Welcome!

As you join, please turn on cameras and mic or unmute your phone and say hello to your Virginia colleagues. We all have a common bond: the choice to serve in a unique area of health care. During the presentation we can mute ourselves until it is time for more interaction.
Virginia LTC-CN: Share Some Info

Please use the Chat box:

- Your Name and Region or City/Town
- Best article you have read lately

Thank you for taking care of Virginia’s residents of PACE, assisted living and nursing homes!
Where to find us, slides, monthly newsletter?

Virginia Long-Term Care Clinician Network

Join the Network | Steering Committee | Forums & Events | Contact Us | Resources

A partnership between long-term care clinicians

- Join the Network
- Read the November newsletter
- LTC-CN Team, plus COVID-19...
Welcome New Members!

Elaine Dunnivan, NP
Susan Moeslein, MSA, BSN, ACM, CIC
Shannon Green, LPN
Mohammad Salman, RN
Michael Hamilton, MDiv
Paula St. Hill, Public Health
James Thompson, PA-C, MMS
Who are we?

Staff
Christian Bergman, MD - Principal Investigator
Bert Waters, PhD - Project Director
Laura Finch, MS, GNP, RN - Clinical Coordinator
Kim Ivey, MS - Communications/Administration
Jenni Mathews - Registration/Evaluation Coord.
Kristin MacDonald, MS, RD - News & Content Editor

Steering Committee
Eastern Region: Rob Walters, MD & Mary Mallory, NP
Northwestern Region: Jonathan Winter, MD
Central Region: William Reed, MD & Tanglea Crawley-Hardy, NP
Southwest Region: Katherine Coffey-Vega, MD & Jamie Smith, NP
Northern Region: Aabha Jain, MD & Noelle Pierson, NP
Statewide: Shawlawn Freeman-Hicks, NP

Our Members
ltccn.vcu.edu
Network Growth – 225 members

Still Growing!
Thanks for spreading the word!

- Administration
- Allied Health
- MD/DO
- NP
- Nurse
- PA
- Public Health
Poll Question 1

Are you tired of holiday music yet?

A- Yes
B- No
Heart Failure in PALTC

Carl J. “Christian” Bergman, MD, CMD, FACP
Assistant Professor, Division of Geriatric Medicine, VCU

I have no relevant conflicts of interest.
CHF Background

- 6.2 million persons today, projected to increase to 8 million by 2030
- Cost of 30-day readmission is $41B in hospital costs alone
- Medicare beneficiaries hospitalized with HF from 2006 to 2008 were used, the 30-day all-cause risk-standardized rehospitalization rate was 24.7%
  - Of note, 6 month re-hospitalization rates are 50%
- For those ≥65 years of age, discharge to long-term care increased significantly from 17% in 2000 to 21% in 2010
- Predicting 30 day hospitalization: 1) Age, 2) # of hospitalizations within 6 months, 3) longer index hospital stay aLOS, and 4) # of ED visits 6 months after index hosp.
2015 Circulation Analysis
Poll Question 2

Which barrier from the 2015 paper do you encounter most frequently in managing PALTC Heart Failure Patients?

A – Medication management
B – Follow up appointment
C – Healthcare provider communication
D – Self-awareness of signs/symptoms of heart failure
PALTC Unique Care Issues

- Admissions are complex, i.e. not “just” heart failure
- Poor handoff between providers
- Nursing home staffing shortages
- Staff education / awareness of signs/symptoms
- Non-adherence to diet / fluid restrictions
- Poor psychosocial support in community
Course of Heart Failure

https://www.activehhh.com/home-health-blog/hospice-for-heart-failure/
Let’s look at Best Practices in CHF
Wait, what?

- Where do we start?
Words matter

Universal Definition and Classification of Heart Failure (HF)

**Definition**

HF is a **clinical syndrome** with current or prior

- Symptoms and or signs caused by a structural and/or functional cardiac

And corroborated by at least one of the following:

- Elevated natriuretic peptide levels
- Objective evidence of cardiogenic pulmonary or systemic congestion

**Stages**

**AT RISK** (STAGE A)

Patients at risk for HF, but without current or prior symptoms or signs of HF and without structural cardiac changes or elevated biomarkers of heart disease

**PRE-HF** (STAGE B)

Patients without current or prior symptoms or signs of HF with evidence of one of the following:

- Structural Heart Disease
- Abnormal cardiac function
- Elevated natriuretic peptide or cardiac troponin levels

**HF** (STAGE C)

Patients with current or prior symptoms and/or signs of HF caused by a structural and/or functional cardiac abnormality

**ADVANCED HF** (STAGE D)

Severe symptoms and/or signs of HF at rest, recurrent hospitalizations despite GDMT, refractory or intolerant to GDMT, requiring advanced therapies transplantation, mechanical circulatory support, or palliative care

**Classification By EF**

- **HF with reduced EF (HFrEF)**
  - HF with LVEF < 40%
- **HF with mildly reduced EF (HFmrEF)**
  - HF with LVEF 41-49%
- **HF with preserved EF (HFrEF)**
  - HF with LVEF > 50%
- **HF with improved EF (HFimpEF)**
  - HF with a baseline LVEF of < 40%, a 10-point increase from baseline LVEF, and a second measurement of LVEF of > 40%

Language matters! The new universal definition offers opportunities for **more precise communication** and description with terms including **persistent HF** instead of “stable HF,” and **HF in remission** rather than “recovered HF.”
Poll Question 3

Prior to today, had you heard of the category of mildly reduced EF (HFmrEF)?

A – Yes

B – No
Poll Question 4

Prior to today, had you heard of the category of improved heart failure (HFImpEF)?

A – Yes
B – No
Heart Failure 2022 Guidelines

Circulation

AHA/ACC/HFSA CLINICAL PRACTICE GUIDELINE

2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines
Heart Failure 2022 Guidelines

CLASS (STRENGTH) OF RECOMMENDATION

CLASS 1 (STRONG) Benefit >> Risk
Suggested phrases for writing recommendations:
- Is recommended
- Is indicated/useful/effective/beneficial
- Should be performed/administered/other
- Comparative-Effectiveness Phrases:
  - Treatment/strategy A is recommended/indicated in preference to treatment B
  - Treatment A should be chosen over treatment B

CLASS 2a (MODERATE) Benefit > Risk
Suggested phrases for writing recommendations:
- Is reasonable
- Can be useful/effective/beneficial
- Comparative-Effectiveness Phrases:
  - Treatment/strategy A is probably recommended/indicated in preference to treatment B
  - It is reasonable to choose treatment A over treatment B

CLASS 2b (WEAK) Benefit > Risk
Suggested phrases for writing recommendations:
- May/might be reasonable
- May/might be considered
- Usefulness/effectiveness is unknown/unclear/uncertain or not well-established

CLASS 3: No Benefit (MODERATE) Benefit = Risk
(Generally, LOE A or B use only)
Suggested phrases for writing recommendations:
- Is not recommended
- Is not indicated/useful/effective/beneficial
- Should not be performed/administered/other

Class 3: Harm (STRONG) Risk > Benefit
Suggested phrases for writing recommendations:
- Potentially harmful
- Causes harm
- Associated with excess morbidity/mortality
- Should not be performed/administered/other
Heart Failure 2022 Guidelines

Initial Classification
- **HFrEF**
  - LVEF ≤40%
- **HFmrEF**
  - LVEF 41%–49%
- **HFP EF**
  - LVEF ≥50%

Serial Assessment and Reclassification
- **HFrEF**
  - LVEF ≤40%
- **HFimpEF**
  - LVEF >40%
- **HFmrEF**
  - LVEF 41%–49%
  - LVEF ≥50%
- **HFP EF**
  - LVEF ≥50%
2. In patients with chronic HF, measurements of BNP or NT-proBNP levels are recommended for risk stratification.\textsuperscript{11,13–29}
Poll Question 5

In LTC patient whom have heart failure, are you checking serial BNP measurements to guide prognosis/management?

A – Yes

B – No
5. In patients hospitalized for HF, a predischARGE BNP or NT-proBNP level can be useful to inform the trajectory of the patient and establish a postdischarge prognosis.\textsuperscript{14,17,20–29}
Poll Question 6

In SNF patients whom have heart failure, are you checking serial BNP measurements during the SNF stay?

A – Yes, multiple times
B – Yes, at admission only
C – Yes, at discharge only
D – No
8. In patients with HF in the absence of: 1) clinical status change, 2) treatment interventions that might have had a significant effect on cardiac function, or 3) candidacy for invasive procedures or device therapy, routine repeat assessment of LV function is not indicated.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1. In patients with LVEF ≤40%, <strong>ACEi</strong> should be used to prevent symptomatic HF and reduce mortality.¹⁻⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>2. In patients with a recent or remote history of MI or ACS, <strong>statins</strong> should be used to prevent symptomatic HF and adverse cardiovascular events.⁵⁻⁹</td>
</tr>
<tr>
<td>1</td>
<td>A</td>
<td>3. In patients with a recent MI and LVEF ≤40% who are intolerant to ACEi, <strong>ARB</strong> should be used to prevent symptomatic HF and reduce mortality.¹⁰</td>
</tr>
<tr>
<td>1</td>
<td>B-R</td>
<td>4. In patients with a recent or remote history of MI or acute coronary syndrome (ACS) and LVEF ≤40%, evidence-based <strong>beta blockers</strong> should be used to reduce mortality.¹¹⁻¹³</td>
</tr>
</tbody>
</table>
Nondihydropiridine calcium channel blockers diltiazem and verapamil are myocardial depressants and generally not tolerated in HF. In previous studies of patients with HF or reduced LVEF after acute MI, diltiazem was associated with increased risk of HF,\textsuperscript{16,17} although in a smaller study of patients with nonischemic cardiomyopathy, diltiazem had no impact on mortality.\textsuperscript{45} Verapamil had no impact on survival or major cardiovascular events after acute MI.\textsuperscript{46} Although not specifically tested in asymptomatic patients with low LVEF, nondihydropyridine calcium channel blockers may be harmful in this population because of their negative inotropic effects.
Poll Question 7

In patients with an EF < 50%, do you feel comfortable using dihydropyridines such as amlodipine or nifedipine?

A – Yes
B – No
Restricting dietary sodium is a common nonpharmacological treatment for patients with HF symptomatic with congestion, but specific recommendations have been based on low-quality evidence. Concerns about the quality of data regarding clinical benefits or harm of sodium restriction in patients with HF include the lack of current pharmacological therapy, small samples without sufficient racial and ethnic diversity, questions about the correct threshold for clinical benefit, uncertainty about which subgroups benefit most from sodium restriction, and serious questions about the validity of several RCTs in this area. However, there are promising pilot trials of sodium restriction in patients with HF. The AHA currently recommends a reduction of sodium intake to <2300 mg/d for general cardiovascular health promotion; however, there are no trials to support this level of restriction in patients with HF.
Poll Question 8

When counseling heart failure patients about dietary intake, do you always recommend a heart healthy, low sodium diet <2.5 g?

A – Yes
B – No
C – Depends
1. In patients with HFrEF and NYHA class II to III symptoms, the use of ARNi is recommended to reduce morbidity and mortality.\textsuperscript{1-5}

<table>
<thead>
<tr>
<th>Value Statement: High Value (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. In patients with previous or current symptoms of chronic HFrEF, in whom ARNi is not feasible, treatment with an ACEi or ARB provides high economic value.\textsuperscript{19-25}</td>
</tr>
</tbody>
</table>
### Heart Failure 2022 Guidelines

<table>
<thead>
<tr>
<th>3: No Benefit</th>
<th>A</th>
<th>1. In patients with HFrEF, dihydropyridine calcium channel-blocking drugs are not recommended treatment for HF.(^{12})</th>
</tr>
</thead>
<tbody>
<tr>
<td>3: No Benefit</td>
<td>B-R</td>
<td>2. In patients with HFrEF, vitamins, nutritional supplements, and hormonal therapy are not recommended other than to correct specific deficiencies.(^{9-9})</td>
</tr>
<tr>
<td>3: Harm</td>
<td>A</td>
<td>3. In patients with HFrEF, nondihydropyridine calcium channel-blocking drugs are not recommended.(^{10-13})</td>
</tr>
<tr>
<td>3: Harm</td>
<td>A</td>
<td>4. In patients with HFrEF, class IC antiarrhythmic medications and dronedarone may increase the risk of mortality.(^{14-16})</td>
</tr>
<tr>
<td>3: Harm</td>
<td>A</td>
<td>5. In patients with HFrEF, thiazolidinediones increase the risk of worsening HF symptoms and hospitalizations.(^{17-21})</td>
</tr>
<tr>
<td>3: Harm</td>
<td>B-R</td>
<td>6. In patients with type 2 diabetes and high cardiovascular risk, the dipeptidyl peptidase-4 (DPP-4) inhibitors saxagliptin and alogliptin increase the risk of HF hospitalization and should be avoided in patients with HF.(^{22-24})</td>
</tr>
<tr>
<td>3: Harm</td>
<td>B-NR</td>
<td>7. In patients with HFrEF, NSAIDs worsen HF symptoms and should be avoided or withdrawn whenever possible.(^{25-28})</td>
</tr>
</tbody>
</table>
Guideline-directed medical therapy (GDMT) for heart failure (HF) with reduced ejection fraction (HFrEF) now includes 4 medication classes which include sodium-glucose cotransporter-2 inhibitors (SGLT2i).
SGLT2 inhibitors have a 2a recommendation in heart failure with mildly reduced ejection fraction (HFmrEF).

Weaker recommendations (2b) are made for ARNi, ACEi, ARB, MRA and beta blockers in this population.
New recommendations for HFrEF are made for SGLT2 inhibitors (2a), MRAs (2b) ARNi (2b).

Several prior recommendations have been renewed including treatment of hypertension (1), treatment of atrial fibrillation (2a), use of ARBs (2b) avoidance of routine use of nitrates or phosphodiesterase-5 inhibitors (3-no Benefit).
Heart Failure 2022 Guidelines – Other Diagrams

At Risk for HF (Stage A)
- Patients with hypertension
- Patients with type 2 diabetes and CVD or high risk for CVD
- Patients with CVD
- Patients with exposure to cardiotoxic agents
- First-degree relatives of patients with genetic or inherited cardiomyopathies
- Patients at risk for HF
- Validated multivariable risk scores (2a)

Pre-HF (Stage B)
- Optimal control of BP (1)
- Optimal management of CVD (1)
- Multidisciplinary evaluation for management (1)
- Genetic screening and counseling (1)
- Natriuretic peptide biomarker screening (2a)
- Patients with recent MI and LVEF ≤40%
- Patients with LVEF ≤40%
- Patients with LVEF ≤30%, >1 y survival, >40 d post MI
- Patients with nonischemic cardiomyopathy

Figure 6. Treatment of HFrEF Stages C and D.

Step 1: Establish diagnosis of HFrEF
   - Address congestion
   - Initiate GDMT

Step 2: Titrate to target dosing as tolerated, lists, health status, and LVEF

Step 3: Consider these patient scenarios

Step 4: Implement additional GDMT and device therapy, as indicated

Step 5: Reassess symptoms, lists, health status, and LVEF

Step 6: Referral for HF specialty care for advanced therapy
Figure 14. Recommendations for Treatment of Patients With HF and Selected Comorbidities.
# Heart Failure 2022 Guidelines – Other Diagrams

## Table 25. Important Components of a Transitional Care Plan

<table>
<thead>
<tr>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>A transitional care plan, communicated with the patient and their outpatient clinicians before hospital discharge, should clearly outline plans for:</td>
</tr>
<tr>
<td>Addressing any precipitating causes of worsening HF identified in the hospital;</td>
</tr>
<tr>
<td>Adjusting diuretics based on volume status (including weight) and electrolytes;</td>
</tr>
<tr>
<td>Coordination of safety laboratory checks (e.g., electrolytes after initiation or intensification of GDMT);</td>
</tr>
<tr>
<td>Further changes to optimize GDMT, including:</td>
</tr>
<tr>
<td>Plans for resuming medications held in the hospital;</td>
</tr>
<tr>
<td>Plans for initiating new medications;</td>
</tr>
<tr>
<td>Plans for titration of GDMT to goal doses as tolerated;</td>
</tr>
<tr>
<td>Reinforcing HF education and assessing compliance with medical therapy and lifestyle modifications, including dietary restrictions and physical activity;</td>
</tr>
<tr>
<td>Addressing high-risk characteristics that may be associated with poor post-discharge clinical outcomes, such as:</td>
</tr>
<tr>
<td>Comorbid conditions (e.g., renal dysfunction, pulmonary disease, diabetes, mental health, and substance use disorders);</td>
</tr>
<tr>
<td>Limitations in psychosocial support;</td>
</tr>
<tr>
<td>Impaired health literacy, cognitive impairment;</td>
</tr>
<tr>
<td>Additional surgical or device therapy, referral to cardiac rehabilitation in the future, where appropriate;</td>
</tr>
<tr>
<td>Referral to palliative care specialists and/or enrollment in hospice in selected patients.</td>
</tr>
</tbody>
</table>

GDMT indicates guideline-directed medical therapy; and HF, heart failure.
**Objective:** Patients discharged from the hospital to a skilled nursing facility (SNF) are not typically part of a heart failure disease management program (HF-DMP). The objective of this study is to determine if an HF-DMP in SNF improves outcomes for patients with HF.

**Design:** Cluster-randomized controlled trial.

**Participants:** The trial was conducted in 47 SNFs, and 671 patients were enrolled (329 HF-DMP; 342 to usual care).

**Methods:** The HF-DMP included documentation of ejection fraction, symptoms, weights, diet, medication optimization, education, and 7-day visit post SNF discharge. The composite outcome was all-cause hospitalization, emergency department visits, or mortality at 60 days. Secondary outcomes included the composite endpoint at 30 days, change in the Kansas City Cardiomyopathy Questionnaire and the Self-care of HF Index at 60 days. Rehospitalization and mortality rates were calculated as an exploratory outcome.

**Results:** Mean age of the patients was 79 ± 10 years, 58% were women, and the mean ejection fraction was 51% ± 16%. At 30 and 60 days post SNF admission, the composite endpoint was not significant between DMP (29%) and usual care (32%) at 30 days and 60 days (43% vs 47%, respectively). The Kansas City Cardiomyopathy Questionnaire significantly improved in the HF-DMP vs usual care for the Physical Limitation (11.3 ± 2.9 vs 20.8 ± 3.6; P = .039) and Social Limitation subscales (6.0 ± 3.1 vs 17.9 ± 3.8; P = .016). Self-care of HF Index was not significant. The total number of events (composite endpoint) totaled 517 (231 in HF-DMP and 286 in usual care). Differences in the 60-day hospitalization rate [mean HF-DMP rate 0.43 (SE 0.03) vs usual care 0.54 (SE 0.05), P = .04] and mortality rate (HF-DMP 5.2% vs usual care 10.8%, P < .001) were significant.

**Conclusions and Implications:** The composite endpoint was high for patients with HF in SNF regardless of group. Rehospitalization and mortality rates were reduced by the HF-DMP. HF-DMPs in SNFs may be beneficial to the outcomes of patients with HF. SNFs should consider structured HF-DMPs for their patients.

Fig. 1. Overview of SNF Connect intervention, the HF-DMP, follow-up, and collection of outcomes. NYHA, New York Heart Association; PCP, primary care physician; CORHIO, Colorado Regional Health Information Organization. *The 7-day time frame allowed the best chance for successful informed consent. †Medication titration was tailored to HF with reduced ejection fraction or HF with preserved ejection fraction according to the HF Guidelines. Loop diuretics were titrated throughout the SNF stay based on weight. Titration recommendations according to pre-established protocols for angiotensin-converting enzyme inhibitors (ACE-Is), angiotensin receptor blockers (ARBs), and beta blockers for those with HF with reduced ejection fraction and a loop diuretic protocol for weight gain (a gain of 3 lb in 3 days or 5 lb in a week) and blood pressure protocol regardless of ejection fraction. The clinician was prompted by the nurse but made his or her own clinical decision if he or she would like to initiate a medication protocol. ‡HF self-management education for 5 sessions using the teach-back method: (a) recognizing signs and symptoms of HF, (b) daily weight monitoring and documenting it on a calendar and how to compare weight trends, (c) recognizing and understanding HF medication, (d) following a low sodium diet, and (e) when to call the doctor.\textsuperscript{15,16}
Fig. 2. Outcomes from Heart Failure Disease Management Program vs usual care in SNFs. The left side of the figure shows the primary composite outcome (rehospitalization, ED visit, and mortality) at 30 and 60 days post SNF admission. The right side of the figure shows exploratory analysis of the rates of ED visits and rehospitalizations at 60 days. CL, confidence limit; ED, emergency department; Hosp, hospitalization; UC, usual care.

Table 2
Fidelity of HF-DMP

<table>
<thead>
<tr>
<th>HF-DM in SNF</th>
<th>Component</th>
<th>Description</th>
<th>Eligible, n</th>
<th>Met Requirement, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Care</td>
<td>Documentation of ejection fraction</td>
<td>Ejection fraction documented</td>
<td>329</td>
<td>306 (93.0)</td>
</tr>
<tr>
<td></td>
<td>Sign and symptom assessment</td>
<td>Blood pressure taken at every study visit</td>
<td>306*</td>
<td>257 (84.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signs and symptoms documented at every study visit</td>
<td>306*</td>
<td>255 (83.3)</td>
</tr>
<tr>
<td></td>
<td>Daily weights and dietary surveillance</td>
<td>Diet documented at every study visit</td>
<td>306*</td>
<td>283 (92.5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weight taken at every study visit</td>
<td>306*</td>
<td>160 (52.3)</td>
</tr>
<tr>
<td>Medication titration</td>
<td>Medication recommendation followed</td>
<td>Medication recommendation not followed but clinician reason reported</td>
<td>98*</td>
<td>34 (34.7)</td>
</tr>
<tr>
<td>Discharge Care</td>
<td>Patient and caregiver education</td>
<td>At least 1 education module completed</td>
<td>272†</td>
<td>253 (93.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All 5 education modules completed</td>
<td>154‖</td>
<td>112 (72.7)</td>
</tr>
<tr>
<td>Discharge instructions</td>
<td>Personalized discharge instructions reviewed</td>
<td>Physician follow-up visit scheduled</td>
<td>278**</td>
<td>167 (60.1)</td>
</tr>
<tr>
<td></td>
<td>Follow-up visit 7 d post SNF discharge</td>
<td>Nurse follow-up visit completed</td>
<td>278**</td>
<td>101 (36.3)</td>
</tr>
</tbody>
</table>

The HF-DMP required that the nurse delivered the repetitive intervention components such as blood pressure, symptom assessment, weight 3 times in 7 days. Overall, n = 329 participants in the HF-DMP arm of SNF Connect.

Objectives: This study evaluated the impact of standardized care protocols, as a part of a quality improvement initiative (Johns Hopkins Community Health Partnership, J-CHiP), on hospital readmission rates for patients with a diagnosis of congestive heart failure (CHF) and/or chronic obstructive pulmonary disease (COPD) after being discharged to skilled nursing facilities (SNFs).

Design: A retrospective study comparing 30-day hospital readmission rates the year before and 2 years following the implementation of the care protocol interventions.

Settings and Participants: Patients discharged from Johns Hopkins Hospital or Johns Hopkins Bayview Medical Center to the participating SNFs diagnosed with CHF and/or COPD.

Methods: The standardized protocols included medical provider or nurse assessments on SNF admission, multidisciplinary care planning, and medication management to avoid unplanned readmissions to the hospital. Descriptive analyses were conducted to illustrate the 30-day readmission rates before and after protocol implementation.

Results: There were 1128 patients in the pre-J-CHiP cohort and 2297 patients in the J-CHiP cohort. About half of the patients with a recorded diagnosis of CHF without COPD had the standardized protocol initiated, whereas 47% of the patients with a recorded diagnosis of COPD without CHF had the standardized protocol initiated. Of patients with recorded diagnoses of COPD and CHF, 49% had both protocols initiated. A reduction in the readmission rate was observed for patients with COPD protocols, from 23.5% in 2011 to 12.1% in 2015. However, fluctuations in the readmission rates were observed for patients who initiated the CHF protocols.

CARE PATHWAY: Symptomatic Congestive Heart Failure (CHF)

Are signs or symptoms of CHF or over-diuresis in a resident with known CHF or risk factors for CHF present?
- Weight gain/loss of 5 lbs. in 3 days or 2 lbs. in 24 hrs.
- New or worsening edema
- Unrelieved shortness of breath
- New or worsening shortness of breath
- New or worsening wheezing or chest tightness
- Inability to sleep without sitting up, using two pillows or head of bed up
- Change in mental status
- Dizziness with standing

NO

Are vital signs within ordered parameters?
- Temp  38°C
- Apical pulse > 100 or <
- Systolic BP > 160 or <
- Respiratory rate < 20/min
- Oxygen Saturation >
- Weight <

Or standard parameters if orders are not given
- Temperature of 38°C
- Apical heart rate > 100 or < 60
- Respiratory rate of > 20
- Systolic BP > 160 or decreased from baseline or < 100 or higher than baseline
- Oxygen saturation 90%

NO

Communicate nursing assessment to medical team

Is patient unstable?

NO

Medical team to consider modifying treatment plan

Diagnostics
- Orthostatic vital signs
- Order blood work: CBC, BMP, Pro-BNP
- Order EKG (if available)
- Order chest x-ray

Treatments
- Initiate oxygen supplementation or increase oxygen
- Initiate or modify other cardiovascular medications (ACE, B-blocker, ARB, hydralazine, nitrates)
- Initiate or increase diuretic dose, timed doses or IV dose
- Increase frequency for monitor electrolytes & renal function
- Increase frequency of monitoring vital signs/Pulse Ox
- Begin to continue Pulse Ox
- Begin recording urinary output

YES

Consider Transfer to Acute Care Facility

- If EKG rhythm has changed
- Patient’s condition is deteriorating
- Oxygen Saturation < baseline
- Heart rate > 100 or > baseline
- Change in mental status
- BUN & Creatinine 1.5 times upper limits of normal or baseline

NO

Continue close monitoring

- Critical lab results
- Worsening clinical condition
- Results of chest x-ray reveal worsening CHF

YES

Consider discontinuing pathway once medication regime no longer requires frequent changes and patient is without signs or symptoms of heart failure

“Reducing 30-day readmissions for patients with CHF and COPD is an ongoing process for hospitals and SNFs in the United States. **Partnerships between hospitals and SNFs can improve transitions in care** and reduce hospital readmissions. A key implication of the collaborative is the implementation of **standardized care protocols** and having a nurse educator train SNF staff on the deployment of the protocols and working on-site with SNF staff to monitor patients and track adherence. During the intervention, the nurse educator communicated with the hospital and SNF teams to agree on a care plan with the protocols when the patient is discharged to the SNF.

...Integrated into the EMRs”

AHA Resources - Checklist

The following checklist is intended to assist healthcare providers in reducing the risk of readmission for patients with heart failure transitioning to home care. Use this checklist to ensure that your patient/caregiver understands the discharge instructions and has the ability to perform self-care.

**Medication Management**
- Was a prescription given?
- Is the patient/caregiver able to get the prescription filled?
- Is the prescribed medication listed on patient’s insurance formulary?
- Were medications and instructions on how to take them listed for the patient?
- Are there any known adverse reactions to the medications?
- Was a list with instructions on how to take the medications provided to a caregiver?
- Does the patient/caregiver understand the importance of medication adherence?

**Self-Management**
- Does the patient have access to transportation?
- Does the patient have financial barriers?
- Does the patient have language barriers?
- Is the patient able to perform care?
- Does the patient understand and know how to recognize new or worsening signs and symptoms of HF?

Will the patient be able to adhere to:
- Medication regimen?
- Low-sodium diet?
- Daily weigh-in?
- Exercise/activity plan or recommendation to participate in cardiac rehab?
- Monitoring new or worsening signs or symptoms of HF?

**Lack of Communication (pending diagnostic results not communicated with PCP)**
- Was transition/discharge summary sent to Primary Care Provider?
- Did a PCP note at the time of transition that a provider had been found prior to discharge?

**Referral/Outpatient Needs Process**
- Was a referral noted?
- Was there a referral follow-up?
  - Name:
- Was there a referral to an agency that was unable to meet individual needs?
  - Name:
- Was there an unaddressed comorbidity?
- Was mobility/home safety assessed?

Heart.org/HFGuidelinesToolkit
# AHA Resources – PAC HF Certification

<table>
<thead>
<tr>
<th>REQUIREMENT NUMBER</th>
<th>POST-ACUTE CARE HEART FAILURE CERTIFICATION REQUIREMENT OVERVIEW</th>
<th>Skilled Nursing Facility</th>
</tr>
</thead>
</table>
| 1                  | Program Management  
The post-acute care heart failure program defines its mission, goals, scope, and organizational structure. It identifies a heart failure program champion(s) and organizes an interprofessional committee which oversees the post-acute care heart failure program. | ✓ |
| 2                  | Personnel Education  
Staff have the education, experience and training for the monitoring and management of heart failure patients. The education program should be provided regularly and tailored to all levels of healthcare providers | ✓ |
| 3                  | Patient/Caregiver Education & Support  
The heart failure program provides the patient and caregiver individualized heart failure education and support | ✓ |
| 4                  | Care Coordination  
The program demonstrates care coordination across the system of care for the heart failure patient in three domains: pre-admission, throughout the patient’s admission to the facility, and at discharge. | ✓ |
| 5                  | Clinical Management  
The heart failure program’s ability to provide post-acute care to persons with a heart failure diagnosis. | ✓ |
| 6                  | Performance Improvement  
Ongoing quality improvement measuring adherence to evidence-based guidelines aimed at improving care and outcomes for heart failure patients in the post-acute setting. | ✓ |

To learn more about Post-Acute Care Heart Failure Certification visit [www.heart.org/certification](http://www.heart.org/certification) or contact us at certification@heart.org


COVID Cases by Age Group in 35 Selected Districts VA Past 13 Weeks

COVID-19 Vaccine Effectiveness (VE)

- Monovalent mRNA vaccination was 76% effective in preventing COVID-19–associated invasive mechanical ventilation and death up to 6 months after the last dose and remained 56% effective at 1–2 years. (Source)

- Among adults aged ≥18 years without immunocompromising conditions, bivalent booster VE was sustained against critical COVID-19-associated outcomes, including intensive care unit admission or death. (Source)

- Among nursing home residents who were up to date with COVID-19 vaccination (most had received a bivalent vaccine), VE against SARS-CoV-2 infection was 31.2%. (Source)

Source: https://covid.cdc.gov/covid-data-tracker/#vaccine-effectiveness
Open Forum

Share an idea. Anything you need help with? What’s new in your Virginia Health District? Any announcements?
As we enter state budget time, if you had all the money in the world, how would you improve where you work in LTC?
Monthly Forum - Every 3rd Wednesday, 4-5 PM

Forum topics will be in areas of interest to clinicians working in long term care. We will continue to integrate COVID-19 topics in our discussion. Share the membership QR code with your work colleagues so they can get a unique link.

Upcoming Forums

- January 17, 2024  Trauma Informed Care
- February 21, 2024  COPD Update
Respiratory Virus Season Resources

**CDC - Respiratory Virus Updates**  NEW updated 12/8

- CDC posts weekly updates during respiratory illness season
- Includes links to: COVID Variant Proportions, COVID Data Tracker, Respiratory Virus Hospitalization Surveillance Network

**VDH - Respiratory Diseases in Virginia - Epidemiology**

- Landing page for COVID, Flu, and RSV

**VDH - Respiratory Diseases Toolkit**

- Flyers and Social Media Images
- Topics include Healthy Respiratory Habits, Symptom Comparison Chart, Fall & Winter Immunization Chart
In support of improving patient care, VCU Health Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

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<tr>
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<tbody>
<tr>
<td>VCU Health Continuing Education designates this activity for a maximum of 1.00 ANCC contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the activity.</td>
</tr>
<tr>
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We acknowledge that no commercial or in-kind support was provided for this activity.
Claiming Credit

Submit Attendance

1. *If you have not participated in a VCU Health CE program in the past:*
   a. Go to vcu.cloud-cme.com to create an account – make sure to add your cell phone number
2. Once you have registered or if you *have participated before:*
   a. Text the course code to (804) 625-4041.
   b. The course code for today’s event is: ###### (please note this is only active for 5 days)

Complete Evaluation & Claim Credit, *within 60 days of the event*

1) Go to https://vcu.cloud-cme.com
2) Sign in using email address used above
3) Click “My CE”
4) Click “Evaluations and Certificates”

OR

1) Open the CloudCME app on your device
2) Click “My Evaluations”
3) Click the name of the activity to complete evaluation

Need help? ceinfo@vcuhealth.org
Thank you for joining us!

**Next Newsletter** - coming to you in **FEBRUARY** (date change)

**Next Monthly Forum** - **January 17, 4pm**. Scroll down in the Zoom registration confirmation email you received today for a calendar link you can use to update your calendar automatically with your Zoom link for future meetings.

**On your way out** of Zoom, **kindly answer a brief feedback survey**.

**Stay in touch!** Email us at [ltccn@vcu.edu](mailto:ltccn@vcu.edu)

**Invite your colleagues!** They can register at [ltccn.vcu.edu](http://ltccn.vcu.edu)
Disclosures

The speakers and presenters for today have no relevant financial conflicts of interest.

Funding Disclosure: This work is supported by the Virginia Department of Health, Office of Epidemiology, Division of Healthcare-Associated Infections (HAI) and Antimicrobial Resistance (AR) Program and the Centers for Disease Control and Prevention, Epidemiology and Laboratory Capacity (ELC) Program under federal award number NU50CK000555 and state subrecipient number VCU LT C60GY23 in the amount of $820,002. The content presented is solely the responsibility of the authors and does not necessarily represent the official views of the Centers for Disease Control, the Virginia Department of Health, or Virginia Commonwealth University.

Virginia Long-Term Care Infrastructure Pilot Project (VLIPP) funding will be utilized in nursing homes and long-term care facilities to assist with the ongoing COVID-19 response and to bolster preparedness for emerging infections. The projects are based on identified needs that align with funding objectives.