mississippi Pharmacist

Quarterly publication of the Mississippi Pharmacists Association | Summer 2019

A BUYING GROUP FOR INDEPENDENT RETAIL PHARMACIES

PACE ALLIANCE

Good for your pharmacy and your profession.

...owned by 19 State Pharmacy Organizations
...a leader negotiating on behalf of independents
...saving pharmacies money for more than 25 years
...financially supports the State Pharmacy Organizations
...serving pharmacies nationwide

1-888-200-0998 | www.pacealliance.com

mississippi Pharmacist

Vol. XLIV, No. 2 | Summer 2019 | Growing stronger together at MPhA

In this issue...

MPhA Continuing Education

Advertisers Index

Friend us! Follow us! Network with us!

www.facebook.com/mississippipharmacists

@mphaRx

@mspharmacists

http://www.linkedin.com/groups/Mississippi-Pharmacists-Association-4220019

This emblem designates *Mississippi Pharmacist* is a member of the State Pharmaceutical Editorial Association, recognizing its high journalistic standards in endeavoring to keep its members well informed on all developments relative to the pharmaceutical profession.

Mississippi Pharmacist (ISSN0161-3189) is the official publication of the Mississippi Pharmacists Association, 341 Edgewood Terrace Drive, Jackson, MS 39206-6299; telephone 601-981-0416. Published quarterly in January, April, July and October. It is distributed to members as a regular membership service, paid for through allocation of membership dues. Periodicals postage paid at Jackson, MS. POSTMASTER: Send address changes to Mississippi Pharmacist, 341 Edgewood Terrace Drive, Jackson, MS 39206-6299. Unsigned editorials do not necessarily express the official viewpoint of the Mississippi Pharmacists Association. Signed articles express the viewpoint of the writer and not necessarily that of the association. All advertisements accepted subject to approval.

mississippi Pharmacists Association

Upcoming Events

Immunization Certificate Training Program
Thursday, August 29
Jackson, MS

Consultant Seminar
Tuesday, September 24
Oxford, MS
and
Thursday, September 26
Jackson, MS

Fall Seminar and Residency Showcase
Tuesday, October 8
Jackson, MS

For more information visit
www.mspharm.org

EXECUTIVE DIRECTOR'S MESSAGE

I hear from members on a daily basis who are worried about the future of the profession. Pharmacists are concerned about reimbursements, PBMs, burnout, prescription per hour limits, unions for pharmacists, reducing college of pharmacy enrollment, mandatory breaks, and the list goes on and on. The current model for payment is based on margins for prescription drugs and this model enables competing interests to chip away at pharmacy profits and many feel they are at their breaking point. It is apparent that a product-based compensation cannot support or sustain the current pharmacy practice model. Pharmacists must seek a new model, which not only recognizes your knowledge and abilities, but also has a positive impact on your patients.

The Mississippi Pharmacy Practice Act will be up for discussion during the 2020 legislative session. This piece of legislation influences every aspect of the profession of pharmacy and how you care for your patients. There are 174 state legislators in Mississippi and only one of them is a pharmacist. That means that 173 people who do not understand pharmacy will be voting on legislation that impacts your daily life. It is up to us to educate them issues affecting the profession and changes that you need. The good news is that there are over 3,300 licensed pharmacists living in the state of Mississippi-if everyone voiced their concerns with their Senator and Representative and contributed to the MS PharmPAC, it would make a huge difference. I guarantee that there is a pharmacist in this state who knows every elected official personally, we just have to make those connections.

Pharmacists need to constantly stay active, keeping issues that are important to you on the minds of elected officials, and establish relationships with

Brynna Clark
MPhA Executive Director

legislators- especially those who will be newly elected in November. Other stakeholders understand that public policy is a critical part of their work and they are personally participating in the legislative and regulatory process, but pharmacists must understand this too! If pharmacists' interests aren't understood and represented, then those interests will, unfortunately, be left out. BUT If pharmacists band together, your voice will be heard loud and clear at the state capitol.

What you can do right now-

1. Contribute to the PAC- I cannot stress this one enough. If you are able, please consider a contribution to the PAC. MPhA PharmPAC's aim is to support candidates who understand our issues and work with us in developing sound public policies. Through PAC contributions and other outreach, MPhA is able to build positive relationships with elected officials and candidates who make policy decisions affecting pharmacists. The PAC enables MPhA members to pool their resources to promote common interests and have a greater impact than any one member could individually.

2. Lobby every day- Call your elected officials and let them know your concerns, it's their job to help their constituency and your voice is so much stronger as a voter or employer in their district. Don't want to do it alone? Plan a coffee or a breakfast with pharmacists in your area to meet with them or plan a tour of where you work. Need some additional help? I would be happy to help you coordinate or provide talking points, please let me know!

3. Recruit your colleagues to join MPhA- We would be so much more powerful as a lobbying organization if I could say that I spoke on behalf of every pharmacist in the state of Mississippi. The more engaged members we have, the stronger our voice will be.

4. Join me at the Capitol- Whether it's Capitol Day in January or any other time during session, if you have a morning off, let's meet at the Capitol and talk about pharmacy with those representing your district.

5. Stay involved and informed- Visit our new and improved website at www.mspharm.org where we will have resources on bills, talking points, and more information about how you can get involved with committees, events, and dates for continuing education.

Pharmacists in Ohio, Tennessee, Washington, and Oregon have made national news by enhancing scope and taking on the PBMs and this is not by accident. Their pharmacists are active and engaged when it comes to government affairs. Those states have proven how powerful pharmacists can be and if they can do it, so can Mississippi. But it is going to take work from every pharmacist in the state, and if you and your colleagues are not fighting for pharmacists, who is?

To contribute to the MS PharmPAC please go on our website or call the office at 601.981.0416.

Regards,
Brynna

A special thanks to outgoing
MPhA President,
Lauren Bloodworth.
Your commitment to MPhA and to
the field of pharmacy is remarkable.

What District Do You Live In?

DISTRICT 1

Counties	Cities
Hinds	Clinton, Jackson, Raymond, Byram, Bolton, Edwards, Terry, Utica
Issaquena	Mayersville
Madison	Madison, Ridgeland, Canton, Gluckstadt
Rankin	Brandon, Flowood, Pearl, Richland, Pelahatchie, Puckett, Florence
Sharkey	Rolling Fork, Anguilla, Cary
Simpson	Magee, Mendenhall, D'Lo
Warren	Vicksburg
Yazoo	Yazoo City, Benton

DISTRICT 3

Counties	Cities
Coahoma	Clarksdale
Desoto	Olive Branch, Hernando, Southaven, Horn Lake
Lafayette	Oxford, Abbeville, Taylor
Panola	Batesville, Como, Sardis
Quitman	Marks
Tallahatchie	Charleston, Sumner, Tutwiler, Webb
Tate	Senatobia, Coldwater
Tunica	Tunica
Yalobusha	Water Valley, Oakland, Tillatoba, Coffeeville

DISTRICT 5

Counties	Cities
Attala	Kosciusko, Ethel, McCool, Sallis
Calhoun	Calhoun City, Bruce, Derma, Vardaman
Chickasaw	Houston, Okolona
Choctaw	Ackerman, French Camp, Weir
Clay	West Point
Lowndes	Columbus, New Hope, Caledonia, Artesia, Crawford
Monroe	Aberdeen, Amory, Nettleton
Montgomery	Winona, Kilmichael, Duck Hill
Oktibbeha	Starkville, Sturgis
Webster	Stewart, Eupora, Mathiston, Maben

DISTRICT 7

Counties	Cities
Covington	Collins, Mount Olive, Seminary
Forrest	Hattiesburg, Petal
Greene	Leakesville, McLain, State Line
Jasper	Bay Springs, Heidelberg, Stringer
Jeff. Davis	Bassfield, Prentiss
Jones	Laurel, Ellisville
Lamar	Lumberton, Purvis, Sumrall
Marion	Columbia, Sandy Hook
Perry	Beaumont, New Augusta, Richton
Smith	Taylorsville, Mize, Raleigh
Wayne	Waynesboro

DISTRICT 2

Counties	Cities
Bolivar	Cleveland, Rosedale, Mound Bayou, Shaw, Shelby
Carroll	Carrollton, North Carrollton, Vaiden, McCarley
Grenada	Grenada
Holmes	Durant, Lexington, Cruger, Goodman, Pickens, Tchula, West
Humphreys	Belzoni, Isola, Louise, Silver City
Leflore	Greenwood, Itta Bena, Morgan City, Sidon, Schlater
Sunflower	Indianola, Drew, Moorhead, Ruleville, Doddsville, Inverness, Sunflower
Washington	Greenville, Hollandale, Leland, Towns, Arcola, Metcalfe

DISTRICT 4

Counties	Cities
Alcorn	Corinth, Rienzi
Benton	Ashland, Hickory Flat, Snow Lake Shores
Itawamba	Fulton, Mantachie, Tremont
Lee	Tupelo, Baldwyn, Verona, Saltillo, Shannon
Marshall	Holly Springs, Byhalia, Potts Camp
Pontotoc	Pontotoc, Ecru
Prentiss	Booneville, Jumpertown, Marietta
Tippah	Ripley, Blue Mountain, Dumas, Walnut, Falkner
Tishomingo	Iuka, Belmont, Burnsville, Golden, Tishomingo
Union	New Albany, Myrtle, Blue Springs

DISTRICT 6

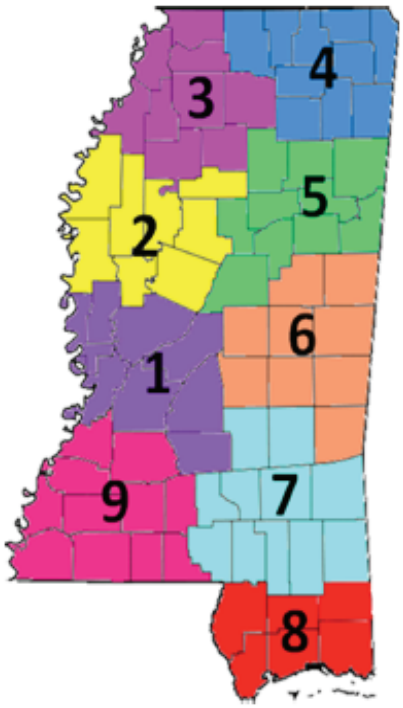
Counties	Cities
Clarke	Quitman, Enterprise
Kemper	Dekalb, Scooba
Lauderdale	Meridian, Marion
Leake	Carthage
Neshoba	Philadelphia
Newton	Newton, Union
Noxubee	Macon, Brooksville, Shuqualak
Scott	Forest, Morton, Lake, Sebastapol
Winston	Louisville, Noxapater

DISTRICT 8

Counties	Cities
George	Lucedale
Hancock	Bay St. Louis, Waveland, Diamondhead, Kiln
Harrison	Biloxi, D'Iberville, Gulfport, Long Beach, Pass Christian, Lyman, Saucier
Jackson	Vancleave, Gautier, Moss Point, Ocean Springs, Pascagoula
Pearl River	Lumberton, Picayune, Poplarville
Stone	Wiggins, Perkinston

DISTRICT 9

Counties	Cities
Adams	Natchez
Amite	Gloster, Liberty
Claiborne	Port Gibson
Copiah	Crystal Springs, Georgetown, Hazlehurst, Wesson
Franklin	Bude, Meadville, Roxie
Jefferson	Fayette
Lawrence	Monticello, New Hebron, Silver Creek
Lincoln	Brookhaven
Pike	Magnolia, McComb, Osyka, Summit
Walthall	Tylertown
Wilkinson	Centreville, Crosby, Woodville



Managing the Measles Pandemonium

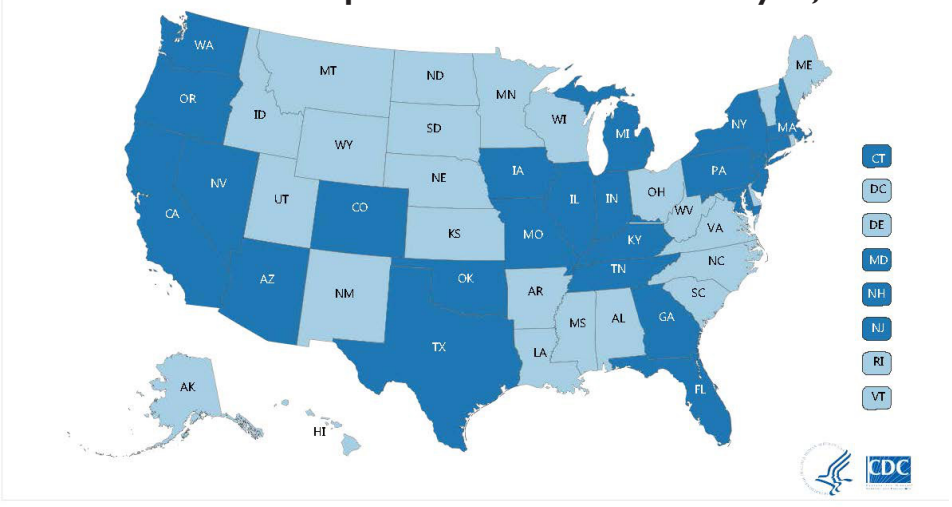
By: Natalie Kern, PharmD, Robert Ross, PharmD, and Megha Patel, PharmD

Recent measles outbreaks throughout the United States has left Americans in fear. The CDC reports over 880 individual cases of measles across 24 states from January 1 to May 17, 2019 (see Figure 1). This is the greatest number of reported cases in the US since 1994.[1] Therefore; Americans are urgently seeking the advice of healthcare providers like pharmacists on how they can stay protected. Measles were considered eradicated from the United States in 2000. However, cases and outbreaks still occur every year in the United States. In 1912, the measles first became a nationally notifiable disease in the United States, averaging 6,000 measles-related deaths each year in the first decade with nearly all children being infected with measles by the time they reached 15 years of age. In 1963, the first measles vaccine was developed by isolating measles strains in the blood of a 13-year-old-boy. Five years later, this vaccine was improved and weakened to the version of the vaccine we administer today. Today, the measles vaccine is usually combined with mumps and rubella (MMR), or combined with mumps, rubella and varicella (MMRV).[2]

When the vaccine was first released, the CDC recommended everyone receive a single dose when they reached 12 months of age. A series of worldwide outbreaks in 1989 caused the CDC to amend this vaccination schedule to the 2-dose series we use today.[3] This second dose increases the effectiveness of protection against measles from 93% to 97%[4], leading to less outbreaks if everyone is vaccinated.3 Today, the recommendation is for children to receive the first dose when they are between 12-15 months old and the second dose when they are 4-6 years old. If a child under 12 years old is unvaccinated, they can receive the two doses a minimum of four weeks apart. Since measles is mostly spread to the United States by outside international travelers visiting here, children traveling internationally should have some immunity before their departure. Children 6-11 months old should receive one dose before leaving the country and two doses spaced four weeks apart when they reach 12-15 months of age. For children that are at least 12 months of age and eligible to vaccinate, they should receive both of their two doses four weeks apart and before departure, if possible.[5]

A booster dose for the MMR vaccine is recommended in most patients older than 12 years old with no evidence of MMR immunity.[4] This evidence of immunity includes being born before 1957 (except for healthcare workers), documented receipt of both doses of MMR, or documented laboratory evidence of immunity or disease.[6] Since nearly all children were infected with the measles before the vaccine was marketed, the majority of individuals born before 1957 are likely to have been infected naturally and immune to measles, mumps, and rubella.[4] Moreover, exceptions to this include healthcare workers, pregnant women, and those infected with HIV. Despite the year they were born, all healthcare workers without evidence of immunity should receive two doses of the MMR vaccine four weeks apart. The MMR vaccine is contraindicated in pregnancy, so a pregnant woman without evidence

FIGURE 1: States with Reported Measles Cases as of May 17, 2019[1]



of immunity should receive one dose after pregnancy.[3-4,6] Patients with an HIV infection and no evidence of immunity should receive two doses of the MMR vaccine four weeks apart only if their CD4 count is greater than or equal to 200.[6] Although the CDC does not specify when titers are recommended, an MMR titer is commonly used for students and employees to submit proof of MMR immunity for compliance requirements if they are unable to show proof of receiving the vaccine series.[7]

Measles is still a deadly disease and typically appears one to two weeks after infection. Measles begins with symptoms of fever, runny nose, cough, red eyes, and sore throat. Thereafter, the patient may develop small white spots in the mouth called Koplik spots and then a rash that spreads over the body within five days after symptoms appear.[8] Measles is highly contagious and spreads through coughing and sneezing; therefore, it is important to know who is at risk for contraction. Overall, unvaccinated young children, healthcare workers, and pregnant women are at highest risk of measles and its complications; however, any person lacking immunity to measles (who has not been vaccinated or was vaccinated but did not develop immunity) can become infected.[3,4]

With the recent outbreaks of measles in several states in the U.S., many people are becoming concerned with whether or not they are protected. To be prepared to help these patients, remember:

1. Most adults have received two doses as a child, but they can receive a booster dose if they do not have proof of immunity;
2. People born before 1957 are protected from the measles and do not need to receive the vaccine (with the exception of healthcare workers); and
3. For those unvaccinated or unable to be vaccinated due to contraindications, recommend others to receive the vaccine to provide herd immunity for these individuals.[3-6,9]

Though no measles cases have been reported in the state of Mississippi, pharmacists in the field need to be prepared when patients come to us seeking advice on the matter. Despite patients' fears, pharmacist are an ideal healthcare professional to educate the public and promote vaccination in those indicated to prevent the further spread of measles.

References:

1. Measles Cases and Outbreaks. CDC; [cited 2019 Apr 29]. Available from: https://www.cdc.gov/measles/cases-outbreaks.html
2. History of Measles. CDC; [cited 2019 Apr 29]. Available from: https://www.cdc.gov/measles/about/history.html
3. Measles. WHO; [cited 2019 Apr 29]. Available from: https://www.who.int/news-room/fact-sheets/detail/measles
4. For Healthcare Professionals. CDC; [cited 2019 Apr 29]. https://www.cdc.gov/measles/hcp/index.html
5. Birth-18 Years Immunization Schedule. CDC; [cited 2019 Apr 29]. Available from: https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html
6. Adult Immunization Schedule. CDC; [cited 2019 Apr 29]. Available from: https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html
7. MMR Titer. Accesa Labs. 2019 Apr 19 [cited 2019 Apr 29]. Available from: https://www.accesalabs.com/MMR-Titer
8. Signs and Symptoms. CDC; [cited 2019 Apr 29]. https://www.cdc.gov/measles/about/signs-symptoms.html
9. Measles, Mumps, and Rubella (MMR) Vaccination: What Everyone Should Know. CDC; [cited 2019 Apr 29]. Available from: https://www.cdc.gov/vaccines/vpd/mmr/public/index.html

Engaging Change: A Pharmacist's Guide to Smoking Cessation Therapy

By Natalie Kern, PharmD and Laurel Sampognaro, PharmD

Peer Reviewed by: Alice Kelly Morgan, PharmD and Stephanie Kile, PharmD

INTRODUCTION

In January 2017, the U.S. Centers for Medicare & Medicaid Services (CMS) published an informational bulletin encouraging states to adopt practices that "facilitate easier access to medically necessary and time-sensitive drugs for Medicaid beneficiaries," such as smoking cessation medications. CMS urged states to adopt legislation that expanded the scope of practice of pharmacists to facilitate this access.[1] In response, many states have utilized pharmacists to expand cessation care by granting prescriptive authority and offering more pharmacist-led cessation programs. While pharmacists in the state of Mississippi (MS) do not have the authority to prescribe smoking cessation medications, their accessible nature places them in an optimal position to provide cessation care to the communities of MS.[2]

The 2018 Mississippi Social Climate Survey of Tobacco Control reports a 17.9% prevalence of cigarette use in MS adults.[3] The report reveals a 2.3% increase from the 2017 Survey,[4] making it no surprise that almost 5,000 lives are still taken each year as a result of cigarette smoking in Mississippi.[6] Each year, the American Lung Association awards letter grades, with A as the highest and F as the lowest, to states and the federal government in five categories pertaining to their tobacco control laws and policies. In the 2019 "State of Tobacco Control," Mississippi received a letter grade of "F" in all five categories, including "Access to Cessation Care."[6] While all healthcare providers can take a role in making care more accessible, pharmacists in Mississippi are well positioned to take the lead in positively influencing this rating for our state. Therefore, this continuing education will explore nicotine pathophysiology, the role of the pharmacist in engaging change, and medication-assisted treatment options for smoking cessation.

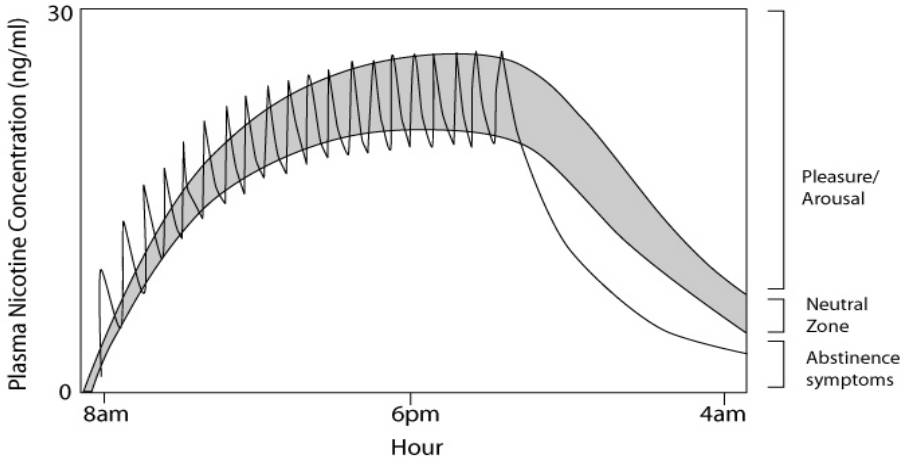
NICOTINE PATHOPHYSIOLOGY

It only takes 10 to 20 seconds before nicotine from a cigarette reaches the user's brain. In that time, Nicotiana tabacum from the tobacco plant is vaporized and enters the body by pH dependent absorption. As it enters the alkaline nature of the lungs, it is readily absorbed into the respiratory endothelium and binds to nicotinic receptors. Nicotine's agonist effects trigger the release of numerous neurochemicals, including dopamine, norepinephrine, acetylcholine, glutamate, and serotonin. The most notable of these neurotransmitters is dopamine. Each contributes to the euphoric effects of nicotine on the smoker, such as pleasure, arousal, appetite suppression, and cognitive enhancement.[7] Pharmacologic effects include increased heart rate and cardiac stroke volume. At higher doses, nicotine continuously releases dopamine that creates a positive feedback loop or reward center in the limbic system of the brain. This repeated nicotine exposure leads to neuroadaptation, causing the user to become dependent on nicotine and grow tolerant to the initial effects of smoking. Users consequently crave nicotine more and experience withdrawals without it.[7,8] In the depiction below (FIGURE1), the nicotine concentration directly correlates to the physiology and psychological effects of nicotine.[7] Abstinence symptoms when nicotine concentrations are depleted include anxiety, inability to concentrate, agitation, and strong cravings for tobacco.[7,8]

ENGAGING CHANGE

Clinical practice guidelines for Treating Tobacco Use and Dependence were first published by the US Public Health Services in 2000 and later updated in 2008. The 2008 update reflects the most recent practice guidelines used today.[9] Due to nicotine's ability to illicit physical and behavioral dependence, cessation treatment should address both physiological and behavioral

FIGURE 1: Correlation between time and plasma nicotine concentration.[7]



Reprinted with permission. Benowitz. (1992). Med Clin N Am 2:415–437.

aspects of a patient's tobacco use. Practice guidelines support the combination of counseling and pharmacological treatment as they lead to better outcomes than either therapy alone.[7,9-10] Healthcare professionals wishing to assist in behavioral therapy may utilize the 5A's: Ask, Advise, Assess, Assist, Arrange and the Theoretical Models of Change when interacting with patients at each encounter.[7,9] However, for the purpose of this continuing education only the pharmacologic treatments will be discussed in further depth.

MEDICATION-ASSISTED TREATMENT OPTIONS

There are seven FDA approved pharmacological treatments for smoking cessation. These include five nicotine replacement therapies, sustained-release bupropion (Zyban®), and varenicline (Chantix®).[8,9] All agents help patients quit smoking by reducing nicotine withdrawal symptoms of anxiety, irritability, restlessness, and the urge to smoke.[7,8] For most patients, therapy is dependent on patient preference. However, a few notable exceptions exist in some populations that may be contraindicated for therapies due to coexisting health conditions.[7] Pharmacological treatment is recommended to only patients 18 years of age and older, as pharmacotherapies are not indicated in younger patients. Patients younger than 18 years should seek behavioral therapy.[7-9]

Nicotine replacement therapy (NRT) was the first proven effective treatment for smoking cessation.[8] NRT works by reducing the nicotine/tobacco withdrawal symptoms and cravings of the smoker by slowly tapering the amount of nicotine the patient receives. Available therapies include non-prescription patches, gum, and lozenges. Prescription only forms of NRT include the Nicotrol® inhaler and nasal spray. The wide variety of dosage forms allows clinicians to create a customized treatment plan suited to the patient's preference.[7-9] Refer to TABLE 2 for further dosing recommendation and important counseling points for patients using NRT.[8,11]

Sustained-release bupropion (Zyban®) reduces cravings and withdrawal symptoms by blocking reuptake of neurotransmitters dopamine and norepinephrine. Varenicline (Chantix®) acts as a partial nicotinic receptor agonist, generating low-level stimulation of the receptor while blocking nicotine's ability to bind.[7,8] This partial agonism not only reduces withdrawal symptoms but also blocks the surge of dopamine responsible for the positive feedback driving a smoker's reward center.[7] Unlike NRT, neither agents need to be tapered at the end of treatment.[8,11] sustained-release bupropion (Zyban®)and varenicline (Chantix®)have serious precautions and contraindications that should be considered, especially in patients with a history of mental illness or seizures (TABLE 3).[11]

Combination NRT shows greater abstinence rate than NRT monotherapy.[12] Nicotine therapies can be combined with each other, long-acting plus short-acting, or sustained-release bupropion (Zyban®) to increase long-term abstinence. More specifically, long acting patches may be combined with gum, lozenges, nasal spray, and inhalers. Bupropion also may be combined with patches.[9] However, no significant difference in effectiveness exists between the NRT combination therapy

TABLE 2: Nicotine Replacement Therapy clinical guidance[7,9]

NRT Dosage Form	DOSING	COUNSELING POINTS
NicoDerm CQ®	Apply patch to dry, clean skin upon waking of quit date. If smoking > 10 cigarettes/day: -21 mg/day patch for 6 weeks, then -14 mg/day patch for 2 weeks, then -7 mg/day patch for 2 weeks If smoking ≤ 10 cigarettes/day: -14 mg/day patch for 6 weeks, then -7 mg/day patch for 2 weeks	-Do not cut the patch -Remove before MRI -Can be combined with the gum or lozenges -Side effects include vivid dreams and skin irritation -Must be 18 years old to purchase.
Nicorette® Gum -max 24 pieces/day -park/chew 30 min Nicorette® Lozenge -max 20 lozenges/day -dissolve 20-30 min	If 1st cigarette is within 30 minutes of waking: -4 mg every 1-2 hours for 6 weeks, then -4 mg every 2-4 hours for 3 weeks, then -4 mg every 4-8 hours for 3 weeks If 1st cigarette is after 30 minutes of waking: -2 mg every 1-2 hours for 6 weeks, then -2 mg every 2-4 hours for 3 weeks, then -2 mg every 4-8 hours for 3 weeks	-Wait 15 minutes after eating or drinking -Minimum of 9 pieces/day for the first 6 weeks -Both are sugar-free and may delay weight gain when using strengths of 4mg -Can combine with the nicotine patch -Must be 18 years old to purchase.
Nicotrol® inhaler (Rx only)	Puff 6-16 cartridges/day over 20 minutes each for up to 12 weeks. A gradual reduction over additional 6-12 weeks can be done if needed.	-Wait 15 minutes after eating or drinking -NOT recommended for asthma or COPD patients
Nicotrol® nasal spray (Rx only) -max 5 doses/hour or 40 doses/ day -min 8 doses/day	Use 1-2 doses per hour for up to 3 months. May increase if needed. (1 dose = 1 spray into each nostril)	-Do not inhale or snort -Provides fastest delivery of all NRT and has highest dependence potential

TABLE 3: Sustained-release bupropion (Zyban®) and varenicline (Chantix®) clinical guidance[7,9]

MEDICATION	DOSING	COUNSELING POINTS
Zyban® (bupropion SR)	Begin one week before quit date, Take 150 mg daily for 3 days, then take 150 mg twice daily thereafter for up to 6 months	-Side effects of insomnia, can be decreased by taking first dose upon waking and the second dose eight hours following the first -NOT for patients with history of seizures and anorexia/ bulimia -Black Boxed Warning for suicidal thoughts -Side effects include dry mouth, insomnia, and headache
Chantix® (varenicline)	At least one week before quit date, Days 1-3, take 0.5 mg daily, then Days 4-7, take 0.5 mg twice daily, then Days 8 (or starting on quit date), take 1 mg daily thereafter for 12 weeks Alternative schedule: Begin dosing schedule above and then quit smoking between days 8 and 35 of treatment. An additional 12 weeks may be warranted to increase likelihood of long-term abstinence Reference package insert in severe renal impairment	-Take with food and full glass of water to reduce nausea -Decrease alcohol intake -Side effects include nausea, headache, insomnia, and abnormal or vivid dreams

and NRT plus sustained-release bupropion (Zyban®).[13] Some evidence shows that the use of combinational therapy, NRT plus sustained-release bupropion (Zyban®), may be more beneficial in patients with a history of depression.[14] This therapy may also be used in patients wishing to temporarily avoid post-cessation weight gain, as both sustained-release bupropion (Zyban®) and nicotine gum and lozenges at strengths of 4mg may delay weight gain in patients attempting to quit.[11,15] Unlike nicotine gum and lozenges, sustained-release bupropion (Zyban®)'s effects on weight gain are not dose-dependent. Increased doses of sustained-release bupropion (Zyban®) showed no evidence of inferior weight outcomes.[15]

Moreover, varenicline (Chantix®) is the only cessation agent recommended as monotherapy for its ability to demonstrate equal efficacy and long-term abstinence when compared to the combination therapies described previously.[16] Studies using varenicline (Chantix®) in combination with bupropion found no significant increase in long-term abstinence rates as compared to varenicline (Chantix®) monotherapy. In a double-blinded randomized control trial, combined use of varenicline (Chantix®) and sustained-release bupropion (Zyban®), compared with varenicline (Chantix®) alone, increased prolonged abstinence but not 7-day point prevalence at 12 and 26 weeks. Neither outcome was significantly different at 52 weeks.[17]

In selecting a therapy that is right for your patient, a patient's entire medical history must be considered as some cessation agents have significant contraindications.[7] While some are listed above, the most notable contraindications are in patients with a history of cardiovascular or psychiatric disorders. NRT may increase heart rate and blood pressure. Those with cardiovascular disease must be monitored regularly for changes in blood pressure.[8,9] Most importantly, NRT treatment should be avoided in patients who have experienced a myocardial infarction in the last 2 weeks, life-threatening arrhythmias, severe angina, and current pregnancy. NRT using prescription inhaler or nasal spray should be avoided in those with bronchospastic or reactive airway disease, as these dosage forms can cause respiratory irritation, cough, or rhinitis that may exacerbate symptoms of the disease.[7,9] In contrast, those patients wishing to receive sustained-release bupropion (Zyban®)or varenicline (Chantix®) should be screened for psychiatric disorders. sustained-release bupropion (Zyban®) has a black boxed warning for its risk of suicidal thinking, especially in adolescents and young adults who are taking an antidepressant. Therapy should be avoided in patients with severe seizure disorders, a history of anorexia or bulimia, and use of a MAO inhibitor. sustained-release bupropion (Zyban®)should only be used 14 days after discontinuing a MAO inhibitor. Lastly, varenicline (Chantix®) may cause serious neuropsychiatric effects, such as suicidal thinking. If the patient experiences abnormal behavior, mood changes, or depression, therapy should be immediately discontinued. Similarly, varenicline (Chantix®)may lower seizure threshold in patients with seizure disorders, increase the effects of alcohol leading to blackout, and may cause sleepwalking.[7-9]

MISSISSIPPI INITIATIVES FOR CHANGE

Certificate programs exist for individuals wishing to be formally trained to help others quit smoking. The University of Mississippi Medical Center (UMMC) offers a Tobacco Treatment Specialist (TTS) training program. This program prepares professionals with appropriate educational and experiential backgrounds to deliver a high-intensity, evidence-based, cognitive-behavioral plus pharmacotherapy treatment for nicotine dependence.[18] In addition, Mississippi has many resources for smokers with a willingness to quit. Pharmacists can refer patients to the toll-free Quit Line at 1-800-QUITNOW.[19] The UMMC ACT Center for Tobacco Treatment, Education, and Research provides free or minimal cost counseling, resources, and cessation aids to Mississippi

smokers. The center is located within the Jackson Medical Mall.[18] Lastly, the Mississippi Department of Health Office of Tobacco Control offers online resources and solutions for tobacco users across Mississippi.[20]

CONCLUSION

While the consequences of tobacco use may be fatal, they are 100% preventable through meaningful behavioral therapy and optimal pharmacotherapy.[9] Mississippi pharmacists have the opportunity to engage positive change within the smoking population in their state due to their accessible nature. Ample cessation resources and training are available to healthcare professionals and should be adequately utilized during cessation counseling and treatment in order to produce long-term outcomes.

REFERENCES:

1. Wachino V. State flexibility to facilitate timely access to drug therapy by expanding the scope of pharmacy practice using collaborative practice agreements, standing orders or other predetermined protocols. Available at: https://www.medicaid.gov/federal-policy-guidance/downloads/ cib011717.pdf. Accessed May 1, 2019.
2. Adams A, Hudmon K. Pharmacist prescriptive authority for smoking cessation medications in the United States. Journal Of The American Pharmacists Association: JAPhA [serial online]. May 2018;58(3):253-257. Available from: CINAHL Complete, Ipswich, MA. Accessed May 1, 2019.
3. Current Prevalence of Tobacco Products: 2018 Mississippi Social Climate Survey of Tobacco Control. MTD; [Cited on 10 May 2019]. Available at: https://mstobaccodata.org/wp-content/uploads/2019/01/2018-scs-ms-current-prevalence-fact-sheet.pdf.
4. Current Prevalence of Tobacco Products: 2017 Mississippi Social Climate Survey of Tobacco Control. MTD; [Cited on 10 May 2019]. Available at: https://mstobaccodata.org/wp-content/uploads/2018/05/MTCN-Meeting_5.9.18.pdf
5. The Health and Economic Burden of Tobacco on Mississippi. MTD; [Cited on 10 May 2019] Available at: https://mstobaccodata.org/wp-content/uploads/2019/05/mtd-tobacco-report.pdf
6. State of Tobacco Control 2019: American Lung Association. ALA; [Cited on 11 May 2019] Available at: https://www.lung.org/our-initiatives/tobacco/reports-resources/sotc/state-grades/?setstate=MS#hide-tab-4
7. Rx for Change. University of California, San Francisco (UCSF). Presented at Tobacco Treatment Specialist Training: 2004. Web-based.
8. Doering PL, Li R. Chapter 49. Substance-Related Disorders II: Alcohol, Nicotine, and Caffeine. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey L. eds. Pharmacotherapy: A Pathophysiologic Approach, 9e New York, NY: McGraw-Hill; 2014. http://accesspharmacy.mhmedical.com.ulm.idm.oclc.org/content.aspx?bookid=689&sectionid=45310500. Accessed May 21, 2019.
9. Tobacco Use and Dependence Guideline Panel. Treating Tobacco Use and Dependence: 2008 Update. Rockville (MD): US Department of Health and Human Services; 2008 May. 3, Clinical Interventions for Tobacco Use and Dependence. Available at: https://www.ncbi.nlm.nih.gov/books/NBK63948/
10. Stead LF, Koilpillai P, Fanshawe TR, Lancaster T. Combined pharmacotherapy and behavioral interventions for smoking cessation. Cochrane Database Syst Rev. 2016 Mar 24;3:CD008286. doi: 10.1002/14651858.CD008286.pub3. Review. PubMed PMID: 27009521.
11. Shapiro, Karen, Sherry A. Brown, Stephanie D. Garrett, and Amine Ale-Ali. Rx Prep Course Book; 2018. Print.
12. Cahill K, Stevens S, Perera R, Lancaster T. Pharmacological interventions for smoking cessation: an overview and network meta-analysis. Cochrane Database of Systematic Reviews 2013, Issue 5. Art. No.: CD009329. DOI: 10.1002/14651858.CD009329.pub2.
13. Piper ME, Smith SS, Schlam TR, Fiore MC, Jorenby DE, Fraser D, et al. A Randomized Placebo-Controlled Clinical Trial of 5 Smoking Cessation Pharmacotherapies. Archives of General Psychiatry. 2009;66(11):1253. DOI: 10.1001/archgenpsychiatry.2009.142
14. Stapleton J, West R, Hajek P, et al. Randomized trial of nicotine replacement therapy (NRT), bupropion and NRT plus bupropion for smoking cessation: effectiveness in clinical practice. Addiction. 2013;108(12):2193–2201. doi:10.1111/add.12304
15. Parsons AC, Shraim M, Inglis J, Aveyard P, Hajek P. Interventions for preventing weight gain after smoking cessation. Cochrane Database Syst Rev. 2009 Jan 21;(1):CD006219. doi: 10.1002/14651858.CD006219.pub2. Review. PubMed PMID: 19160269.
16. Baker TB, Piper ME, Stein JH, et al. Effects of Nicotine Patch vs Varenicline vs Combination Nicotine Replacement Therapy on Smoking Cessation at 26 Weeks: A Randomized Clinical Trial. JAMA. 2016;315(4):371–379. doi:10.1001/jama.2015.19284.
17. Ebbert JO, Hatsukami DK, Croghan IT, et al. Combination Varenicline and Bupropion SR for Tobacco-Dependence Treatment in Cigarette Smokers: A Randomized Trial. JAMA. 2014;311(2):155–163. doi:10.1001/jama.2013.283185
18. UMMC Act Center for Tobacco Treatment, Education, and Research. UMMC; [Cited on 10 May 2019]. Available at: http://www.act2quit.org/
19. Mississippi Tobacco Quit Line. [Cited on 10 May 2019]. Available at: http://quitlinems.com/
20. Mississippi Department of Health: Office of Tobacco Control. MDH; [Cited on 10 May 2019]. Available at: https://msdh.ms.gov/msdhsite/_static/43,0,94.html

Continuing education quiz #007-010-019-001 for 1.0 clock hour. CE credits are valid through 2020.

ENGAGING CHANGE: A PHARMACIST'S GUIDE TO SMOKING CESSATION THERAPY

INSTRUCTIONS: After reading the continuing education article, photocopy or detach this page. Take the quiz below. A grade of 70 percent or better is required to earn 1.0 hour of continuing education credit. This is a free service for MPhA members. Email submit or scan your answers into CE@mspharm.org to have your quizzes graded and certificate emailed back to you. If mailing, please include a self-addressed stamped envelope. **NEW! Take your CE Quiz online! Visit www.mspharm.org for more information.**

Print name, phone number, and email:

NAME _____

PHONE _____ - _____ - _____ EMAIL _____

1. A 17 year old female enters your practice and expresses her desire to quit smoking e-cigarettes. Which of the following therapies should be recommended by a pharmacist?
   a. Nicotine patches + lozenges
   b. Behavioral therapy + nicotine patches
   c. Behavioral therapy + sustained- release bupropion
   d. Behavioral counseling only

2. Which of the following therapies should be avoided in patients with a history of anorexia or bulimia?
   a. Zyban
   b. Chantix
   d. Nicotrol inhaler
   d. Nicotrol nasal spray

3. Identify the most appropriate initial dosing of a single-agent NRT for a 54 year old male who smokes one pack of cigarettes per day and begins smoking 45 minutes within waking in the morning.
   a. Nicorette gum 2mg
   b. Nicorette gum 4mg
   c. Nicorette lozenge 4mg
   d. Nicoderm CQ patch 14mg

4. If a patient is starting Chantix for the first time, new therapy counseling should include which of the most common side effects?
   a. Abnormal dreams and nausea
   b. Increased heart rate and weight loss
   c. Decreased appetite and vomiting
   d. Insomnia and dry mouth

5. Mississippi pharmacists can refer patients to seek cessation care at through which of the following state programs?
   a. 1-800-QUITNOW
   b. Mississippi Department of Health
   c. UMMC ACT Center
   d. All of the above

6. What is the maximum number of nicotine lozenges a patient can use in one day?
   a. 9
   b. 12
   c. 20
   d. 23

CONGRATULATIONS!

- TO OUR -

2019 SCHOLARSHIP WINNERS

Pharmacists Mutual is proud to support students who are interested in serving in an independent or small chain community pharmacy or an underserved geographic or cultural community. Each student listed received a $2,500 scholarship.

ABIGAIL SCOTT - University of Oklahoma
ALEXIS DAYTON - Ohio Northern University
ALLIE TAYLOR - Samford University
BRYAN QUINN - University at Buffalo The State University of New York
CARLY HUFFMAN - University of Montana
CYNTHIA SMITH - Auburn University
DAVID LU - Northeastern University
ELIZABETH CRONAN - Mercer University
HEATHER HEMBREE - University of South Carolina
JACOB LOMAX - Ohio Northern University
JONATHAN LITTLE - University of Oklahoma
JORDYN NORDE - St. Louis College of Pharmacy
LACY EPPERSON - University of Missouri–Kansas City
MATTHEW JOLLEY - University of Utah
MEGAN BAKER - Washington State University
SAMANTHA HOPPE - South Dakota State University
SEAN VINH - East Tennessee State University
SHELLEY MUELLER - Southwestern Oklahoma State University
TIFFANY CHAN - University of the Pacific
TIFFANY SMITH - South University

ACCEPTING APPLICATIONS FOR 2020 SCHOLARSHIP

October 1, 2019 - December 1, 2019

https://www.phmic.com/scholarship/

pharmacists mutual™
TOMORROW. IMAGINE THAT.

Pharmacists Mutual Insurance Company
808 Highway 18 W | PO Box 370 | Algona, Iowa 50511
P. 800.247.5930 | F. 515.295.9306 | E. info@phmic.com

phmic.com

Mississippi Pharmacists Association
341 Edgewood Terrace Dr. • Jackson, MS 39206
www.mspharm.org • info@mspharm.org