



Washington Metropolitan Society of Health System Pharmacists Newsletter

November 2023
Volume 3

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WMSHP website:
www.wmshp.org



Message from the WMSHP President

As we enter the Fall of 2023 - on behalf of WMSHP leadership, I would like to take the opportunity to thank you all as members and those who support our state affiliate. It has been a pleasure to serve and lead a very progressive time for WMSHP in the last 2 years, including successful re-affiliation as a society, developing internal tools to better define and organize societal goals, ensuring current excellent financial standing, designing and launching a new functional website to optimize communication and to also keep track of membership/renewal, and revising the Constitution and Bylaws in light of many of these updates.

I hope this work and re-building of our foundation will help future leadership teams to achieve even more goals including working as a cohesive team and on service/leadership skills, continued quality education delivered both in-person and virtually, impactful representation on the local and national level with policy work

See page 19

Pictures from ASHP Policy week in September 2023



Nish Kasbeker, PharmD,
FASHP, ASHP President;
Meenakshi Shelat,
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President



Leigh Briscoe-Dwyer,
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Elections for WMSHP Officers to serve in 2024

As we come toward the end of the year, WMSHP will be holding elections for Officers to serve for terms beginning in January 2024. This is an opportunity to meet new colleagues and gain experience in managing events. We will be holding elections for the following positions:

President Elect – This is a two-year commitment. The first year you will serve as President Elect assisting the President and learning about the Society. In the second year you will become the President.

Secretary – This is a two-year commitment. Responsibilities include taking notes at board meeting and maintaining an accurate and timely membership roster

Delegate – This is a two-year commitment. Responsibilities include attending a 2-day regional delegate training conference prior to the House of Delegates meeting and representing WMSHP at the summer ASHP House of Delegates meeting which will be held June 8-12, 2024, in Portland Oregon. A travel stipend is provided.

Alternative Delegate – This is a one-year commitment. Responsibilities include attending a 2-day regional delegate training conference prior to the House of Delegates meeting. If the Delegate is unable to serve, the alternative delegate will attend the summer ASHP House of Delegates meeting.

Board Member – This is a two-year commitment. Responsibilities include attending all board meetings and assisting in projects as assigned by the President

To run for any of these offices, you just need to decide what office you want to run for and respond to the webwmshp@gmail.com with a short biography of two-hundred words or less. This should state your current professional position and what you would like to accomplish during your tenure in office. You should also include a picture with your head and shoulders.

Nominations are due by November 15th COB

If you are interested in serving on one of committees like program planning, membership or legislative issues write to us and we will contact you after the election with information on these opportunities. If you have further questions, please write to

webwmshp@gmail.com

NEW CONSTITUTION AND BY-LAWS ADOPTED

Following a prolonged, often delayed, process, WMSHP members approved a number of significant changes to the Society's Constitution and By-Laws in August. These documents define WMSHP as an organization and establish its goals and objectives; accordingly, changes should not be made casually. But neither should they be impossible to change when a policy or procedure no longer serves its intended purpose. These changes represent the first comprehensive update of the Constitution and By-Laws in at least 30 years, possibly longer.

Updating the Constitution and By-Laws was not an easy process. The process of drafting and approving the recommended changes required a considerable effort by several WMSHP officers, members of the Board of Directors and other interested WMSHP members. A special committee was appointed to review the Constitution and By-Laws in 2015. The committee presented a list of recommended revisions to the Board of Directors in November 2015; but these were never submitted to the members for approval as required. Since 2015, a number of changes were made to the original draft. In 2019, then WMSHP President Vaiyapuri Subramaniam, President-elect Ashok Ramalingam, and Board Member John Quinn led the Board of Directors in reviewing the various changes, and preparing a new draft to present to the membership. Unforeseen circumstances delayed final action on these documents until now.

The voter response to the balloting was somewhat less robust than the Board of Directors had hoped, with only 18 responses. With the sole exception of Article 10.1 of the By-Laws, which received a plurality vote of 61%, all the proposed changes to the Constitution and By-Laws were approved unanimously (at least 2/3 majority).

The revisions include updating references to the Society's corporate and tax-exempt status, and formally adopted practices that Society has been using to take advantage of modern methods of electronic communications to conduct routine activities. The Society is now allowed to use electronic voting, rather than mail-in ballots for election and future amendments to the Constitution or By-Laws. See top of page 3

NEW CONSTITUTION AND BY-LAWS ADOPTED (CONT)

While the Society began using electronic voting for the annual elections several years ago, this procedure was technically in violation of its governing documents. This potential problem has been eliminated. Additionally, several significant changes were made to how WMSHP functions. Among these:

Membership

The Retired member category was eliminated. Retired pharmacists will be included as Active members. Pharmacists over the age of 65, regardless of whether they are still in active practice, will be considered Retired pharmacists. Pharmacy technicians and student pharmacists were removed from the Associate member category. Two new sections were created; one for technicians and one for student pharmacists.

Board of Directors - Several changes were made to the composition and function of the Society's Executive Committee. The Board of Directors was renamed the Executive Board of Directors. The Board's membership was expanded by the addition of the Society's Delegates and Alternate Delegate to the ASHP House of Delegates, and allows the WMSHP President to appoint a technician and/or student as non-voting members of the Board.

Standing Committees- Two new standing committees, the Newsletter/Communications Committee and the Legislative Committee, were created to improve WMSHP's ability to keep the members informed of the Society's activities (newsletter) and to coordinate the Society's input on issues being address by local and state government agencies.

By-Laws revisions - The Board of Directors is now authorized unilaterally to amend the By-Laws without a vote by the members.

The revised Constitution and By-Laws will be posted on the WMSHP website, www.wmsHP.org. On the Home page, select "About Us", then select, "Constitution and By-Laws." WMSHP members are encouraged to review these documents as soon as they are available.

Former WMSHP President Chairs International Conference Session on pharmacists as influencers across public health

Former WMSHP President Dr. Vaipayuri Subramaniam was recently honored to Chair the presentation session at the International Pharmaceutical Federation (FIP) Congress of the World Congress of Pharmacy and Pharmaceutical Sciences held in Brisbane, Australia in September 2023. The session's focus was entitled "Pharmacists as influencers across public health: Moving towards future sustainable pharmacy practice." Together with the contributions and insights from his experienced team of speakers and panelists from Australia, Brazil, Canada, and the United States of America, the session demonstrated pharmacists' critical role as public health influencers to meet global challenges to ensure sustainable patient-centered care. For both experienced and early career pharmacists, the session communicated to the FIP Congress attendees and delegates, various approaches and insights to identify and critically analyze information such as that from health applications and social media which may impact the expanding scope of pharmacy practice in supporting patient-focused and population-based care to improve health outcomes.



2023 USPHS Excellence in Public Health Pharmacy Award
Submitted by CDR Sadhna Khatri, and CDR Trang Tran, LCDR Sally Doan



CDR Sadhna Khatri, PharmD,
MPH, MS, M.Ed United States
Public Health Service

The prestigious USPHS Excellence in Public Health Pharmacy Award was established by the Pharmacist Professional Advisory Committee (PharmPAC) Student Awards Program to encourage student pharmacists to become active in public health.

Continued below



Caption: (Left to Right, Top to Bottom)

Taylor Coston (East Tennessee State University Bill Gatton College of Pharmacy), Andy D. Fernandez (Nova Southeastern University College of Pharmacy), Yaser Ghavami (Marshall B. Ketchum University College of Pharmacy), Nathaniel Hays (Midwestern University College of Pharmacy – Downers Grove campus in Illinois), Leila Hessam (Touro College of Pharmacy), Derek King (Shenandoah University Bernard J. Dunn School of Pharmacy), Samantha Denise Mamie (Temple University School of Pharmacy), Gabrielle Marchese (Medical College of Wisconsin School of Pharmacy), Jennifer Tram Nguyen (American University of Health Sciences School of Pharmacy), and Rafiaa Siddiqui (Roosevelt University College of Pharmacy).

Article continued from above

Over the years, this award program has significantly grown in its capacity, outreach, and recognition of pharmacy students across the entire Nation.

This unparalleled award recognizes outstanding pharmacy students who have made significant contributions to public health by promoting and advancing wellness and healthy communities. Students are evaluated on their contributions toward voluntary health-related services, emerging public health issues, or contributions that advance the goals of Healthy People 2030 or the National Prevention Strategy.

The 2022-2023 USPHS PharmPAC Student Awards Team has been tirelessly at work behind the scenes supporting and promoting the public health accomplishments of exceptional pharmacy students. This exceptional team is led by CDR Sadhna Khatri who serves as the Program Manager. The team consists of two coordinators CDR Trang Tran and LCDR Sally Doan and six work group leads who have made this year's program a remarkable success. Work group leads are CDR Chaltu Wakijra, LCDR Marcia Fields, LCDR Evelyn Hong, LCDR Sylvia Park, LT Colleen Kim, and LT Warren Simmons. Cont. on next page

2023 Excellence in Public Health Pharmacy Award continued

In 2023, this Program recognized 88 pharmacy students from across the country as the recipients of this distinguished award. Of the 88 pharmacy students, the program further selected the top ten award recipients for their public health achievements that positively impacted their local communities and beyond. These top ten award recipients were recognized by RDML Kelly Battese at the APhA Annual Meeting & Exposition on March 24, 2023. In addition, these recipients are currently featured on the [PharmPAC Student Awards Website](#).

Congratulations to all 2023 USPHS Excellence in Public Health Pharmacy Award recipients. Special thanks to all members of the PharmPAC Student Awards Program for their leadership, hard work, and dedication to recognize these students for their efforts and initiatives to protect, promote, and advance public health!

Pictures from Recent Events

July 5th “Practical Approaches in the Management of Pulmonary Arterial Hypertension: Understanding the Pharmacist’s Role in Personalized Care” PTCE Live Free CE by Dr. Tracey E. Macaulay at Maggiano’s



WMSHP President Meenakshi Shelat and
WMSHP Newsletter Editor Tiffany Tseng



Former WMSHP President Vaiyapuri Subramaniam and Board Member John Quinn attended the September 10th, 2023 Pinnacle Awards ceremony at the American Pharmacists Association (APhA) headquarters in Washington D.C.

The statue is of William Procter Jr., who is considered to be the Father of American Pharmacy

These awards are bestowed on individuals and organizations that have made significant contribution to the medication use process.

For descriptions of the individuals awarded and their accomplishments please see <https://www.aphafoundation.org/2023-pinnacle-awards-program>

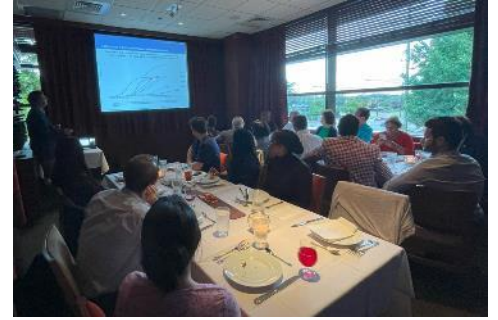
**September 13th “Influenza and RSV-Common Respiratory Infections and Complications”
Sanofi Non-CE Dinner Program by Ferdaus Hassan, PhD from Sanofi Vaccine at Seasons 52**



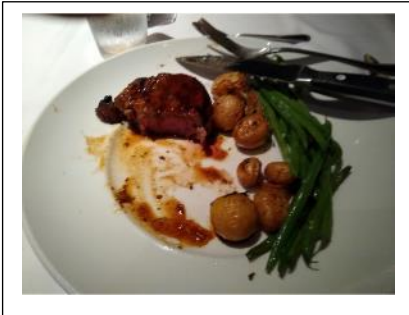
Beatrix Lam and former
WMSHP Newsletter editor
Dominic A. Solimando



WMSHP President Meenakshi Shelat
and WMSHP Secretary Matt Levit



Top Row: Ashok Ramalingam;
Ferdaus Hassan; Vaiyapuri
Subramaniam; Matt Levit; John
Quinn; Second Row: Meenakshi
Shelat; Tiffany Tseng; Sadhna
Khatri





An Interview with Jateh Major, PharmD

March 19, 2023

https://www.industrypharmacist.org/news_post.php?id=571

Dr. Jateh Major, PharmD

Associate Director, Regulatory Affairs Oncology

Bristol Myers Squibb

[LinkedIn Profile](#)

What was your motivation to pursue the pharmaceutical industry as a career path?

I had many motivations to pursue the pharmaceutical industry and particularly regulatory affairs as a career path. When I was completing my APPE rotations as a pharmacy student, I had a rotation with AbbVie pharmaceuticals in regulatory affairs advertising and promotion. I learned so much from that experience and I saw the continuous growth, in knowledge but also in opportunities for career advancement, which I found appealing. I gravitated towards regulatory affairs because this function attaches you to innovation in new therapies, new mechanisms, new technologies, etc. This made sense to me as a career path, as I was always excited to lead/work on new projects throughout pharmacy school.

Talk about diversity, equity, and inclusion in the pharmaceutical industry; what should companies be doing to continue making progress?

There are two ways to look at this. 1) from the drug development perspective (i.e., clinical trial diversity), and 2) from an employment perspective.

From the clinical trial perspective, the FDA has been very vocal about its expectations for companies to enroll more diverse populations in their studies, consistent with the populations affected by the disease. Globally, health authorities and ICH have authored several statements/guidelines to companies to elucidate some of the complexities around enrolling diverse patients into studies. I think that it is important for the pharmaceutical industry to remain both engaged in the dialogue and creative in our approaches to consider new ways to gain clinical trial interest from historically underrepresented populations.

From the employment side of things, I think that companies should be engaging with diverse institutions that are developing the diverse talent they are seeking, to receive guidance on how to address some of the barriers to entry for these populations.

Do you have any tips for productive networking with industry professionals?

My biggest tip for networking would be to remain consistent and be specific about what your expectations/needs for developing your network should be. Time is so valuable and the importance of being intentional about who you network with cannot be overstated. You must be sure that you're growing/building on skills, knowledge, relationships, etc. that are consistent/supportive of your long-term goals.

Continued next page

Interview continued

What does the balance between scientific knowledge and business acumen look like in your role?

Scientific knowledge and business acumen are important in all roles within the pharmaceutical industry, although in varying degrees depending on your function. However, the goal is to grow in both consistently, as it will make you a greater asset to your company. For me, in regulatory strategy, since I communicate with multiple other functions daily, both are equally important.

Were there any specific life and/or professional experiences that you can pinpoint as influential for your career?

In my P3 and P4 years of pharmacy school, I held two jobs, in retail and I did overnights at a local hospital. During this time, I was still involved in professional student organizations, held leadership roles, maintained my academic performance (Rho Chi), and remained social. It was impossible for me to do this without surrounding myself with high performers amongst my professional student colleagues.

I was empowered to do these things by consistently working with intelligent, innovative, professional, and creative classmates who had their own areas of expertise and interest that complemented my own. It was during these experiences that I determined that regardless of the environment I work in, I know that I do my best work when I am surrounded by others jointly motivated towards the outcome looking to become experts of their craft. Of all my options, working in cross-functional teams within multiple drug development programs seemed to be the most consistent with that environment.

What does work/life balance look like for you? How do you prioritize this important aspect of your career?

To me, work/life balance looks like being able to give attention to the things I find important outside of work while not compromising my level of performance at work. In my opinion, the best way to prioritize work/life balance is by being slow to make commitments and making thorough assessments of your ability to take on more.

What skills would you say are most important for a PharmD student to develop to succeed in industry?

In my opinion, critical thinking and active listening are the most important skills one needs to develop to be a success in the pharmaceutical industry. Before I was in pharma, I looked at the individuals who I felt were most respected and saw that they were oftentimes seen speaking. But it's very important to know that they had to do a lot of listening before they got to where they were, to ensure that they could have valuable contributions. Developing this skill as a junior professional is truly an underemphasized treasure.

What was something in your industry career that you were not prepared for? How did you overcome it?

I was not prepared for the huge gap between my knowledge of my role and those more experienced. What I was learning throughout my fellowship (and even now) is not information taught in pharmacy school classrooms. I truly had to humble myself to my lack of knowledge and get comfortable with listening and asking questions before giving my opinion to minimize those gaps.



Tejona Johnson-Moore
Howard Pharmacy WMSHP
student editor

Respiratory Syncytial Virus (RSV) update for Pharmacists

According to the National Foundation for Infectious Diseases, respiratory syncytial virus (RSV) is a common respiratory virus that affects lungs, nose, throat, and breathing passages. Individuals are able to contract the virus by coming in contact with an affected person's droplets (coughing, kissing, and sneezing) or touching a contaminated surface and then subsequently touching one's mouth, nose, or eyes. Signs and symptoms of RSV in children and adults are not limited to wheezing, fever, coughing, runny nose, and headache. For younger children, irritability, decreased appetite, and difficulty breathing are commonly seen. Small children are the most at risk for being infected by the respiratory syncytial virus. However, elderly patient population (60 and older) also have risk factors that place them at a higher likelihood of contracting the virus, including kidney disorders, liver disorders, diabetes mellitus, being immunocompromised, and cardiopulmonary disease. Being frail and living in a nursing home further places the elderly at high risk. An individual is typically contagious for 3 to 8 days but can become contagious 24 to 48 hours before displaying illness signs.




RSV infection can lead to clinical conditions like bronchiolitis, which is the narrowing of the airways making breathing difficult. This particular virus circulates during the late fall to early spring, with typical peaks around January - February. This is during the influenza virus season, so having prevention options for all ages is important to control the exposure and transmission rates.


According to the National Institutes of Health, RSV treatment consists of supportive care and implementing proper hygiene practices. Supportive care includes staying hydrated, oxygen (if needed), nutrition, and clearing the nasal passages. Proper hand washing can reduce/prevent the spread of RSV transmission. Using the shared clinical decision model, the Centers for Disease Control recommends that adults 60 and older should receive a single dose of RSV for the 2023-24 RSV season. As of May 2023, two types of vaccinations are available, RSVPreF3 (Arexvy, GSK) and RSVpreF (Abrysvo, Pfizer). Using the shared clinical decision model will allow health care professionals to individually determine if the benefits outweigh the risks for the patient receiving the vaccine. Adults with a minor acute illness, such as a cold, can receive the RSV vaccination. Moderate or severe acute illnesses are advised to wait until the illness clears.

In August 2023, the Center for Disease Control recommended a new RSV immunization called nirsevimab (Beyfortus, Sanofi and AstraZeneca) to protect babies and some toddlers from severe RSV during the RSV season

<https://www.cdc.gov/respiratory-viruses/whats-new/rsv-update-2023-09-22.html#:~:text=In%20August%202023%2C%20CDC%20recommended,using%20shared%20clinical%20decision%2Dmaking.>

New Immunizations to Protect Against Severe RSV

Who Does It Protect?	Type of Product	Is It for Everyone in Group?
 Adults 60 and over	RSV vaccine	Talk to your doctor first
 Babies	RSV antibody given to baby	All infants entering or born during RSV season. Small group of older babies for second season.
OR		
 Babies	RSV vaccine given during pregnancy	Can get if you are 32-36 weeks pregnant during September-January

www.cdc.gov/rsv


Dean Toyin Tofade ASHP Donald Franke Medal

Many readers know former Howard College of Pharmacy [Dean Toyin Tofade](#). She was awarded the 2022 ASHP Donald Francke Medal. This award honors pharmacist who have made significant international contributions to advance pharmacy practice. The Dean is also on the Editorial Advisory Board of American Journal of Health System Pharmacy. Her current position is the President of the Albany College of Pharmacy and Health Sciences



Dr. Vaiyapuri
Subramaniam, PharmD,
MS, FASHP, FASCP,
FCP, FFIP

World Leprosy Day: Public health perspectives and creating awareness

Introduction:

On January 29, 2023, World Leprosy Day was observed as it has been over the past 60 years on the last Sunday of January each year. It was established in 1954 by French philanthropist Raoul Follereau. Its purpose is to create awareness about leprosy (renamed Hansen's disease by Norwegian scientist Gerhard Henrick Armauer Hansen) and inform people that it is a disease spread by a type of bacteria that is easily curable today.^{1,4} The World Leprosy Day 2023 theme "Act Now: End Leprosy" observed on January 29, 2023, as the last Sunday in January was chosen by Follereau as a tribute to India's independence leader Mahatma Gandhi who died on January 30, 1948, and who did much work and had compassion for those afflicted with leprosy

Background:

The World Health Organization (WHO) has classified leprosy as one of the neglected tropical diseases (NTD)s, being referred as such because they are often ignored by global health agencies due to limited resources, making public health control challenging.¹

Leprosy still occurs in more than 120 countries, with more than 200,000 new cases reported every year and more than four million people living with some form of impairment related to leprosy.¹ Leprosy is caused by the bacterium *Mycobacterium leprae* (*M. leprae*) and *Mycobacterium lepromatosis* (*M. lepromatosis*), collectively referred to as the *M. leprae* complex. Research on leprosy suggests that the disease has infected people at least as early as 4000 B.C., while the first known written reference to the disease was found on Egyptian papyrus in about 1550 B.C. References to leprosy in the Bible are mentioned in both the Old Testament and New Testament Gospels. The disease was well recognized in ancient China, Egypt and India.² Despite the discovery of *M. leprae*, the disease continues to be a public health challenge globally. While in the past it was common in temperate climates, today leprosy is mainly confined to tropical and subtropical regions in underdeveloped and developing countries.

Clinical findings and transmission:

The typical skin lesions and classic neuropathy of leprosy are readily recognized in countries where the disease is more common, but in regions where leprosy is rare, it can be difficult to diagnose. Regions reporting cases of leprosy distributed worldwide are shown in Figure 1.

Figure 1: Number of new leprosy cases in 2021.

Source: WHO (2021) Accessed 2/7/2023.

World Health Organization apps.who.int/neglected_diseases/ntddata/leprosy/leprosy.html



Continued on next page

Leprosy can affect the skin, mucous membranes, and eyes, and some of the peripheral nerves. These are primarily the nerves of the hands, feet, and eyes, and some of the nerves in the skin. In severe, untreated cases, loss of sensation, muscle paralysis of hands and feet, disfigurement, and blindness may occur. Transmission of leprosy is thought to occur through inhalation of droplets containing the causative agent, *M. leprae*. However, transmission via skin contact or other means cannot be entirely excluded. Up to 95% of patients exposed to the causative agent will not develop the disease, suggesting that host immunity plays an important role in disease progression and control.¹ The incubation time is variable, ranging from 2 to 20 years, or longer. Human to human transmission is not the only way leprosy can be transmitted. Leprosy also has a reservoir in a few animals such as armadillos which can be attributed to transmission to human.³ Studies show that infection with leprosy was present among armadillos before they were used in research and surveys have confirmed that armadillos in southern United States and Mexico are a large natural reservoir for *M. leprae* where infected armadillos have been reported to be a significant risk factor for leprosy.³ The National Hansen's Disease Program's (NHDP) Laboratory Branch located in Baton Rouge, Louisiana, conducts and supports research in the diagnosis, transmission, prevention and treatment of Hansen's Disease (leprosy) and has the only colony of *M. leprae*-infected armadillos in the world for testing leprosy therapeutics and vaccines.⁴

Classification of leprosy and symptoms:

Classification of leprosy is based on clinical evaluation, skin smears from several sites and ideally an initial biopsy. In 1981, the WHO expert committee on leprosy classified leprosy in an individual who has one of the following cardinal signs of leprosy but who has not received a full course of multi-drug therapy (MDT) for the type of leprosy identified:^{4,5,7} 1) A definite loss of sensation in a pale (hypopigmented) or reddish skin patch; 2) a thickened or enlarged peripheral nerve with a loss of sensation and/or weakness in the muscles supplied by the nerve; and, 3) the presence of acid-fast bacilli in leprosy lesions from slit skin smears (SSS) diagnoses of therapy. The WHO classification system (1981) is based on clinical criteria and classifies leprosy as Paucibacillary (PB) for those with one to five skin lesions; or Multibacillary (MB) for those with six or more skin lesions. However, nerve involvement is not part of the WHO classification.

In 2009, the National Leprosy Eradication Program (NLEP) of India also classified the number of nerves involved, along with the number of skin lesions in the classification of leprosy into PB cases (viz. up to 5 skin lesions; no nerve/single nerve involvement with five lesions, including nerve; skin smear negative at all sites) and, MB cases (viz. 6 or more skin lesions; more than one nerve involvement, irrespective of the number of skin lesions; skin smear positive at any site). In 1966, Ridley-Jopling proposed the Ridley-Jopling system that classifies leprosy as an immune-mediated spectral disease by cellular response and clinical findings and denotes the disease ranging from early localized (I) to generalized (LL) such as: indeterminate (I), tuberculoid (TT), borderline tuberculoid (BT), mid-borderline (BB), borderline lepromatous (BL), and lepromatous (LL). People with I, TT, and BT in the Ridley-Jopling system are those with skin smear negative and show no evidence of more advanced disease on biopsy, have a strong cell-mediated response which limits the disease to a few lesions and generally equivalent to PB in the WHO classification and the disease is milder, less common, and less contagious. People with BB, BL and LL in the Ridley-Jopling system are those who typically have poor cell-mediated immunity to *M. leprae*, have more severe, systemic infection with widespread bacterial infiltration of skin, nerves, and other organs (eg. nose, testes, kidneys), are more contagious and generally equivalent to MB in the WHO and NLEP classifications.^{2,3,4}

The WHO's limited drug regimen form its multidrug therapy (MDT) has led to widespread use of the WHO classification. (**Tables 1 and 2**). The Ridley-Jopling classification of leprosy is the one usually used in the United States.

In the aforementioned classifications, the type of leprosy dictates the long-term prognosis, likely complications and duration of antibiotic treatment. Symptoms of leprosy usually do not begin until > 1 year after infection (average 5 to 7 years). Once symptoms begin, they progress slowly. Leprosy affects mainly the skin and peripheral nerves. Nerve involvement causes numbness and weakness in areas controlled by the affected nerves.³ Continued on next page

History of Treatment and Current Therapy:

As a result of the discovery of *M. leprae* by Hansen, there was research to find treatments (viz. anti-leprosy agents) that would stop or eliminate *M. leprae*. Drug trials on the island of Malta in the 1970s showed that a three-drug combination of dapsone, rifampin (Rifadin, Rifampicin) and clofazimine (Lamprene) was very effective in killing *M. leprae*. Due to antibiotic resistance, the multi-drug treatment (MDT) regimens are used.² The drugs chosen depend on the type of leprosy. For instance, multibacillary (*MB*) leprosy requires more intensive regimens and a longer duration than paucibacillary (*PB*) leprosy does. In 1981, the WHO recommended the multi-drug treatment (MDT) of dapsone, rifampin and clofazimine which remains the therapy of choice.^{5,6} However this MDT does not alter the damage done to an individual by *M. leprae* before starting MDT. Antibiotics can stop the progression of leprosy but do not reverse any nerve damage or deformity. Thus, early detection and treatment are vitally important. Treatment of leprosy requires long-term MDT regimens with dapsone, rifampin, and sometimes clofazimine with some patients needing lifelong maintenance antibiotics.

The WHO MDT regimen lasts six months for *PB* and 12 months for *MB* cases. The MDT regimen kills the pathogen and cures the patient symptoms. More than 16 million leprosy patients have been treated with MDT since its introduction.^{4,5,6} (**Tables 1 and 2**). In the United States of America, the National Hansen's Disease Program (NHDP) recommends longer treatment duration and excludes clofazimine in *PB* leprosy treatment.^{4,7} Regardless of clinical or the treatment outcome, recommendations from WHO for patients beginning MDT who exhibit resistance to rifampicin alone or in conjunction with dapsone, include restarting therapy with a course of second-line therapy.^{3,4,7}

Table 1: Recommended Treatment Regimens^{4,5,6}**Adults: Tuberculoid (TT & BT) and WHO classification (Paucibacillary "PB")**

Agent	Dose	Duration
Dapsone	100 mg daily	12 months, and then therapy discontinued
Rifampicin	600 mg daily	12 months, and then therapy discontinued

Table 2: Recommended Treatment Regimens^{4,5,6}**Adults: Lepromatous (LL, BL, BB) and WHO classification (Multibacillary "MB")**

Agent	Dose	Duration
Dapsone	100 mg daily	24 months, and then therapy discontinued
Rifampicin	600 mg daily	24 months, and then therapy discontinued
Clofazimine ^a	50 mg daily	24 months, and then therapy discontinued

- a. Clofazimine, that was used to treat leprosy around the world is no longer available in the market commercially. Clofazimine can only be obtained in the U.S. as an investigational new drug (IND). The NHDP holds the IND for its use in treating leprosy in the U.S.

Prevention of leprosy:

- a. As leprosy is not known to be contagious, the risk of spread is low. Only the untreated lepromatous form is contagious, but even then, the infection is not easily spread. However, household contacts (particularly children) of patients with leprosy should be monitored for development of symptoms and signs of leprosy. Once treatment has begun, leprosy cannot be spread. The best prevention recommended is avoiding contact with bodily fluids and the rash on infected people.^{2,4} The bacilli Calmette-Guérin (BCG) vaccine that was used to prevent tuberculosis (TB), provides some protection against leprosy but is not often used for that purpose.

Continued on next page

The 2018 WHO Guidelines recommends a single dose of rifampicin as preventive treatment of individuals aged over 2, after confirmation that they are not infected with leprosy. Any contraindications should be checked prior to treatment including the presence of TB. ²

Risk factors for leprosy:

Susceptibility of individuals to contracting leprosy is variable with a higher risk of developing leprosy in persons in contact with afflicted patients. Several risk factors besides contact with patients have been suggested such as the type of leprosy one is exposed to, the age and sex of the person in contact, and the genetic and physical distance of the person with the patient. ^{7,8} Risk factors include persons being in close proximity with a recently diagnosed patient particularly those with lepromatous leprosy or MB leprosy, being exposed to armadillos, being of ages 5 – 15 years and more than 30 years at the time of exposure, having immunosuppression and immunodeficiency, and a genetic predisposition. ⁹

Recommendations to improving adherence to leprosy treatment: ⁹

- Patients affected by low health literacy, poverty, and low socioeconomic status: Provide educational material in an easy-to-understand format (and if needed consider multilanguage resources or infographics).
- Patients receiving a complexity of treatment regimen or long duration of treatment: Provide treatment instructions that are easy to follow and noncomplicated.
- Longer treatment regimens: Provide additional information accompanied by scheduling follow-up appointments at appropriate intervals to decrease risk of relapse.
- Patients having misconceptions, beliefs, and experiencing stigma related to disease: Provide information about risk or spread and prevention with approaches to educating others on possible risks and build patient-provider relationships.

Conclusion:

The World Leprosy Day 2023 theme, “*Act Now: End Leprosy*” presents enormous public health challenges in leprosy control and elimination. Despite implementation of global actions to eliminate leprosy, ongoing challenges include stigmatization and discrimination against afflicted persons. Further, leprosy is still being transmitted to children. In 2020, new cases of leprosy in children comprised 6.8% of all the new detected leprosy cases. ⁴ Children are suffering from lifelong disabilities caused by leprosy. These complex problems require developing public policies to promote investment in research to identify areas needed in leprosy elimination and control through treatment. ⁸ Delayed diagnosis of leprosy can have serious neurological consequences. Awareness by healthcare professionals is key to early diagnosis and treatment to prevent disability. Further, a stigma based on fear continues to contribute to prolonged suffering and delayed diagnosis. To understand how best to prevent the risk factors of disease, illness and poor health outcomes from ever developing, one must first understand the many factors that contribute to overall health, referred to as “social determinants of health.” ¹⁰ Healthcare professionals have opportunities to collaborate on strategies needed to address the social determinants of health and encourage adherence to treatment of patients affected by leprosy. Proactive, early detection and treatment of leprosy must be an international priority to prevent transmission and prevent disabilities.

Author Information:

Dr. Vaiyapuri Subramaniam formerly served in the federal government and held appointments as pharmacist executive and associate chief consultant at the U.S. Department of Veterans Affairs Central Office, Washington DC and at the U.S. Food and Drug Administration as a pharmaceutical interdisciplinary scientist and regulatory compliance officer. Previously, he was a director and clinical pharmacist teaching coordinator in hospital pharmacy practice and served in academia as clinical affiliate professor of pharmacy practice and administration. He was recognized for his international leadership and distinguished service in pharmacy by the International Pharmaceutical Federation (FIP) and made a FIP Fellow (FFIP) as one of eight fellowship awardees worldwide selected in 2020 for commendation among pharmacists and pharmaceutical scientists. He is currently President Emeritus of the Washington Metropolitan Society of Health-System Pharmacists where he provides leadership and strategic management and is on the Board of Visitors of Howard University College of Pharmacy, Washington, DC.

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CDC:

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Kristy Zhang PGY-1
Pharmacy Practice
Resident at Sibley
Memorial Hospital

The impact of a pharmacist-driven methicillin-resistant staphylococcus aureus (MRSA) polymerase chain reaction (PCR) screening on vancomycin use in patients with suspected MRSA pneumonia in a community hospital

My name is Kristy Zhang, and I am the PGY-1 Pharmacy Practice Resident at Sibley Memorial Hospital – Johns Hopkins Medicine in Washinton, DC. I earned my PharmD from University of Connecticut. Following PGY-1, I will be returning to my home state of Massachusetts to serve as a full-time hematology oncology clinical pharmacist. I would like to share my residency longitudinal research project - the impact of a pharmacist-driven methicillin-resistant staphylococcus aureus (MRSA) polymerase chain reaction (PCR) screening on vancomycin use in patients with suspected MRSA pneumonia in a community hospital. The idea of this research project came from several studies show the high negative predictive value of MRSA nasal swabs in lower respiratory tract infections and suggest this can be used to justify antimicrobial de-escalation of empiric antibiotic therapy.

Pneumonia caused by MRSA carries a high rate of mobility and mortality. Current guidelines from the American Thoracic Society and Infectious Diseases Society of America (IDSA) recommend empiric treatment for those at risk of developing MRSA pneumonia and vancomycin therapy is often the empiric antibiotic of choice. Despite the uncommon incidence of MRSA pneumonia, recently there have been concerns about vancomycin overuse within the healthcare system. The objective of this study was to assess the impact of a pharmacist-driven MRSA nasal swab PCR screening on the mean duration of empiric vancomycin therapy in patients with suspected pneumonia.

This study was a single-center retrospective cohort quality improvement study. Patient charts were reviewed to compare those who received vancomycin for suspected MRSA pneumonia before and after the implementation of a pharmacist-driven protocol for nasal MRSA PCR screening. Patients were included if they were 18 years of age or older, initiated on IV vancomycin for indication of suspected MRSA pneumonia and on the first course of vancomycin during the study period. Exclusion criteria included vancomycin use for any other indication, history of prior MRSA infection or colonization, and existing MRSA nasal PCR swab within the last 7 days.

This study was approved by the Johns Hopkins Medicine Institution Review Board as a quality improvement project. The organization's Pharmacy and Therapeutics Committee and Medical Executive Committee approved the pharmacists to order the MRSA nasal swab per protocol via the electronic health record. When the decentralized clinical pharmacist received an order for IV vancomycin with the indication of pneumonia or suspected pneumonia, screened the patients' record for inclusion and exclusion criteria. The clinical pharmacist ordered MRSA nasal PCR test for qualified patients. Based on the results of the PCR test, the prescribing physician was notified and if the test was negative, a recommendation to discontinue vancomycin was made. The primary outcome was the mean duration of vancomycin therapy in hours. The secondary outcomes were the rate of acute kidney injury occurrence and vancomycin trough level.

Continued on next page

My results showed the mean total duration of vancomycin was 72 hours in the pre-protocol group and 29.1 hours in the post-protocol group. Both groups had one patient experience AKI and there were 57 vancomycin trough levels ordered in the pre-protocol group and 14 orders in the post-protocol group. In conclusion, the implementation of a pharmacist-driven MRSA PCR nasal swab protocol resulted in a clinically significant reduction in the average total duration of vancomycin therapy in patients with pneumonia. No difference was seen in the rate of AKI in both groups and less vancomycin trough levels were obtained in the post-implementation group. For the future study, I would recommend expanding this study to include soft skin tissue infection (SSTI) since more recent studies showed the MRSA nasal PCR swab also has high NPV in SSTI. In addition, an increase in pharmacists' compliance with the protocol via education and utilizing technology to implement best practice alerts for the status of nasal swab results, will help to improve unnecessary vancomycin use.



MICHELLE MONTOYA
Pharm.D., M.S.
Pharmacy Practice Resident, Post-Graduate Year 1
Sibley Memorial Hospital—Johns Hopkins Medicine

Pretreatment to Pre-Intubation Optimization: Updates to Rapid Sequence Intubation by AJHP

Michelle Montoya, PharmD, MS

The American Journal of Health-System Pharmacy (AJHP) has recently published updated guidance for pharmacists who help facilitate rapid sequence intubation (RSI). The previous guidance was established over a decade ago, so this update is timely, considering the number of strategies clinicians are beginning to implement into practice. In order to understand these changes, one must first be familiar with the original guidance around the “seven P’s” of intubation

Preparation	Evaluate airway and create plan for induction and post-intubation drugs		
Pre-oxygenation	Augment oxygen delivery and ventilation to stave off oxygen deprivation		
Pretreatment (2011)	Reduce the physiologic consequences of intubation	Pre-intubation optimization (2022)	Stabilize hemodynamics and make backup plan
Induction and Paralysis	Push medications to promote deep sedation, then paralysis		

Positioning	Assume ideal position for intubating
Placement with Proof	Intubate and confirm placement with CO ₂ colorimetry/lung auscultation
Post-intubation management	Initiation of analgo-sedation with patient-specific factors in mind

Interestingly, AJHP has changed the third P from “pretreatment” to “pre-intubation optimization”. Pretreatment is usually performed with lidocaine or fentanyl (though other agents have been used in the past) to provide a counteractive measure to the forcefulness of intubation. As the process of intubation stimulates both baroreceptors and the cough reflex, there is a concern for causing an increase in intracranial pressure, especially in patients with head trauma. However, the practice of pretreatment in the setting of RSI has fallen out of favor, and AJHP suggests that the use of pretreatment introduces risk of hypotension without procuring significant benefit in the prevention of increased intracranial pressure. A brief summary of the evidence behind this statement is included below.

Review Authors	Methods	Outcome	Review Limitations
<i>Robinson N, Clancy M. (2001)</i>	Meta-analysis of studies in which IV lidocaine was used for the purpose of blunting physiologic increases in intracranial pressure (ICP) in response to physical manipulation of larynx, such as intubation or endotracheal suctioning. These studies were conducted in patients with major head injury or neurosurgical intervention to evaluate lidocaine as an agent that may improve neurological outcomes.	One influential study demonstrates the blunting of increased ICP by lidocaine in non-RSI intubation. The other five studies included demonstrated partial or transient blunting of ICP increase in variable contexts. The authors’ overall impression was that there is no role for lidocaine pretreatment in reducing ICP increases or providing neuroprotection.	<ul style="list-style-type: none"> • Significant heterogeneity of studies • Head trauma patients vs. elective neurosurgery patients • Mechanism of larynx manipulation and associated increase in ICP: intubation vs. endotracheal suctioning • Pre-planned RSI • Difficult to reach meaningful conclusion

<i>Kramer N, Lebowitz D, Walsh M, et al. (2018)</i>	Systematic review summarizing the state of literature surrounding agents for adult RSI, including pretreatment, induction, paralysis, and post-intubation sedation.	In the role of pretreatment, the authors found that existing literature does not support the idea that lidocaine blunts ICP increases, and its use may be detrimental due to the more frequent incidence of hypotension. Meanwhile, studies demonstrate the efficacy of fentanyl in dampening sympathetic surge, leading attenuation of rise in blood pressure and heart rate due to RSI. They also recommend fentanyl for neuroprotection from elevated ICP.	<ul style="list-style-type: none"> • Similar heterogeneity in the lidocaine studies (some overlapping with previous review) • Recommendations for fentanyl bolus utility in patients with increased ICP opposite between pretreatment and post-intubation phase.
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(shout out to September's ASHP Policy Week and the #BeTheChange theme from ASHP Leadership and mentors), as well as practicing well-being and resilience.

We have listened to your feedback and continued the hybrid format of meetings for programs - it has been nice to meet and interact with many of you. We welcome your interests for active involvement with committee work and leadership in the Fall and beyond! As always, check out the website at wmshp.org for updates on upcoming events, position descriptions, newsletters, and be sure to renew your rolling memberships. Mark your calendars now for our January 17, 2024 virtual kick-off meeting. This is an opportunity to see our new WMSHP Officers to be sworn in and also listen to an ACPE accredited CE lecture. We will be sending out more details closer to this event.

Be well!

Meenakshi Shelat, PharmD, BCOP
Hematology/Oncology Clinical Pharmacy Specialist at the NIH Clinical Center
WMSHP President 2023

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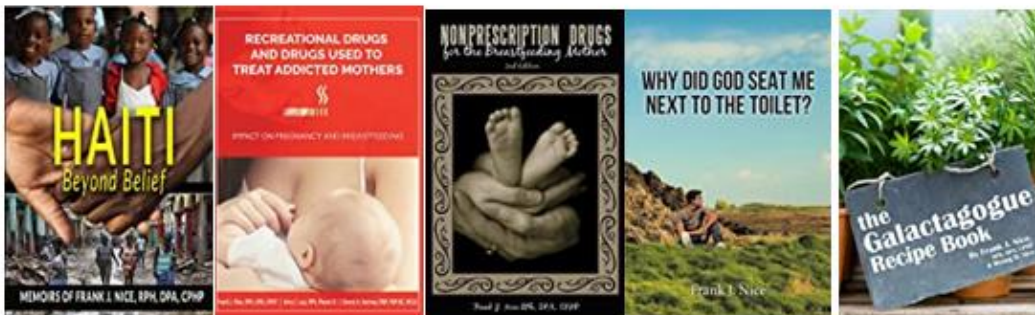


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