

Empowering Your Heart Failure Patient Through Diet

Emily Matson, MS and Theresa Han-Markey, MS, RD

Improving the quality of life for patients with heart failure (HF) is an integral component of patient centered care. Current, well researched dietary interventions will help manage symptoms of heart failure (HF). The symptoms of altered fluid and electrolyte balance that occurs with HF can have a severe impact on activities of daily living (ADLs), both physically and mentally.¹ Educating your patients about the importance of diet quality empowers them to take an active role in symptom management of their condition.

The main dietary intervention for systolic and diastolic HF used in clinical practice is limiting sodium to less than 2g/day. Depending on the symptoms, a fluid restriction of 2 L/day may also be recommended. Believe it or not, these dietary modifications are “easier said than done.” Also, there is some controversy regarding sodium restriction recommendations for HF as it may actually worsen outcomes in patients with chronic compensated HF with reduced ejection fraction (HFrEF).^{2,3} There is some evidence that fluid restriction coupled with diuretic use may be more effective than sodium restriction in patients with HFrEF.^{4,5}

There are currently no published results from large clinical trials for sodium or fluid restriction as dietary intervention for the treatment of HF. However, there is currently a clinical trial in progress through Emory University called the Prevent Adverse Outcomes in Heart failure By limiting Sodium (PROHIBIT) Study. The results from this ongoing study may affect the dietary sodium recommendations for treatment of HF with reduced ejection fraction only.⁶

Recommending just a low sodium diet may have unintended nutritional consequences as intake of sodium is often correlated with calorie intake.⁷ Also, intake of other micronutrients such as calcium, thiamin, and folate may decrease.⁸ Thiamin in particular is of concern as its deficiency is more prevalent in the HF population and may lead to worse outcomes.⁹

The Dietary Approaches to Stop Hypertension (DASH) diet with sodium restriction has already been shown to improve blood pressure more than salt restriction alone. DASH, ranked by the 2018 U.S. News & World Report as the healthiest diet and best diet overall (tied with Mediterranean diet), emphasizes whole grains, low fat dairy, and lean protein sources in addition to a sodium restriction. The DASH diet is also high in fruits and vegetables which contain many phytochemicals that may be beneficial for heart health.¹⁰ DASH stresses getting key nutrients from the diet such as potassium, calcium, and magnesium. However, it's important to note that patients with HF and chronic kidney disease, may need to limit dietary potassium sources.

Small studies have begun using DASH with a sodium restriction as an intervention for HF and have shown improvement in endothelial function, blood pressure, metabolite profile, and reduced oxidative stress in patients with HFpEF.¹¹⁻¹⁵ In a very recent study, it was found that HFpEF patients who received DASH meals tended to have fewer HF hospital readmissions and total days hospitalized than those who received usual care.¹⁶

Diet education is important for patients with HF. Knowledge about diet can empower individuals to take an active role in their HF symptom management. Teaching skills such as food label reading for sodium restriction and how to make small realistic goals can go a long way in making the DASH diet a sustainable nutrition intervention for heart failure.

UPCOMING EVENTS



Click on the dates below to register for MiCMRC Complex Care Management Courses:

[May 7-10, 2018, Lansing](#)

[May 21-24, 2018, Grand Rapids](#)

[June 11-14, 2018, Dimondale](#)

MiCMRC WEBINARS

Title: Advance Care Planning 101

Date and Time: Wednesday, May 23rd 2-3 pm

Presenter: Carolyn Stramecki, MHSA
Register [HERE](#)

Title: Michigan Physician Orders for Scope of Treatment (MI-POST) 101

Date and Time: Wednesday, June 13th 2-3 pm

Presenter: Carolyn Stramecki, MHSA
Register [HERE](#)

The Michigan Care Management Resource Center supports ambulatory practices statewide to implement and build upon Patient-Centered Medical Home (PCMH) and PCMH Neighborhood (PCMH-N) capabilities related to care management, population management, self-management support, and care coordination. MiCMRC provides foundational and longitudinal curriculum, tools and resources to assist practices with developing a sustainable, evidence-based clinical model for care management activities. Support for the Michigan Care Management Resource Center is provided by Blue Cross® Blue Shield® of Michigan as part of the BlueCross Value Partnerships program. Michigan Care Management Resource Center is not affiliated with or related to Blue Cross Blue Shield of Michigan nor Blue Cross Blue Shield Association .

Announcing Pediatric Office Hours for 2018

Open to All Michigan Care Management Team Members

In response to requests for care management curriculum with a focus on pediatric topics, the State Innovation Model PCMH Initiative is announcing a series of Pediatric Office Hours in 2018.

Date: Wednesday, June 6th 11 am-12 pm

Topic: “Adverse Childhood Experiences and Social Determinants of Health Screening – How to have the conversation”

Presenter: To be announced

This presentation is supported by Funding Opportunity Number CMS-1G1-14-001 from the U.S. Department of Health and Human Services (HHS), Centers for Medicare and Medicaid Services. The content provided is solely the responsibility of the authors and does not necessarily represent the official views of HHS or any of its agencies.

Register [HERE](#)

Save the date for the next Pediatric Office Hours: September 13th 12pm-1pm. The Pediatric Office Hours is open to all interested Michigan Care Management team members.

eLearning Opportunities from the American Diabetes Association

The American Diabetes Association Professional Education eLearning site offers quality accredited eLearning programs *free of charge*. Continuing Education contact hours and CME credits are available for physician assistants, physicians, nurses, certified diabetes educators, pharmacists, and dietitians. You can search accredited eLearning programs by topic area as well modality. To access the eLearning, users are required to register with a username and password. Examples of eLearning topics offered:

- Highlights of the 2018 Standards of Care
- Diabetes and Hypertension
- Exercise and diabetes
- Psychosocial care
- Management of Diabetes in Children

For more information visit <https://ada.healthmonix.com/>.



MiCMRC Complex Care Management Course Registration

The MiCMRC Complex Care Management (CCM) course is designed to prepare the healthcare professional for the role of Complex Care Manager. Course content is applicable to all Care Managers in the ambulatory care setting, working with complex patients. For CCM Course details [click here](#)

Upcoming CCM course dates and course registration:

May 7-10 |Lansing MI | [REGISTER HERE](#) | Registration deadline: May 3, 2018

May 21-24 |Grand Rapids MI |[REGISTER HERE](#) | Registration deadline: May 17, 2018

June 11-14 |Lansing MI |[REGISTER HERE](#) | Registration deadline: June 7, 2018

NOTES: If you have 15 or more Care Managers in your area and would like the MiCMRC team to provide a regional training at your location please submit your request to: micmrc-ccm-course@med.umich.edu

For questions please contact : micmrc-ccm-course@med.umich.edu

MiCMRC 2018 CARE MANAGEMENT EDUCATIONAL WEBINARS

In case you missed it

Nursing and Social Work continuing education opportunity. For more information visit www.micmrc.org/continuing-ed

MiCMRC Questions?
For questions please [Contact Us](#)

Share Your Success Stories

Submitting your success story is as easy as clicking on the following link:
[Share Your Success Story](#)

For help submitting your success story contact us at <http://micmrc.org/contact-us>

Title: Advance Care Planning 101
Date and Time: Wednesday, May 23rd 2-3 pm
Presenter: Carolyn Stramecki, MHSA
Consultant, Advance Care Planning – Michigan, Michigan Primary Care Consortium

This activity has been submitted to the Ohio Nurses Association for approval to award contact hours. The Ohio Nurses Association is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. (OBN-001-91)

“Michigan Care Management Resource Center is an approved provider with the Michigan Social Work Continuing Education Collaborative”. Approved Provider Number: MICEC 110216

This program has been pre-approved by The Commission for Case Manager Certification to provide continuing education credit to CCM® board certified case managers. The course is approved for 1.0 CE contact hour(s). Activity code: I00031933 Approval Number: 180001611 **To claim these CEs, log into your CCMC Dashboard at www.ccmcertification.org.**

Register [HERE](#)

Title: Michigan Physician Orders for Scope of Treatment (MI-POST) 101
Date and Time: Wednesday, June 13th 2-3 pm
Presenter: Carolyn Stramecki, MHSA
Consultant, Advance Care Planning – Michigan, Michigan Primary Care Consortium

This activity has been submitted to the Ohio Nurses Association for approval to award contact hours. The Ohio Nurses Association is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. (OBN-001-91)

“Michigan Care Management Resource Center is an approved provider with the Michigan Social Work Continuing Education Collaborative”. Approved Provider Number: MICEC 110216

This program has been submitted to The Commission for Case Manager Certification for approval to provide board certified case managers with 1.0 clock hour.

Register [HERE](#)

MiCMRC Approved Self-Management Support Courses and Resources Update

To access the list of the MiCMRC approved Self-Management Support courses, [click here](#). The list of MiCMRC approved Self-Management Support Courses provides a detailed summary of each course, with associated objectives, location, cost and more.

Additionally, MiCMRC has collected resources for Self-Management Support including: websites of interest, publications, tools, videos, and even patient materials. MiCMRC's “Self-Management Support Tools and Resources” document offers an at a glance list and summary of these resources, along with descriptions and website links for quick access. For “Self-Management Support Tools and Resources” [click here](#).

Both of these documents can also be accessed on the MiCMRC website home page <http://micmrc.org/>

Provider Delivered Care Management (PDCM)
Blue Distinction Total Care (BDTC)
High Intensity Care Model (HICM)

Monthly Billing Q & A Sessions

On a monthly basis, Blue Cross Blue Shield of Michigan will conduct a question and answer session via WebEx relating to questions you may have after you've completed the online Billing/Coding course regarding these programs. They are scheduled for the first Thursday of each month from 12:00 – 1:00 for 2018. Below is the 2018 scheduled question and answer sessions.

Please do not ask specific questions about claims. If you have an issue, you should contact your provider consultant for assistance or you can submit an inquiry to valuepartnerships@bcbsm.com. For additional billing resources visit <http://micmrc.org/training/care-management-billing-resources>

Below are the dates and WebEx information to join the conference call.

Barbara Brady invites you to an online meeting using WebEx.

To join this meeting (Now from mobile devices!)

1. Go to <https://bcbsm.webex.com/bcbsm/j.php?MTID=m4b96f6a21bf31261e0162488e206e731>
2. If requested, enter your name and email address.
3. If a password is required, enter the meeting password: pgip
4. Click "Join".
5. Follow the instructions that appear on your screen.

Teleconference information

1. Please call one of the following numbers:
Toll-Free: 1-800-4625837
Local: 1-313-2254000
2. Follow the instructions that you hear on the phone.
Your Cisco Unified MeetingPlace meeting ID: 735 921 157

To join this meeting from bcbsm.webex.com

Meeting Number: 735 921 157
Meeting Password: pgip
<https://www.webex.com>

May 3rd
June 7th
July 5th
August 2nd
September 6th
October 4th
November 1st
December 6th



References

- Alpert CM, Smith MA, Hummel SL, Hummel EK. Symptom burden in heart failure: assessment, impact on outcomes, and management. *Heart Fail Rev.* 2017;22(1):25-39. doi:10.1007/s10741-016-9581-4.
- Gupta D, Georgiopoulou V V., Kalogeropoulos AP, et al. Dietary sodium intake in heart failure. *Circulation.* 2012;126(4):479-485. doi:10.1161/CIRCULATIONAHA.111.062430.
- Doukky R, Avery E, Mangla A, et al. Impact of dietary sodium restriction on heart failure outcomes. *JACC Hear Fail.* 2016;4(1):24-35. doi:10.1016/j.jchf.2015.08.007.
- Paterna S, Parrinello G, Cannizzaro S, et al. Medium Term Effects of Different Dosage of Diuretic, Sodium, and Fluid Administration on Neurohormonal and Clinical Outcome in Patients With Recently Compensated Heart Failure. *Am J Cardiol.* 2009;103(1):93-102. doi:10.1016/j.amjcard.2008.08.043.
- Paterna S, Gaspare P, Fasullo S, Sarullo FM, Di Pasquale P. Normal-sodium diet compared with low-sodium diet in compensated congestive heart failure: is sodium an old enemy or a new friend? *Clin Sci.* 2008;114(3):221-230. doi:10.1042/CS20070193.
- Butler J, Papadimitriou L, Georgiopoulou V V., Skopicki H, Dunbar S, Kalogeropoulos AP. Comparing Sodium Intake Strategies in Heart Failure: Rationale and Design of the PROHIBIT Sodium (Prevent adverse Outcomes in Heart failure By limITing Sodium) Study. 2016;5(7):636-645. doi:10.5014/ajot.2012.004234. Proprioceptive.
- Cogswell ME, Mugavero K, Bowman B, Frieden TR. Dietary Sodium and Cardiovascular Disease Risk – Measurement Matters. *N Engl J Med.* 2016;375(6):580-586. doi:10.1056/NEJMSb1607161. Dietary.
- Jefferson K, Ahmed M, Choleva M, et al. Effect of a Sodium-Restricted Diet on Intake of Other Nutrients in Heart Failure: Implications for Research and Clinical Practice. *J Card Fail.* 2015;21(12):959-962. doi:10.1016/j.cardfail.2015.10.002.
- Jain A, Mehta R, Al-Ani M, Hill JA, Winchester DE. Determining the Role of Thiamine Deficiency in Systolic Heart Failure: A Meta-Analysis and Systematic Review. *J Card Fail.* 2015;21(12):1000-1007. doi:10.1016/j.cardfail.2015.10.005.
- Webb, D. (2013). Phytochemicals' Role in Good Health. Today's Dietitian, [online] (Vol. 50 No. 9), p.70. Available at: <http://www.todaysdietitian.com/newarchives/090313p70.shtml> [Accessed 28 Nov. 2017].
- Hummel SL, Mitchell Seymour E, Brook RD, et al. Low-sodium dietary approaches to stop hypertension diet reduces blood pressure, arterial stiffness, and oxidative stress in hypertensive heart failure with preserved ejection fraction. *Hypertension.* 2012;60(5):1200-1206. doi:10.1161/HYPERTENSIONAHA.112.202705.
- Hummel SL, Seymour EM, Brook RD, et al. Low-Sodium DASH Diet Improves Diastolic Function and Ventricular-Arterial Coupling in Hypertensive Heart Failure with Preserved Ejection Fraction. *Circ Hear Fail.* 2013;6(6):1165-1171. doi:10.1161/CIRCHEARTFAILURE.113.000481. Low-Sodium.
- Rifai L, Pisano C, Hayden J, Sulo S, Silver MA. Impact of the DASH diet on endothelial function, exercise capacity, and quality of life in patients with heart failure. *Proc (Bayl Univ Med Cent).* 2015;28(2):151-156.
- Mathew A V, Seymour EM, Byun J, Pennathur S, Hummel SL. Altered Metabolic Profile With Sodium-Restricted Dietary Approaches to Stop Hypertension Diet in Hypertensive Heart Failure With Preserved Ejection Fraction. *J Card Fail.* 2015;21(12):963-967. doi:10.1016/j.cardfail.2015.10.003.
- Rifai L, Silver MA. A Review of the DASH Diet as an Optimal Dietary Plan for Symptomatic Heart Failure. *Prog Cardiovasc Dis.* 2016;58(5):548-554. doi:10.1016/j.pcad.2015.11.001.
- Wessler JD, Maurer MS, Hummel SL. Evaluating the Safety and Efficacy of Sodium-Restricted/Dietary Approaches to Stop Hypertension Diet After Acute Decompensated Heart Failure Hospitalization: Design and Rationale for the Geriatric Out of hospital Randomized MEal Trial in Heart Failure (GOURMET-HF). *Am Hear J.* 2017;169(3):1-23. doi:10.1007/s00210-015-1172-8.