that they can treat, cure, or prevent COVID-19. The FDA also cautions trading partners from obtaining products from nontraditional sources that are not known, trusted sources for the product. Buying drugs from unknown sources could put patients at risk of receiving drugs that may be ineffective or harmful such as counterfeit, stolen, diverted, or intentionally adulterated products. This also pushes for the verification of received products, yet another point outlined in the DSCSA.

NATIONAL DRUG CODE

What is an NDC? It's a 10- or 11-digit, three-segment number that identifies medications for human usage worldwide. Each segment signifies something important. The first segment identifies the labeler code and will always be 4-5 digits long. The second set of numbers shows the product code, identifies the specific strength, dosage form, and formulation of a drug for a specific labeler. This second segment of the NDC is typically 3-4 numbers long. And lastly, the third segment provides information on the package code and identifies package sizes and type. The last set of numbers in an NDC will always be 1-2 digits long. The FDA keeps a current list

of NDC's and has a searchable database of the codes in circulation. Some drugs may not have an NDC if it is an OTC (over-the-counter) product or an insulin product, if the medication is no longer commercially available and marketed, or the manufacturer has not provided a complete listing of the drug product. Complete drug registration and listing is required by the FDA unless a waiver is granted. Currently, the FDA formulates NDC's as a 10-digit number. However, certain government entities such as the CMS (Centers for Medicare and Medicaid Services) and other government agencies such as HIPAA and private payers require an 11 digit NDC formulation. If the NDC is less than 11 digits, it is just missing leading zeros and can easily be configured.

The FDA estimates that by 2033, no more possible NDC configurations will be available, and the FDA will move from 5 digits in the first segment to 6, allowing for more combinations. To conclude, Title I- the Compounding Quality Act and Title II- the Drug Supply Chain Security Act of the Drug Quality and Security Act were created to further establish protocols and guidelines to protect patients and create a tighter closed system for prescription drug distribution in the United States. These provisions set out higher standards and establish the product tracing, product identifier, authorized trading partner, and verification requirements for manufacturers, repackagers, wholesale distributors, and dispensers to facilitate the tracing of products through the pharmaceutical distribution supply chain. The DSCSA also outlines critical steps to build an electronic, interoperable system that will enable the identification and tracing of certain prescription drugs as they are distributed. The CQA creates a higher oversight system for the FDA to more closely monitor the production and distribution of compounded pharmaceuticals. Both acts create higher safety levels for the patient and will demonstrate a faster and more efficient drug supply chain.

Sources: https://bit.ly/3tSRrei

CONTINUING EDUCATION - LAW

TEST

Post Test Instructions: Completion of an online post-test with minimum passing score of 70% is required to be awarded CPE contact hours. To access the online post-test for this program, go to: www.pharmacytechnician.org, select "CE" from the navigation menu and then click on "Online CE"

1. What does the last segment of the NDC identify?
A) Strength of medication
B) Package size and type
C) Labeler code
D) Dosage form

2. Why might a drug not have an NDC?
A) The drug is an OTC or insulin product
B) The medication has a large amount of tablets in the bottle
C) The manufacturer didn't want to include one
D) The lot and expiration date is sufficient

3. What is Title 2 of the Drug Quality and Safety Act called?
A) The Compounding Quality Act
B) The Food and Cosmetic Safety Act
C) The Drug Supply Chain Security Act
D) The Drug Safety and Quality Act

4. When was Title 2 of the DQSA signed into legislation?
A) 2013
B) 2019
C) 2014
D) 2011

5. What is the final step in the distribution chain process?
A) Wholesale distribution
B) Dispensing
C) Manufacturing
D) Repackaging

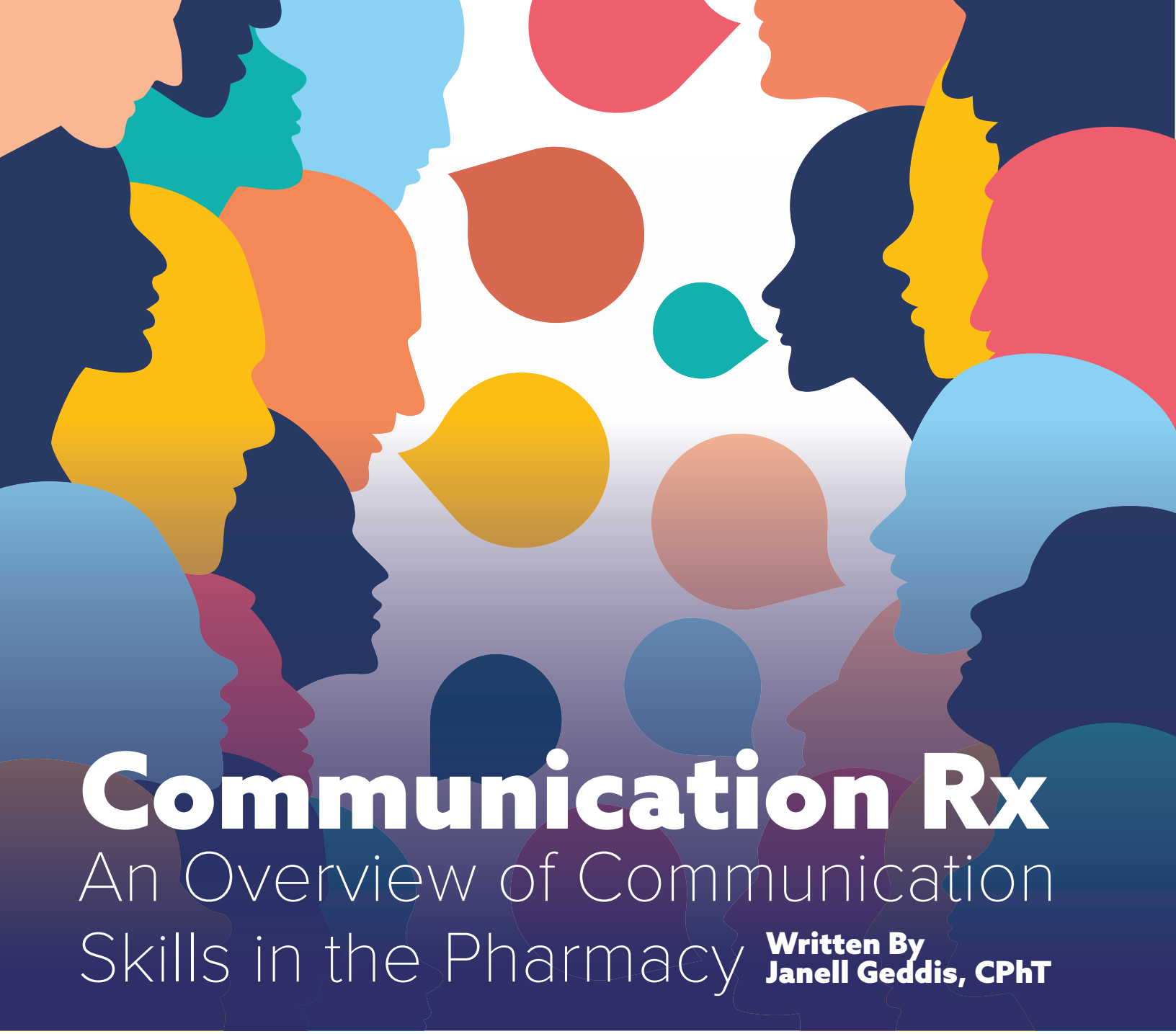
6. After how many hours do manufacturers, repackagers, wholesale distributors and dispensers notify the FDA and their immediate trading partners if a product has been identified as illegitimate or suspect?
A. 24 hours
B. 72 hours
C. 48 hours
D. 1 week

7. What caused the FDA to write the Compounding Quality Act?
A. A hospital dispensed expired medications that killed several patients
B. A compounding center skipped steps in compounding that resulted in a fungal meningitis outbreak
C. A doctor's office combined medications for chemotherapy without sterile preparation and infected several patients with hepatitis
D. A compounding pharmacy made errors in compounding that resulted in a staph outbreak in several hospitals

8. Which USP standard addresses sterile product compounding?
A. USP <797>
B. USP <795>
C. USP <799>
D. USP <800>

9. What type of determination can the HH Secretary provide?
A. Section 319 Determination, which is a declaration of a public health emergency
B. Section 419 Determination, which is a declaration of a public health emergency
C. Section 319 Determination, which is a declaration of an endemic
D. Section 419 Determination, which is a declaration of a pandemic

10. Which of these is not considered a "trading partner"?
A. Manufacturer
B. Wholesale Distributor
C. Repackager
D. Patient



Communication Rx

An Overview of Communication Skills in the Pharmacy

Written By
Janell Geddis, CPhT

Communication in the pharmacy is a crucial skill, whether with the patients or other co-workers. Knowing how to communicate properly can go a long way in ensuring you and your pharmacy implement best practices to provide essential care to patients and healthy work environments with other co-workers.

Effective Communication

Coordination is key within a pharmacy, especially between co-workers. The members of your pharmacy team must have effective communication, which is essential to coordinate patient care. For instance, regardless of the setting or situation, you must ensure that all parties clearly understand the point of a conversation. When pharmacy staff works as a team with excellent communication skills, they can deliver quality service to their patients.

Therefore, pharmacies should implement effective communication standards. Pharmacy members also need good communication skills to encourage patient compliance. For example, pharmacies must ensure that medications are delivered to the correct patient as prescribed and encourage compliance with medication instructions to promote the best outcomes for patients' health.

As pharmacy technicians, we play a crucial role in that process. Therefore, effective communication with patients and co-workers is vital to ensure patients receive the correct information, medication, and dosage.

Lastly, effective communication creates a positive environment. As a result, pharmacy technicians can more easily work together and have effective outcomes with our work.

Methods of Communication

The four primary methods of communication are verbal, non-verbal, written, and visual.

Verbal

Verbal communication includes the words people speak to each other, either in person or through technology. We share essential information regarding patients and workflow operations with verbal communication. However, pharmacy technicians must ensure that patients understand when sharing critical information about their medication. You have to be clear because what you say-- and how you say it will--affects how patients respond. Always confirm that patients understand you. Often, information goes in one ear and out the other if not displayed correctly, leaving patients unsure of what was said or how to take their medication correctly.

Listen to ensure they understand what is said. For instance, you can pause while sharing information to make sure a patient understood what was said. Verbal communication is especially important for giving patients information about their medication. You never want a patient to walk away from a pharmacy counter confused about the information they received.

Non-Verbal

Non-verbal communication revolves around body language and facial expressions. After all, patients pick up non-verbal cues that do not involve words. Behavioral patterns, clothing choices, and overall physical appearances also contribute to non-verbal communication.It is important to make good eye contact, display positive facial expressions, and react to patients' words without emotional turnoffs. Don't use too many hand gestures or movements to distract patients. Fidgeting or tapping a pen on the counter is distracting, too. Likewise, don't talk with gum in your mouth because it prevents people from understanding you.

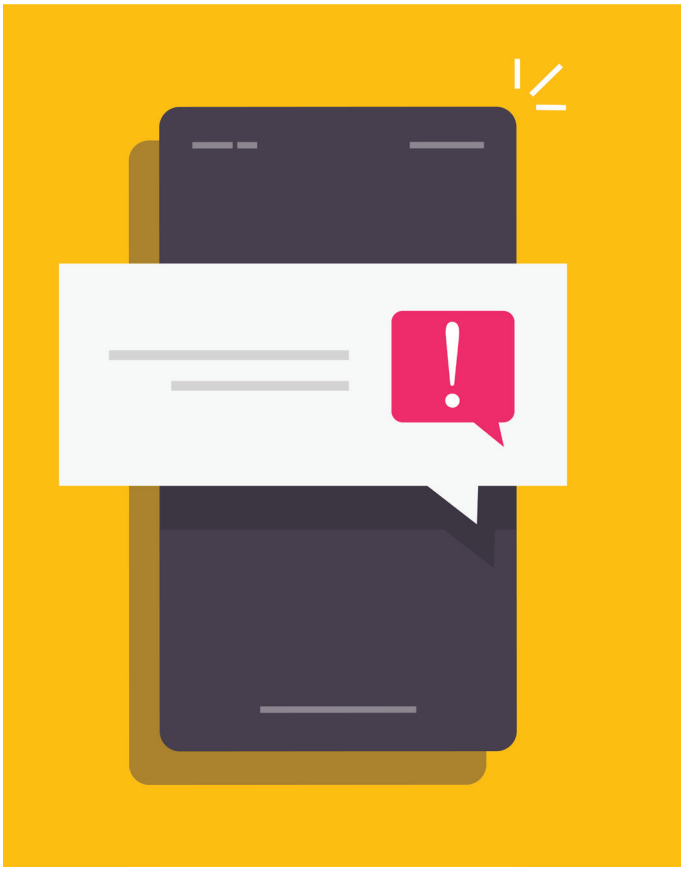
Your tone of voice is important, too, because it sets the emotion in an interaction. You don't want to talk too low, making it difficult to be heard or too loud not to appear rude. Other non-verbal communication cues include clarity of speech, voice pitch and volume, and the presence of pauses when speaking.

Furthermore, proper posture shows confidence. For example, if you slump, anything you say or do could come off as a lack of confidence. As a result, patients might not show trust in what you say or do.

Written

Written communication is any interaction with written words, whether handwritten or typed. Examples of written communication include emails, department memos, newsletters, schedules, research articles, and even social media.

A person's writing can make or break an interaction with written communication. If the person sharing vital information has poor handwriting,



a patient or co-worker can make mistakes when reading medication instructions. Therefore, it is important to ensure handwritten notes are legible and understandable. However, notes should preferably be typed. Unclear written communication can potentially inhibit a patient's health literacy and cause medication errors. Therefore, it is important to break down instructions and make them explicit. Plus, remember that not everyone shares the same thinking pattern, so instructions must be understandable by anyone who reads them.

Written communication is especially important for caregiver-patient interactions. A caregiver is responsible for a patient's needs, so the caregiver must be given proper instructions, too. Ensure that a caregiver can easily interpret the words you write, especially if words have dual meanings. Furthermore, do not write emails in all caps, as it can be interpreted as offensive yelling. Remember to be conscious of the length of an email as well.

Plus, it is more courteous to send lengthy information as an attachment rather than in the body of an email. Lastly, always ensure that the subject line prompts the recipient to open the email. Subject lines should also include the topic so patients can search their inbox by subject and quickly find a message if needed.

If you post department memos or flyers inside or around the pharmacy, remember to use big fonts and attractive colors to get attention. Newsletters can be helpful as they can relay updates about what is happening in a pharmacy. A newsletter can ultimately keep people engaged and see an overview of what is happening with the pharmacy. Schedules must be effective to avoid creating confusion within your pharmacy. Printed and posted monthly schedules lack effectiveness as too many people can scratch out information on a schedule. It could be very effective to hand out schedules in smaller increments, such as daily or weekly.

Research articles are always suitable forms of communication, but always ensure they are scholarly or have been peer-reviewed. Lastly, social media is an excellent written form of communication but avoid overly casual posts. Many emojis and shortened words that many people may not be familiar with, so do not assume everyone will understand what you write.

Visual communication comes in signs, infographics, and even pictures. This form of communication can be effective in cases of patient literacy issues. For example, when patients do not know the meaning of specific terminology, visual communications can still convey information. For example, auxiliary labels are a good form of visual communication.

Visual communication methods can also add emphasis to important information. For example, when patients see an infographic or chart, they understand that the information is important and are more likely to read it.

Best Practices for Effective Communication with Co-Workers

Strong communication with co-workers is important for a healthy and productive working environment.

Always be an active listener. Ask co-workers questions or make a statement that allows

them to know you are staying engaged with them. Always accept differences. People come from different cultures, and we have to admit differences with our co-workers. The differences may even lead to a flow of other ideas.

Be proactive. If you are leaving your shift and handing the reins over to the next co-worker, be sure to give them updates from your shift. These updates ensure that a pharmacy operates as a unit. The more information you share, the better. Understand your job responsibilities and what you are responsible for on any day. Some pharmacies shift duties from day to day, so be aware of your daily work responsibilities. Work on forming positive relationships with your co-workers. You don't necessarily have to become friends with them, but you will have a better work experience if you develop positive relationships.

Ask for help or questions. Don't be afraid to ask questions. You're not a solo employee but have a whole team in the pharmacy. You're all trying to meet the same goal: provide the best care possible for your patients. Focus on your patients and quality healthcare. Your patients' best interest is always your end goal.

Best Practices for Effective Communication with Patients

Strong communication skills with patients are important to ensure the patient's best interest is always on top. As with co-workers, be an active listener with patients. Listen to patients' needs and make sure you understand them. When dealing with patients, try to accept their differences. After all, they probably don't know everything about the medications they take, so be sure to listen to their questions and accept different ways of thinking. Be respectful and empathic to patients. Sometimes, patients who come into the pharmacy can be in frustrating situations, but it is important to maintain your composure when helping them. Remember to assess your body language.

Even if you're not directly giving verbal information, patients can pick up on visual cues from your body language. Be engaging, clear, and concise. Don't use common pharmacy jargon that patients do not know. Lastly, use simple written instructions and even graphics when possible. Give people multiple ways to understand how to comply with their doctor's medication instructions.

MEMBER SPOTLIGHT

Sharon Garrett, CPhT

ABOUT SHARON GARRETT

My name is Sharon Denise Garrett, CPhT. I am originally from Detroit, but now live in New Orleans. I came to New Orleans because I got accepted to Xavier University of Louisiana in June 2017. I was pursuing my dream of becoming a Pharmacist. My pharmacy background started in retail with Rite Aid Pharmacy in 2008. But my specialty for the past 9 years has been: Sterile Compounding IVs (Chemo and Non-Chemo). My pharmacy passion is preparing Pediatric Sterile Compounding Doses and IVs (Chemo and Non-Chemo).

WHEN DID YOU FIRST BECOME INTERESTED IN BECOMING A PHARMACY TECHNICIAN?

I became interested in being a pharmacy technician back in April 2007. I graduated from high school in 2003 and was tired of working at the local Wendy's. I wanted a career in healthcare and was terrified of drawing blood, at the time. Pharmacy was the best choice out of all the options. I completed my program in January 2008 with a GPA of a 3.67. And I have been working as a pharmacy technician since August 2008, becoming a Certified Pharmacy Technician in May 2013.

TELL US ABOUT YOUR CURRENT POSITION/CAREER.

Currently, I am the Pharmacy Technician Program Director for Unitech Training Academy-New Orleans. I instruct the morning and evening students in the aspects of pharmaceutical calculations, aseptic technique, compounding, medical terminology, pharmacology, and career placement. Provide instruction and concepts of pharmacy in areas such as billing, pharmacy protocol, legal aspects, ethics, and pharmacy technology. I am also a member of ASHP PTF MOeC Advisory Board, NPTA Advisory Board, and also PTEC. My desire is to further my career in the education sector for pharmacy technicians. I have an unquenchable thirst for patient safety and care. I love being a part of the advancements and improvements of Pharmacy, as it pertains to pharmacy technicians and pharmacy technician candidates.

WHAT WAS THE EDUCATIONAL PROCESS YOU TOOK TO GET WHERE YOU ARE TODAY?

I attended Kaplan Career Institute back in April 2007. I worked in retail pharmacy setting from 2008 through 2013. Once I become a CPhT in May 2013, I landed my first hospital job at Henry Ford Wyandotte Hospital, in Wyandotte, MI (12 miles south of Detroit, MI).

WHAT ADVICE DO YOU HAVE FOR TECHNICIANS WHO FEEL TRAPPED OR IN A RUT IN THEIR CURRENT POSITION?

Keep advancing ahead. Pharmacy is a forever changing industry. In the past 3 years alone we have seen a great change in all settings of pharmacy. We no longer have to remain in one setting. You can go from working in retail, hospital, home infusion, and nuclear all in one career. Explore all new options that are available to us.

WHAT ADVICE WOULD YOU GIVE TO A STUDENT OR BRAND NEW TECHNICIAN?

If you are good to your pharmacist, they will always be good to you. If it wasn't for Violette Lake-Brown, RPh of Detroit, MI and Yvette Duncan, RPh of New Orleans, LA, I probably wouldn't be as career driven and determined as I am. These two women embody everything I aspire to be in all pharmacy settings.

WHAT IMPACT HAVE PROFESSIONAL ASSOCIATIONS, SUCH AS NPTA, HAD ON YOUR CAREER & PROFESSIONAL DEVELOPMENT?

NPTA has allowed me to discover and teach my students that you don't have to be "just" a pharmacy technician. I speak about Mike Johnston, CPhT and creator of NPTA, often in class for two reason. Firstly, because I use his book "The Pharmacy Technician, 3rd Edition" daily. My students are not a fan of this book, but my PTCB pass rate for my campus proves that we are using the best resources and material. It's a in depth book that teaches far above what most ASHP entry-level programs require. And secondly, because he too is a Certified Pharmacy Technician. My student and I all thought that a Pharmacist wrote our textbook. But for my students to find out all the greatness a technician can do, not only as an in-service technician, but on the academia side, it's absolutely amazing.

IS THERE ANYTHING ELSE YOU WOULD LIKE TO ADD?

I would like to thank my Unitech Training Academy – New Orleans/ Regional Director, Mrs. Erika Santos, for hiring me on the spot and giving me the opportunity to be the Pharmacy Technician Program director at her campus. I also want to thank, Ms. Nyra George and Ms.Tanara Bazanac for all their help and support of me. All three ladies have offered me guidance to surpass all my goals at the New Orleans campus and I will forever be grateful for their encouragement.

ARE YOU READY TO ADVANCE YOUR CAREER?

WE'VE GOT ALL THE ESSENTIALS.

NPTA's new initiative, BPTS, is designed to help you advance in your career. The goal with BPTS is to help 1,000 CPhTs earn their CPhT-Adv by the end of 2022! All ten of the essential training certificate programs for the pharmacy technician profession are offered through BPTS, including: Billing & Reimbursement, Controlled Substances Diversion Prevention, Hazardous Drug Management, Immunization Administration, Medication History, Medication Therapy Management, Point-of-Care Testing, Regulatory Compliance, Supply Chain Management, and Technician Product Verification.

NPTA National Pharmacy Technician Association

BPTS BOARD OF PHARMACY TECHNICIAN SPECIALTIES

PHARMACYTECHNICIAN.ORG