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Quarterly publication of the Mississippi Pharmacists Association | Summer 2022

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PRESIDENT'S MESSAGE

Members of MPhA,

I am excited and humbled to begin my term as MPhA President. I would like to thank Peyton Herrington for his leadership and the diligent efforts of the Executive Committee, MPhA working committees and MPhA staff to make this past year a success. MPhA organized multiple educational events, held a variety of social gatherings and meetings, and promoted legislative actions in order to support Mississippi pharmacists and advance the profession of pharmacy.

During the MPhA annual convention, I presented three areas of focus for the association and provided some practical ways to get involved. Please consider the following:

Connection:

• Print MPhA membership forms and have copies in your work place. Discuss the importance of being involved in MPhA and the work the association is doing to advance practice with your colleagues.

• Join MPhA working committees and get actively involved. If you are interested in joining a committee, email info@mspharm.org and get connected with a committee that aligns with your interests.

• Attend MPhA educational and social events. A list of upcoming events can be found on the MPhA website.

Advocacy:

• Identify the state and federal legislators that represent you and have their contact information saved.

• Respond to calls to action from MPhA by contacting these representatives and expressing your support for pharmacy related initiatives.

• Give to the MPhA PAC account to support legislative action.

Education:

• Participate in MPhA district meetings and special events to learn best practices and novel innovations in pharmacy practice.

• Present a topic at one of the many MPhA organized continuing education conferences.

• Write an article for one of the quarterly MPhA journals related to your area of practice.

The strength of MPhA is its members. Please consider these practical steps to get involved and support the association as MPhA works to Connect, Educate and Advocate for the profession of pharmacy in Mississippi and beyond.

Sincerely,

Tripp Dixon

Tripp Dixon, PharmD
MPhA President
President@mspharm.org

LET'S TALK ABOUT TECHS

SUMMER JOURNAL
TECH SPOTLIGHT WINNER

KIM CARNLEY

Guy's Pharmacy
Summit, MS

What advice would you give to yourself back at the beginning of your career?
"Don't be satisfied with where you are - there are many opportunities in healthcare and you never have to stop learning"

What advice would you give to someone looking to become a technician?
"It's been a good career for me . I encourage getting nationally certified... there are so many options other than hospital and retail."

Why do you feel you were nominated? What stands out about you while at work?
"I feel like I have a very good work ethic and dependable, I am constantly trying to improve my skills and knowledge"

Backed by Science, Proven by Research:

Clinical Pharmacists Impacting Patient Outcomes with MedWise® Science and MedWise Risk Score™

TabulaRasa HealthCare®

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Executive Summary

Healthcare costs are rising in the U.S. According to the Centers for Medicare & Medicaid Services (CMS), National Health Expenditure increased 4.6% in 2019, reaching $3.8 trillion, with Medicare spending climbing 6.7% to $799.4 billion.[1] Meanwhile, U.S. Census Bureau estimates show a growing 65-and-older age group, which increased 34.2% between 2010 and 2019.[2] Among this group, the Lown Institute reports that 42% take at least five prescription medications.[3]

Rising healthcare costs and a growing elderly population could have significant implications when it comes to adverse drug events (ADEs). ADEs occur when an individual is harmed by medication, even when that medication is used appropriately. They are responsible for around 1.3 million emergency department visits a year, and roughly 350,000 individuals require hospitalization for additional treatment.[4]

Tabula Rasa HealthCare's (TRHC) MedWise Risk Score™ is a novel approach to help clinical pharmacists target patients at risk for ADEs. Used together with TRHC's clinical decision support technology, MedWise® Science, pharmacists can identify those patients with high risk scores and target them for risk-mitigating interventions. TRHC has found these pharmacist-led interventions to result in better patient outcomes, including reduced falls, hospital admissions, emergency department visits, medical expenditures, and deaths. Pharmacists and other healthcare providers working with TRHC clinical pharmacists can use these technologies to effectively pinpoint risk, identify medication-related problems, and make recommendations that advance patient outcomes and ultimately save lives. The impact of clinical pharmacist-driven interventions, under the scope of medication safety reviews, using these technologies is further illustrated in a new **peer-reviewed research series** in The American Journal of Managed Care.

Understanding MedWise and the MedWise Risk Score

TRHC's MedWise Risk Score helps pharmacists determine which patients are at risk for ADEs[5] by analyzing medication-related risk factors through proprietary algorithms.[6] Unlike traditional medication therapy management offerings, which evaluate a number of chronic diseases, number of medications, and Medicare Part D costs, the MedWise Risk Score evaluates pharmacokinetic and pharmacodynamic characteristics of active medication ingredients.[7] This evaluation incorporates over-the-counter medications, herbals, and supplements to illuminate simultaneous, multi-drug interactions.[5] Based on the data, patients are assigned a risk score ranging from 0 to 50, where 0–9 indicates minimal risk, 10–14 indicates low risk, 15–19 indicates intermediate risk, 20–29 indicates high risk, and 30 and above indicates severe risk.[6]

In the CMS Innovation Center's Enhanced Medication Therapy Management (EMTM) model, TRHC clinical pharmacists used the MedWise Risk Score with MedWise Science, a clinical decision support technology, to optimize patient outcomes.[7] The MedWise Matrix creates a visualization of a patient's complete medication regimen and enables pharmacists to identify and address medication-related problems that can lead to ADEs.

Identifying Patients with Higher Risk for Negative Outcomes

Research has proven that MedWise Risk Scores can help pharmacists successfully identify patients whose medications—when used together—put them at greater risk for negative outcomes including ADEs, falls, higher medical expenditure, emergency department visits, hospitalizations, and death. A study by Michaud et al. included over 200,000 participants who were prescribed medication in 2018.[6] A MedWise Risk Score was calculated for the year 2018 and, according to the data, there was a greater percentage of intermediate, high, and severe max scores among participants who had at least one ADE. Specifically, 18.6% of participants with one or more ADE had an intermediate score, 26.5% had a high score, and 9.9% had a severe score.

The results also showed a strong link between the MedWise Risk Score and falls. Compared to participants with a minimal max score, participants with a severe max score were most likely to experience a fall, followed by participants with a high max score, then an intermediate max score.

Data trended similarly for medical expenditures. Fifty percent of participants with a minimal max score had a mean yearly medical expenditure of $1,297. This cost escalated to $2,964 for participants with a low score; $4,532 for participants with an intermediate score; $6,514 for participants with a high score; and $10,352 for participants with a severe score (see Figure 1).

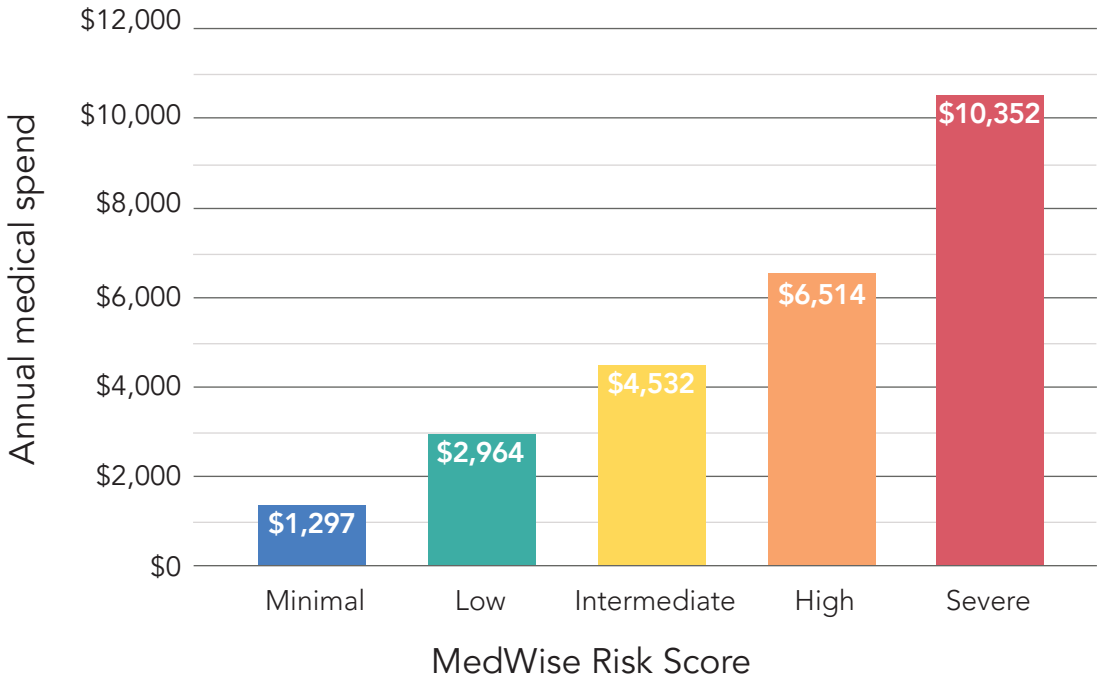
According to the study's results, pharmacist recommendations could reduce the average MedWise Risk Score by 4.7 points.

In addition, the data revealed associations between the MedWise Risk Score and emergency department visits, hospitalizations, and deaths. For example, the data showed a greater number of participants with high and severe max scores among those who died compared to those who remained living. These results confirm the MedWise Risk Score's ability to identify which patients have the greatest risk for negative outcomes.

Pinning Down Medication-related Problems

By identifying patients with the greatest risk, a MedWise Risk Score helps to prioritize individuals for MedWise Safety Reviews. These reviews enable pharmacists to leverage the clinical decision support tools to detect medication-related problems and make recommendations to prevent dangerous drug interactions.[8]

Figure 1: Average Annual Medical Expenditures by Risk Level



Pharmacists used MedWise Risk Scores and MedWise Science to effectively lower patient risk for multi-drug interactions in a study by Bankes et al.[7] During the study, analyzing MedWise Risk Scores helped pharmacists prioritize 22,696 high-risk participants for their first-ever review. Guided by MedWise Science, pharmacists detected 36,455 clinically actionable medication-related problems, roughly 85% of which were *adverse drug reaction, drug interaction*, and *unnecessary medication use*. MedWise Science also informed pharmacist recommendations to address the medication-related problems, with *start alternative therapy, discontinue medication, change time of medication administration*, and *change dose* topping the list. According to the study's results, pharmacist recommendations could reduce the average MedWise Risk Score by 4.7 points.

Improving Patient Outcomes

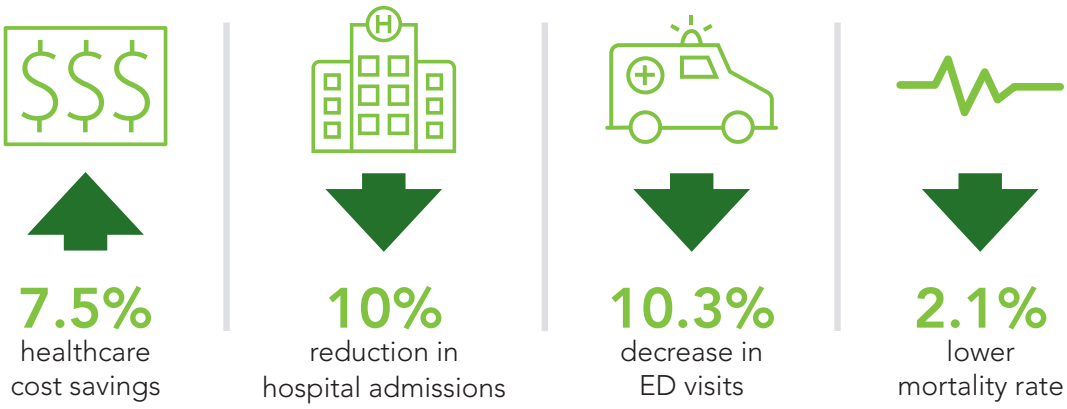
Insight from MedWise Safety Reviews can optimize prescribing practices and impact patient outcomes. This impact was proven by Stein et al., who studied the impacts of MedWise Safety Reviews on medical expenditures, hospitalizations, emergency department visits, and mortality.[9] The research included two groups totaling 11,436 participants: 4,384 individuals who received their first-ever review in 2018 and at least one review in 2019, and 7,052 individuals who did not receive a review. According to the data, participants who received MedWise Safety Reviews benefitted from less total medical expenditure as well as fewer hospitalizations and emergency department visits, comparatively.

While mean total medical costs (Medicare Part A and Part B) increased for both groups from 2018 to 2019, participants with MedWise Safety Reviews saved in comparison. In fact, the findings revealed an 8.5% increase for those who received MedWise Safety Reviews versus a 16% increase for those who did not, resulting in 7.5% cost savings for those who completed reviews. Similarly, emergency department visits increased in both groups, but this increase was less among participants with MedWise Safety Reviews. According to the data, the change from 2018 to 2019 was 2.3% for those who received MedWise Safety Reviews and 12.6% for those who did not, marking a 10.3% decrease for the intervention group (see Figure 2).

Meanwhile, the hospitalization rate decreased among participants who had MedWise Safety Reviews, but increased among participants who did not. Hospitalizations climbed 6.6% for those who did not complete reviews but dropped 3.4% for those who did, resulting in an overall 10% reduction for those who completed reviews (see Figure 2).

The data also demonstrated impact in terms of mortality. While 6.8% of participants who had their first-ever review in 2018 died by the end of 2019, 8.9% of participants who did not have a review died by the end of 2019. This marks a 2.1% difference between the groups (see Figure 2).

Figure 2: Patients who completed a MedWise Safety Review saw improved outcomes from 2018 to 2019



Putting Results in Perspective

With over 6 billion prescriptions dispensed in 2020, the safe use of medication is critical.[10] Advanced tools like MedWise Science and the MedWise Risk Score are important to shed unparalleled light on medication regimens and prescribing practices. Research has proven the MedWise Risk Score effective in identifying patients whose medication regimens put them at greater risk for negative outcomes. For high-risk patients, pharmacists can pinpoint medication-related problems and recommend measures that reduce risk through pharmacist-led consultations, which leverage MedWise Science.

As research demonstrates, this strategy ultimately leads to improving the safety of medication use and better patient outcomes. Given overarching trends surrounding healthcare costs, the elderly, and ADEs, wider use of advanced clinical decision support technology, such as MedWise Science, can help clinicians significantly improve the healthcare landscape.

TabulaRasa HealthCare®

CONTACT
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trhc.com

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2022

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Pharmacy Technician of the Year
Amber Coleman

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Lauren Puzz

MPhA Awards

Hall of Fame
Eddie Rutherford

Member of the Year
Anna Touchstone

Distinguished Young Pharmacist
Jordan Ballou

Excellence in Innovation
Carly Brown

Understanding Appropriate Heart Failure Treatment

2022 American Heart Association (AHA)/American College of Cardiology (ACC)/Heart Failure Society of America (HFSA) Heart Failure Guideline Update: What's new?

Heart failure (HF) therapy is commonly seen in both the inpatient and community settings. According to the American Heart Association (AHA), HF has affected 6.2 million Americans as of 2018.1 Medical cost is estimated to increase from $21 billion in 2012 to $53 billion by 2030.2 Additionally, it is estimated that 50% of patients are non-adherent to treatment due to many reasons, few of which are complexity and polypharmacy of therapy. This leads to worsening of outcomes, causing exacerbations in symptoms and rehospitalizations.2

While pharmacy personnel are evaluating treatment indications, it's important for the pharmacist to understand why and when certain medications are added to a regimen. It is also important to understand how a patient may benefit from dose titrations, as well as what could precipitate those dose changes. These concepts could also be explained to the patient during motivational interviewing to increase adherence and prevent complications. Motivational interviewing not only encourages the patients to be adherent to treatment, but also helps the patient understand why it's important to be adherent through patient education. It gives the patient an opportunity to express their true concerns and allows us to address barriers with resources available and listed in the 2022 AHA/ACC/HFSA HF Guideline.3

Guideline-directed medical therapy (GDMT) for patients with heart failure with reduced ejection fraction (HFrEF) belonging to AHA Stage C is explained in the 2022 AHA/ACC/HFSA HF Guideline update.3 HFrEF is classified by left ventricular ejection fraction (LVEF) less than 40%. Stage C refers to patients with previous or current HF symptoms (Table 1) and is divided into the four New York Heart Association (NYHA) classes (Table 2).3,4 It is recommended to start an angiotensin receptor-neprilysin inhibitor (ARNi), angiotensin-converting enzyme inhibitor (ACEi), or an angiotensin II receptor blocker (ARB) along with an evidence-based beta blocker, mineralocorticoid receptor antagonist (MRA), and a sodium-glucose-like transporter 2 inhibitor (SGLT2i). The only evidence-based beta blockers recommended in the guidelines are carvedilol, bisoprolol, and metoprolol succinate. A diuretic may also be added as needed only for symptom control in patients with fluid retention or congestion. A common question seems to involve the order of initiation of the ACEi/ARB/ARNi compared with the beta blocker. According to the 2021 ACC HF Guidelines, either can be started first. However, "Initiation of an ACEi/ARB/ARNi (Table 1, Figures 2 and 3) is often better tolerated when the patient is still congested ("wet"), whereas beta-blockers are better tolerated when the patient is less congested ("dry") with an adequate resting heart rate; beta-blockers should not be initiated in patients with decompensated signs or symptoms."4 Nevertheless, both agents may be given to the patient together and, in selected patients, be initiated together. Both agents are to be started at the initial dose and titrated to the target dose to achieve clinical benefits (Table 3).4

Currently, there is only one ARNi available in the U.S. The brand name is Entresto, containing sacubitril, a neprilysin inhibitor and valsartan, an ARB in a single tablet. Neprilysin is an enzyme that breaks down natriuretic peptides and bradykinin, thus the inhibition of neprilysin allows for vasodilation and natriuresis which lowers blood pressure. Like ACEi's and ARB's, ARNi has shown to be tolerable, improve cardiac remodeling in patients naïve to the treatment of either class, and improve left ventricular function, and quality of life.4 Although an ARNi is recommended to reduce morbidity

Table 1. AHA/ACC/HFSA Heart Failure Classifications

AHA/ACC/HFSA Heart Failure Classifications	
Stage A	Patients at risk for heart failure without symptoms.
Stage B	Structural heart disease without symptoms.
Stage C	Structural heart disease with current or previous symptoms.
Stage D	Advanced heart failure with symptoms interfering daily life.

and mortality, its high price may limit its access. Nevertheless, sacubitril/valsartan can be initiated without any prior exposure to an ACEi or an ARB. A "direct-to-ARNi" approach is recommended due to the positive outcomes demonstrated by sacubitril/valsartan.4 If the patient is currently taking an ACEi, there is a 36-hour washout period to minimize the risk of angioedema, classified by facial swelling and difficulty breathing. When switching from an ARB, sacubitril/valsartan may be given at the next scheduled ARB dose, thus giving a 24-hour break period to also lower the risk of angioedema. Although an ARB may be used in those who have experienced ACEi-induced angioedema, monitoring is recommended due to the possible angioedema occurrence with an ARB, as well.3 If angioedema does occur while taking any of the three classes, the offending agent needs to be discontinued. The precautions, contraindications, and side effect profile of sacubitril/valsartan mimic ACEis and ARBs; therefore, potassium and renal function should be checked within two weeks of initiation.4

The MRA's, such as spironolactone, are given to patients to reduce morbidity and mortality if the estimated glomerular filtration rate (eGFR) is higher than 30 mL/min/1.73 m2 and serum potassium is less than 5 mEq/L. MRA use is recommended for patients with HFrEF that are NYHA class II through IV. Those classes encompass patients who are symptomatic during ordinary physical activity, during less-than-normal activity, and/or at rest.3

In summary, GDMT recommends an ARNi, ACEi, or an ARB, preferably an ARNi, as well as an evidence-based beta blocker. SGLT2i (to be discussed below), and an MRA are to be initiated in symptomatic patients with HFrEF Stage C. These classes may be started simultaneously, however, if there are patient safety concerns, they may be initiated sequentially. The others may be initiated without an MRA, which could then be added at the two-week follow-up after obtaining baseline vitals. Nevertheless, they are all to be started at the recommended initial dose and titrated every two weeks to the HFrEF target dose as tolerated.3

Table 2. New York Heart Association (NYHA) Functional Class

New York Heart Association (NYHA) Functional Class	
I	No symptoms.
II	Slight limitations at ordinary activities, comfortable at rest.
III	Marked limitations of physical and basic activities, comfortable at rest.
IV	Symptoms of heart failure during all activities and when at rest.

New Heart Failure Therapies: What, How, When, and Why?

The SGLT2i agents, dapagliflozin and empagliflozin, have newly approved indications which were the new additions to the 2021 ACC HF guidelines as adjunctive therapy.4,5 The 2022 ACC HF guideline now recommends their use in patients upon diagnosis as part of the GDMT with an ARNi/ACEi/ARB, an evidence-based beta blocker, and an MRA. They are used to further improve patient outcomes without regard to the presence of type 2 diabetes mellitus (T2DM). According to studies conducted, they have shown to decrease cardiovascular (CV) events, hospitalizations, and death.4,5 The dose for both agents is identical, and both require renal function monitoring. Unlike dose titrations of other medications, the dapagliflozin or empagliflozin dose will remain at 10 mg daily, as it is both the initial and target dose.4,5

Other than the SGLT2i's glucose-lowering abilities, there are a few hypotheses of how they improve HFrEF outcomes. They aid in natriuresis and osmotic diuresis, which helps improve left ventricular function by reducing the preload. This can, in turn, lead to a decrease in arterial pressure and stiffening. The reduction in preload and afterload could help lessen hypertrophy and scarring, which benefits cardiac remodeling. The beneficial actions of these mechanisms on HFrEF were demonstrated in the DAPA-HF and EMPEROR-Reduced trials.6,7 In these studies, when compared with placebo, SGLT2i showed a reduction in composite CV death or HF hospitalization by an estimate of 25% and a reduction in HF hospitalizations by 30%.
The DAPA-HF trial studied the effect of dapagliflozin and the incidence of worsening HF or CV death in patients with chronic HFrEF.6 Dapagliflozin showed a reduction in the composite outcome of worsening heart failure (heart failure-related hospitalization or an urgent visit resulting in intravenous therapy) or CV death (hazard ratio [HR], 0.74; 95% confidence interval [CI], 0.65 to 0.85; P<0.001).6 The benefit was seen in those both with and without T2DM.6 This led to the FDA approval of dapagliflozin for HFrEF on May 3rd, 2021.

Similarly, the EMPEROR-Reduced trial studied empagliflozin in patients with chronic HFrEF with or without diabetes.7 A decrease in the composite outcome of HF hospitalizations, emergent/urgent heart failure visit requiring IV therapy, and death was demonstrated (HR, 0.76; 95% CI, 0.67–0.87; P<0.0001).7 This led to the FDA approval of empagliflozin for HFrEF on August 18th, 2021.

An SGLT2i is not to be used in patients with type 1 diabetes or on dialysis. Additionally, caution is advised when dapagliflozin is used in patients with an eGFR less than 30 mL/min/1.73 m2 and when empagliflozin is used in patients with an eGFR less than 20 mL/min/1.73 m2. In the event a patient is having an acute kidney injury (AKI) with fluid loss, one may consider the temporary discontinuation of the SGLT2i. Due to their diuresis effect, monitoring the patient's fluids, electrolytes, and possible genital infections

Table 3.

Therapy	Starting Dose	Target Dose
Bisoprolol	1.25 mg daily	10 mg daily
Carvedilol	3.125 mg twice daily	25 mg-50 mg twice daily
Metoprolol Succinate	12.5 mg-25 mg daily	200 mg daily
Sacubitril/valsartan	24-49 mg/26-51 mg twice daily	97 mg/103 mg twice daily
Enalapril	2.5 mg twice daily	10 mg-20 mg twice daily
Lisinopril	2.5 mg-5 mg daily	20 mg-40 mg daily
Losartan	25 mg-50 mg daily	50 mg-150 mg daily
Valsartan	20 mg-40 mg daily	160 mg twice daily
Spironolactone	12.5 mg-25 mg daily	25 mg-50 mg daily
Dapagliflozin	10 mg daily	10 mg daily
Empagliflozin	10 mg daily	10 mg daily
Isosorbide dinitrate/hydralazine	20 mg/37.5 mg thrice daily	40 mg/75 mg
Ivabradine	5 mg twice daily	7.5 mg twice daily

is recommended. An adjustment to their diuretic dosing should also be considered.4

Medication Dosing: What to target?

As patient monitoring goes, medication tolerability and monitoring should also be of high priority when assessing a patient. The low initial dosing is provided for patient safety and tolerability. Upon monitoring and ensuring the patient is both safe on the medication and can tolerate it well, a titration should occur. The titration doses are embedded in the 2022 ACC HF guidelines and should be followed to achieve target doses of the GDMT. The target doses are the doses studied in the trials that provided data of efficacy to use in HFrEF therapy. Achieving GDMT target doses provides the greatest chance to reverse cardiac remodeling and lower left ventricular volume which helps decrease rehospitalization, improve symptoms, quality of life, and reduce the mortality rate.4

Some medications, such as MRA's and SGLT2i's can be initiated at diagnosis or added to the current regimen prior to achieving target doses.3 However, being on maximally tolerated doses of the current regimen is sometimes a requirement before initiating a new agent. For example, if a patient has an ejection fraction of less than 35%, a resting heart rate of over 70 beats per minute with sinus rhythm, and on a maximum tolerated dose of beta blocker, then ivabradine (Corlanor) can be added to the regimen.

For ivabradine, the initial starting dose is 5 mg twice daily and the target dose is 7.5 mg twice daily. While the target dose is the goal, it is important to titrate based on the patients resting heart rate to reach the goal of 50 to 60 beats per minute, which patients may get prior to the target dose. If that occurs, there is no reason to continue the upward titration.3 It has a unique mechanism of inhibiting the If current involved in sinoatrial nodal activity, which reduces the heart rate without lowering the blood pressure.4 Lastly, prolongation of the QTc interval should be monitored while the patient is on ivabradine.

Similarly, the vasodilator, hydralazine, is mainly given in combination with isosorbide dinitrate as a single tablet, isosorbide dinitrate/hydralazine (BiDil). It is given to African American patients with HFrEF who are symptomatic regardless of taking GDMT to improve their symptoms and reduce morbidity and mortality.3 Its efficacy, when added to an ARNi, has not yet been studied and its use in non-African Americans has also not been established. However, it may be considered in those who cannot tolerate or take an ARNi/ACEi/ARB. Lastly, isosorbide dinitrate/hydralazine (20 mg/37.5 mg) is taken initially as one tablet three times daily, then titrated to the target dose of two tablets three times daily.3

For HFrEF therapies, it is recommended that clinicians aim to titrate to GDMT target doses within three to six months from an initial diagnosis of HFrEF. Although that may not be feasible for all patients, it is important to continuously aim to titrate medications to achieve target doses, as tolerated. A longer time may be needed for frail or hemodynamically unstable patients. A steady, yet quick titration may be better tolerated in clinically stable patients. When titrating to target doses of an ARNi/ACEi/ARB, lowering the loop diuretic dose may be needed to prevent hypotension and ensure patient safety.4 The target doses recommended help reverse cardiac remodeling, lower the left ventricular volume, reduce rehospitalization, and improve patient outcomes.4 Initial and target doses that help achieve the HFrEF long-term clinical goals are provided for reference in Table 3.3

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CONTINUING EDUCATION ARTICLE QUESTIONS

CE Approval #007-013-022-001 for 1.5 clock hours. CE Credits are valid through July 2024.

Understanding Appropriate Heart Failure Treatment

Instructions: After reading the continuing education article, quizzes can be taken at mspharm.org or detach this page. A grade of 70% or better is required to earn 1.5 hours of continuing education credit. This is a free service for MPhA members.

Print name, phone number, and email:

To mail your quiz, include a self-addressed and stamped envelope and mail to:
MPhA, PO Box 16861, Jackson, MS 39236

Name _____

Phone _____ Email _____

1. Which of the following is the correct stepwise approach when switching from ACEi/ARB to an ARNi?
    a. Must initiate ACEi before switching to ARNi
    b. Must initiate ARB before switching to ARNi
    c. Switch from ARB to ARNi after a 36-hour washout period
    d. Switch from ACEi to ARNi after a 36-hour washout period

2. When is the most appropriate time to add a beta blocker to the patient's regimen?
    a. After adding an angiotensin antagonist
    b. Before adding an angiotensin antagonist
    c. When the patient has passed the congeste phase
    d. After a maximally tolerated dose of an angiotensin antagonist

3. Which of the following is an appropriate evidence-based beta blocker to give to a patient with HF?
    a. Nadolol
    b. Metoprolol tartrate
    c. Acebutolol
    d. Metoprolol succinate

4. A patient is on lisinopril 20 mg, metoprolol succinate 25 mg, furosemide 20 mg, and is experiencing shortness of breath, and swelling around the lips and cheeks. What is the appropriate next step?
    a. Increase dose of furosemide
    b. Discontinue lisinopril and monitor swelling
    c. Switch to sacubitril/valsartan
    d. Monitor swelling

5. A patient is on metoprolol succinate 50 mg once daily and has a heart rate of 80 beats per minute, what is recommended for the patient?
    a. Continue medication as is and monitor the heart rate
    b. Increase the dose to 100 mg twice daily
    c. Discontinue the medication due to a stable and at goal heart rate
    d. Increase the dose to 100 mg daily

6. When should patients optimally be at their evidence-based recommended doses for maximal therapy benefits?
    a. Within 2 months of diagnosis
    b. Within 3 months of diagnosis
    c. Within 6 months of diagnosis
    d. Within 12 months of diagnosis

7. When is the appropriate time to add ivabradine to a patient's regimen?
    a. At the time of diagnosis
    b. When a patient has achieved their goal heart rate
    c. When a patient is not at their goal heart rate after a maximum tolerated beta-blocker
    d. When a patient is not at their goal heart rate while titrating the beta blocker

8. What is an important benefit of achieving guideline-directed medical therapy (GDMT) target doses?
    a. The patient is satisfied with high doses of medications
    b. Reverse cardiac remodeling
    c. To satisfy facility guidelines
    d. To lower blood pressure

9. When is the most appropriate time to add spironolactone to a patient's regimen?
    a. At diagnosis or during the titration period of GDMT
    b. Before adding an SGLT2i
    c. When a patient is on maximally tolerated GDMT
    d. After adding an SGLT2i if symptoms persist

10. When is the most appropriate time to add dapagliflozin to a patient's regimen?
    a. After adding an MRA in a persistently symptomatic patient
    b. When a patient is on maximally tolerated GDMT
    c. Before adding an MRA
    d. Upon Diagnosis of Stage C HF

11. How often should HF medications be titrated to achieve target doses as tolerated?
    a. Every week
    b. Every 2 weeks
    c. Every month
    d. Every 2 months

12. While titrating ivabradine, what is the goal heart rate?
    a. 50 to 60 beats per minute
    b. 60 to 80 beats per minute
    c. 60 to 100 beats per minute
    d. 80 to 100 beats per minute

13.What is the most appropriate reason to add a diuretic to a patient's regimen?
    a. Mortality benefits
    b. Reverse cardiac remodeling
    c. For symptomatic relief
    d. To lower blood pressure and heart rate

14. Which of the following is considered a reduced ejection fraction in heart failure?
    a. Less than 70%
    b. Less than 60%
    c. Less than 50%
    d. Less than 40%

15. Of the following, which is the most compelling reason to add an SGLT2 inhibitor in the treatment of HFrEF?
    a. An extra diuretic for the patient
    b. Reduces rehospitalization and cardiovascular death
    c. Lowers blood sugar in patients with diabetes
    d. Lowers ejection fraction in patients with diabetes

16. Which of the following is a true statement about SGLT2 inhibitor agents?
    a. Dapagliflozin and empagliflozin may be used in patients with type 1 or 2 diabetes
    b. There is no need to adjust the diuretic dose or monitor fluids and electrolytes when on dapagliflozin
    c. Empagliflozin can be continued regardless of an acute kidney injury and may be used during dialysis as well
    d. The estimated glomerular filtration rate should be at least 30 mL/min/1.73 m2 when initiating dapagliflozin

17. A 96 kg patient is currently on empagliflozin 10 mg daily with an average heart rate of 70 beats per minute, what is their target dose?
    a. Continue current dose
    b. 10 mg twice daily
    c. 10 mg three times daily
    d. 20 mg daily

18. Which of the following SGLT2 inhibitors are ap proved by the FDA for the treatment of heart failure?
    I. Canagliflozin (Invokana)
    II. Dapagliflozin (Farxiga)
    III. Empagliflozin (Jardiance)
    IV. Ertugliflozin (Steglatro)
    a. I only
    b. II and III
    c. III and IV
    d. I, II, III, and IV

Join a Committee

The Mississippi Pharmacists Association (MPhA) begins a new committee year each July. We invite you to join one or more committees. You can visit our website for committee information - mspharm.org/committees. Each committee addresses different topics relevant to MPhA business. Examples of topics discussed at each meeting could pertain to membership engagement (Membership), educational topics for conventions and journals (Education), ways to engage students and recent graduates (New Practitioner), and/or legislation (Government Affairs).

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Is Your Pharmacy Ready for an Unannounced Audit?

Pharmacies are often startled with the limited amount of time a PBM offers prior to an onsite audit. However, PBM auditors, DEA agents, FDA inspectors and state Board of Pharmacy inspectors can also make unannounced visits.

Ensuring your staff members are prepared in case of an unannounced visit is essential. Since these visits occur without warning, the Pharmacist-in-Charge (PIC) and/or owner may not be working or available to assist. Keeping information in a central location and advising staff on how to handle these intimidating visits will make the process go much smoother.

PAAS National® has created a document to help pharmacies prepare for PBM visits. Located on the PAAS Member Portal, under the Tools & Aids Section, PAAS Audit Assistance members can find the O***nsite Credentialing Guidelines.*** This tool provides a list of frequently asked questions from auditors. The guide also includes references to the Policy and Procedure Manual for PAAS National® Fraud, Waste & Abuse and HIPAA Compliance[1] members.

PAAS Tips:

- Anyone requesting access to PHI (or your professional service area) should be identified with a company issued picture ID and other validating information
    - Follow your pharmacy's HIPAA policy for visitors. PAAS FWA/HIPAA members can document information on their Visitor's Log located in their Policy and Procedure Manual
- Check PAAS' newest guide ***How to Be Prepared for An Onsite Audit***[2] located on the PAAS Member Portal in the Tools & Aids Section
- Make sure all staff are:
    - Up to date on FWA and HIPAA compliance training
    - OIG and GSA exclusion checked; required monthly, PAAS performs these checks daily for our FWA/HIPAA members and records are accessible on the PAAS Member Portal
- Review and update your FWA/HIPAA Compliance Manual and the Onsite Credentialing Guidelines with your Compliance Officer and/or PIC
- Keep copies of all documents requested by auditor or inspector
- Keep copies of any documents you are requested to sign
- Contact PAAS: info@paasnational.com or (608) 873-1342, once your PBM visit is over as we can track this information to better serve all members based on your experience

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By Trenton Thiede, PharmD, MBA, President at PAAS National®, expert third party audit assistance and FWA/HIPAA compliance

References:

1. https://paasnational.com/fwac-hipaa/
2. https://portal.paasnational.com/Paas/Resource/Tools

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