Cardiovascular Disease

Dorothy M. Urschel, DNP

Chief Executive Officer

Columbia Memorial Hospital

Agenda

- Introductions
- Our partners
- Session 1: Cardiovascular disease
- Upcoming sessions

HANYS Care Connections Team

Kathleen Rauch, RN, MSHQS, BSN, CPHQ
Vice President, Quality Advocacy, Research and Innovation and Post-acute and Continuing Care

Christina Miller-Foster, MPA
Senior Director,
Quality Advocacy, Research and Innovation

Morgan Black, MPA
Director,
Care Connections

Maria Baum, MS, RN, CPHQ
Project Manager,
Western New York

Kira Cramer, MBA
Project Manager,
New York City

Rachael Brust, MBA
Project Manager,
North Country

Jonathan Serrano
Communications Coordinator

Theresa Green, PhD, MBA
Associate Director, Associate Professor,
Center for Community Health & Prevention
Public Health Sciences URMC, SON

Today's presenter

Dorothy M. Urschel, DNP

Chief Executive Officer

Columbia Memorial Hospital

Our partners

Mother Cabrini HEALTH FOUNDATION

DataGen® Insights for Healthcare®

OUR FUNDER

Funding from the Mother Cabrini Health Foundation allows HANYS to expand its capacity to provide education, direct support, tools and data to our members. With Care Connections, we strive to build hospital-community partnerships and share evidence-based chronic disease prevention and management strategies to address healthcare access barriers at the local level.

OUR PARTNER

DataGen®, Inc. develops custom analytics for participants to help them understand healthcare access barriers and the chronic disease burden in their communities so they can develop tailored interventions.

Session objectives

After this session, participants will be able to:

- Identify key risk factors that contribute to cardiovascular disease and the prevalence of it throughout New York State
- Understand the barriers to cardiovascular care and the gaps that exist in patient care
- Learn evidence-based practices for cardiovascular disease prevention and management
- Consider new opportunities and community partnership models to improve health outcomes within a specified region

Care Delivery of Patients with Chronic Cardiovascular Diseases in Post Acute Care

The Role of Community Based Organizations

Dorothy M. Urschel, DNP

Chief Executive Officer

Columbia Memorial Hospital

Webinar Learning Objectives

- Cardiac Disease Definition
- Types of Cardiac Disease
- Prevalence in the US and NY state
- Review of the Literature
- Policy Recommendations of the care of the Cardiac patient in the Post Acute Setting
- Objectives of Post Acute Care
- Community and Rural role in the care of cardiac patient population – an innovative approach

Cardiovascular Disease

Cardiac disease, also known as cardiovascular disease (CVD), is a broad term encompassing any disease that affects the heart or blood vessels.

It includes conditions like:

- coronary artery disease
- heart failure
- hypertensive heart disease
- congenital heart disease

CVD is a leading cause of death worldwide, with many cases being preventable through lifestyle modifications and management of risk factors.

Types of Cardiac Disease

Coronary Artery Disease (CAD): Narrowing of the arteries that supply blood to the heart, often due to atherosclerosis.

Heart Failure: The heart's inability to pump blood effectively to meet the body's needs, often due to damage to the heart muscle or other heart conditions.

Hypertensive Heart Disease: Damage to the heart caused by persistently high blood pressure.

Rheumatic Heart Disease: A condition caused by rheumatic fever, an inflammatory condition that can damage the heart valves.

Cardiomyopathy: Disease of the heart muscle that can make it stiff, enlarged, or thickened, impairing its ability to pump blood.

Arrhythmia: Irregular heart rhythms.

Congenital Heart Disease: Heart defects present at birth.

Valvular Heart Disease: Problems with the heart's valves.

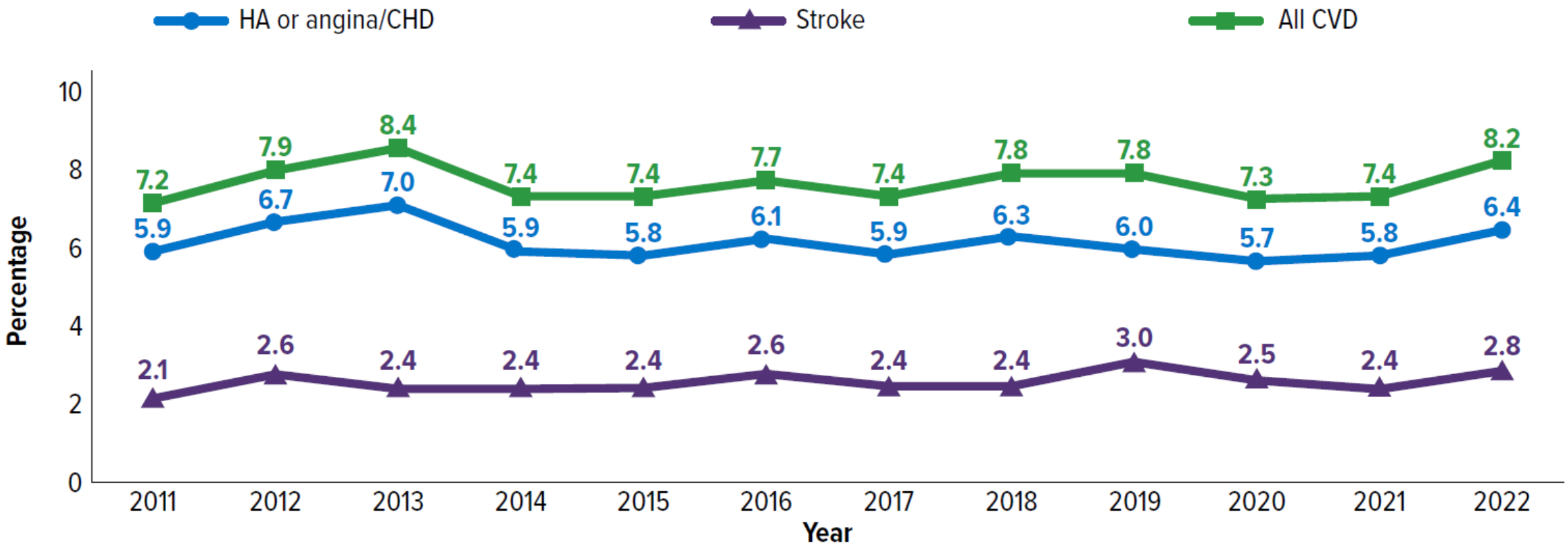
US Prevalence of Cardiac Disease

*American College of Cardiology

Population Group	Prevalence, CHD, 2015–2018, ≥20 y	Prevalence, MI, 2015–2018, ≥20 y	Prevalence, AP,* 2015–2018, ≥20 y
Both sexes	20.1 million (7.2% [95% CI, 6.5–7.9])	8.8 million (3.1% [95% CI, 2.7–3.6])	11 million (4.1%)
Men	11 million (8.3%)	5.8 million (4.3%)	5.3 million (4.2%)
Women	9.1 million (6.2%)	3 million (2.1%)	5.7 million (4.0%)
NH White men	8.7%	4.4%	4.5%
NH White women	6.0%	2.0%	4.0%
NH Black men	6.7%	3.9%	3.3%
NH Black women	7.2%	2.3%	4.7%

Prevalence of Cardiac Disease amongst NYS adults (BRFSS, 2022)

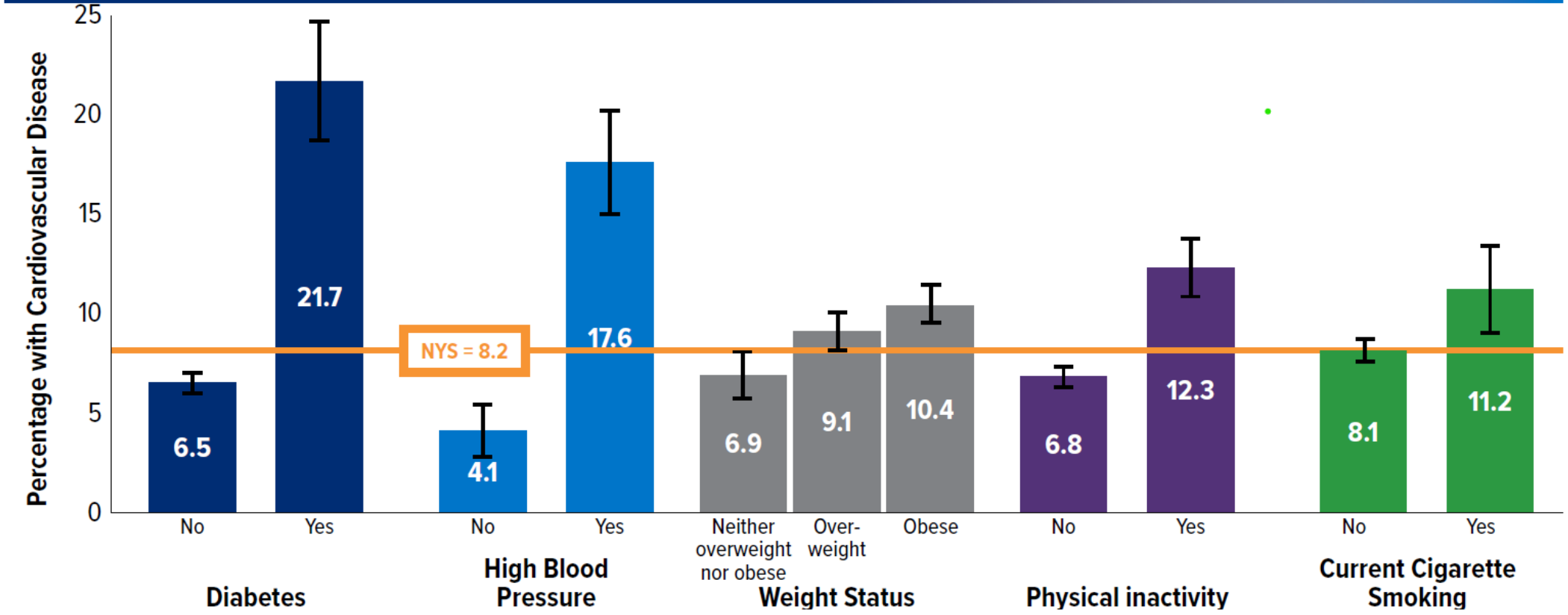
Figure 1. Prevalence of cardiovascular disease (CVD)* among New York State adults, Behavioral Risk Factor Surveillance System, 2011-2022



*Includes heart attack (HA) or angina/coronary heart disease (CHD) or stroke.

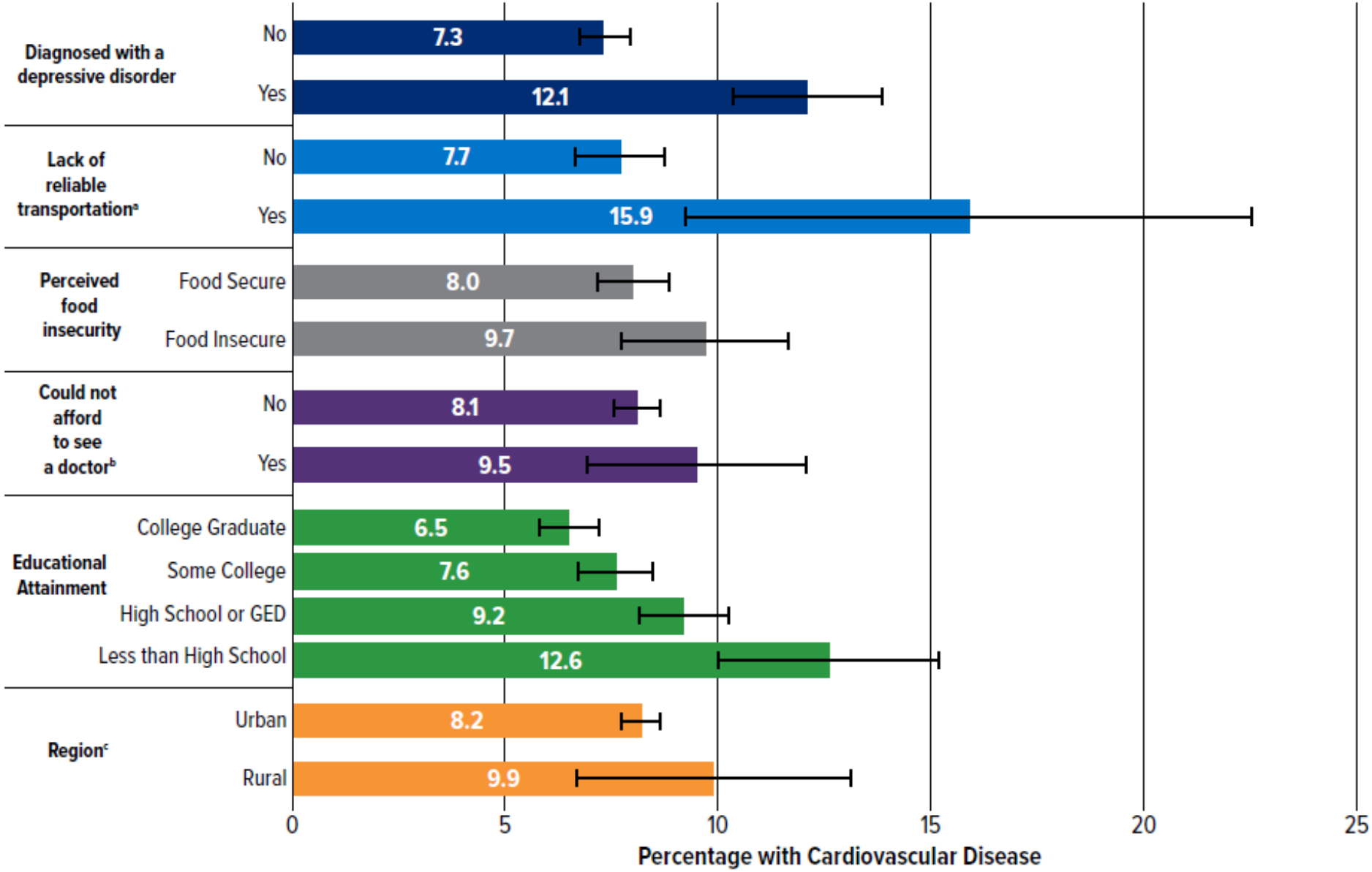
Prevalence of CVD among NYS adults with known CVD risk factors (BRFSS, 2022)

Figure 2. Prevalence of cardiovascular disease (CVD)* among New York State adults with known cardiovascular disease risk factors, Behavioral Risk Factor Surveillance Survey, 2022



*Includes heart attack (HA) or angina/coronary heart disease (CHD) or stroke.
Note: Error bars represent 95% confidence intervals.

Disparities in CVD prevalence in NYS adults (BRFSS, 2022)



*Includes heart attack, angina/coronary heart disease (CHD), and stroke.

a. During the past 12 months, has a lack of reliable transportation kept you from medical appointments, work, from getting things needed for daily living?

b. Was there a time in the past 12 months when you needed to see a doctor but could not because you could not afford it?

c. Based on county of residence and the 2013 National Center for Health Statistics' Urban-Rural Classification Scheme for Counties.

Note: error bars represent 95% confidence intervals.

In-Hospital Management of Acute Coronary Syndrome

Cardiac Intensive Care Unit

ACS and any of the following:

- Ongoing angina
- Hemodynamic instability
- Uncontrolled arrhythmias
- Suboptimal reperfusion
- Cardiogenic shock

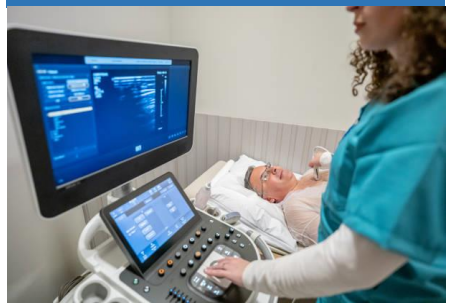
Admit to CICU
(Class 1)

Telemetry Monitoring

In ACS patients, telemetry monitoring is recommended to reduce cardiovascular events with duration determined by cardiac risk.

(Class 1)

Echocardiogram



In patients with ACS, an assessment of LVEF is recommended prior to hospital discharge to guide therapy and for risk stratification.

(Class 1)

Blood Transfusions

In patients with ACS and acute or chronic anemia, blood transfusion to achieve a hemoglobin level ≥10 g/dL may be reasonable to reduce cardiovascular events.

(Class 2b)

Abbreviations: ACS indicates acute coronary syndrome; CICU, cardiac intensive care unit; and LVEF, left ventricular ejection fraction.

Rao, S.V., et al. 2025 AHA/ACC/ACEP/NAEMSP/SCAI Guideline for Acute Coronary Syndromes. *Circulation.*

Patient Education, Lifestyle Modifications, Medication, and Follow-up Care: both preventative medicine and chronic management

Hospital admission

- Education about CAD, diagnostic tests, procedural results
- Return to physical and sexual activity, work and travel

Lifestyle modifications

- Smoking cessation
- Healthy diet
- Regular exercise

Medications

- Antithrombotic therapy
  Lipid-lowering therapy
  Other therapies as appropriate
- Annual influenza vaccination

Follow-up care

- Follow-up appointments
- Cardiology
- Cardiac rehabilitation
- Additional testing

Symptom management and psychosocial support

Ref: American College of Cardiologists Guidelines

Rao, S.V., et al. 2025 AHA/ACC/ACEP/NAEMSP/SCAI Guideline for Acute Coronary Syndromes. *Circulation.*

Post Acute Care Literature Review

- Post Acute Care of the Chronic Cardiovascular Disease Population
- Rural Health Challenges
- Post Acute Tele-management
- Post Acute Care of the Heart Failure Medicare Patients
- Post Acute Care of the Heart Failure Patient
- Post Acute Care of the Cardiac Surgery Patient

Rural Hospital Challenges

A secondary analysis of the 2012 National Inpatient Sample including adult discharges to PAC after a hospitalization.

Patients of all diagnostic/case types (not specifically cardiac)

Rural discharges received less home health care than urban discharges, resulting in less rural PAC use overall (statistically significant difference).

- ***Patients with food insecurities- local food banks, pantries***
- ***Uninsured requiring hospital support***
- ***Pharmacy Assistance Program***
- ***Transportation programs***
- ***Social work assistance***
- ***Funding for new programs and current programs–***

Burke et. al., Am J Accountable Care. 2017

Post Acute Focus on Social Determinants of Health Challenges in Rural/Community Care

Service categories	Services
Nutrition	• Nutritional counseling and education • Medically tailored meals • Food prescriptions • Fresh produce and non-perishables groceries • Cooking supplies (pots, pans, etc.)
Housing	• Home accessibility and safety modifications • Home remediation • Asthma remediation • Medical respite (recuperative care) • Rent/temporary housing • Utility set-up/assistance • Housing Navigation • Pre-tenancy services • Community transitional services (e.g., utility activation) • Tenancy sustaining services
Transportation	• Reimbursement for public and private transportation to connect to social care services (e.g., appointment with a housing navigator) • Note: excludes transportation to doctor's appointments
Social care management/ navigation	• Outreach and referrals • Connection to employment, education, childcare, and interpersonal safety resources in addition to enhanced HRSN services listed above

Post-acute Telemanagement

Non-randomized study of post-acute CHF care.

Setting of SNF and/or home healthcare nurse.

Used wireless sensors, video and audio, point of care devices.

Patients receiving telemanagement had **29% lower rehospitalization rates (17% vs. 24%).**

Technology enhanced communication content and timeliness across the post-acute care continuum.

Dadosky et. al., Telemed J E Health, 2018

Post-Acute Care Heart Failure in Medicare patients

Annual cross-section prospective cohorts from Medicare database of all HF admissions 2008-2015.

A 20% random sample examined.

4% of patients received PAC of some type

PAC use reduced hospital readmissions (−3.4% at 30-day; −6.3% at 180-day) and decreased 180-day Medicare costs by $2,948 (−18.7%)

Gains from PAC were greatest among the frailest patients.

Keeney et. al., J Am Geriatr Soc. 2023

Post-Acute Care Heart Failure Patients

Heart failure expert panel's evidence-based recommendations:

- Have experts in HF lead the care across disciplines
- Optimize patient care transitions
- Improve patient education
- Improve end-of-life care
- Promote heart failure prevention

Cowey et. al., ESC Heart Failure 2014

Post-Acute Care Heart Surgery patients

Systematic Review article

Home healthcare: Regular home visits by healthcare providers result in decreased hospital readmission rates

Improved hospital-PAC linkages reduced hospital readmissions by 25%.

Stoicea et. al., Front Cardiovasc Med. 2017

Cardiovascular Disease: Review and Recommendations

Acute cardiac disease and heart failure account for

5% of all emergency hospital admissions in the US and Europe

- **Numbers of readmissions for heart failure and chronic cardiac patients continue to grow despite the efforts on the post acute care side with wrap around services**
- **Health literacy continues to be an imperative**
- **Patient education and support is necessary to meet the goals of the care of the cardiac patient**
- **Providing health equity and equitable care for all patients – for timely access, quality, long term follow up, diagnostic procedures – this can vary across regions and rural communities have considerable needs given the distance**
- **Lack of transportation – the underinsured- food insecurities- measures of care- palliative care- end of life care – hospice care and promoting prevention of cardiac disease leading to chronic disease- varies across the US**

Most Important Care Goal for Patient Outcomes

Emphasis is on team-based, patient-centered care that considers social determinants of health along with associated costs while incorporating shared decision-making in risk assessment, testing, and treatment.

Cardiovascular Disease Goals and Objectives of Post Acute Care

Main goals of post acute care for chronic cardiac disease are to improve recovery, reduce risk of future events, assist patients in maintainingg an active lifestyle.

This involves a combination of cardiac rehabilitation, medication management, lifestyle modifications and psychosocial support.

Specific interventions include:

- Cardiac Rehabilitation,
- Skilled nursing,
- Subacute rehabilitation,
- Home care,
- Palliative Care/Hospice,
- Lifestyle modifications,
- Symptom management,
- Psychosocial support.

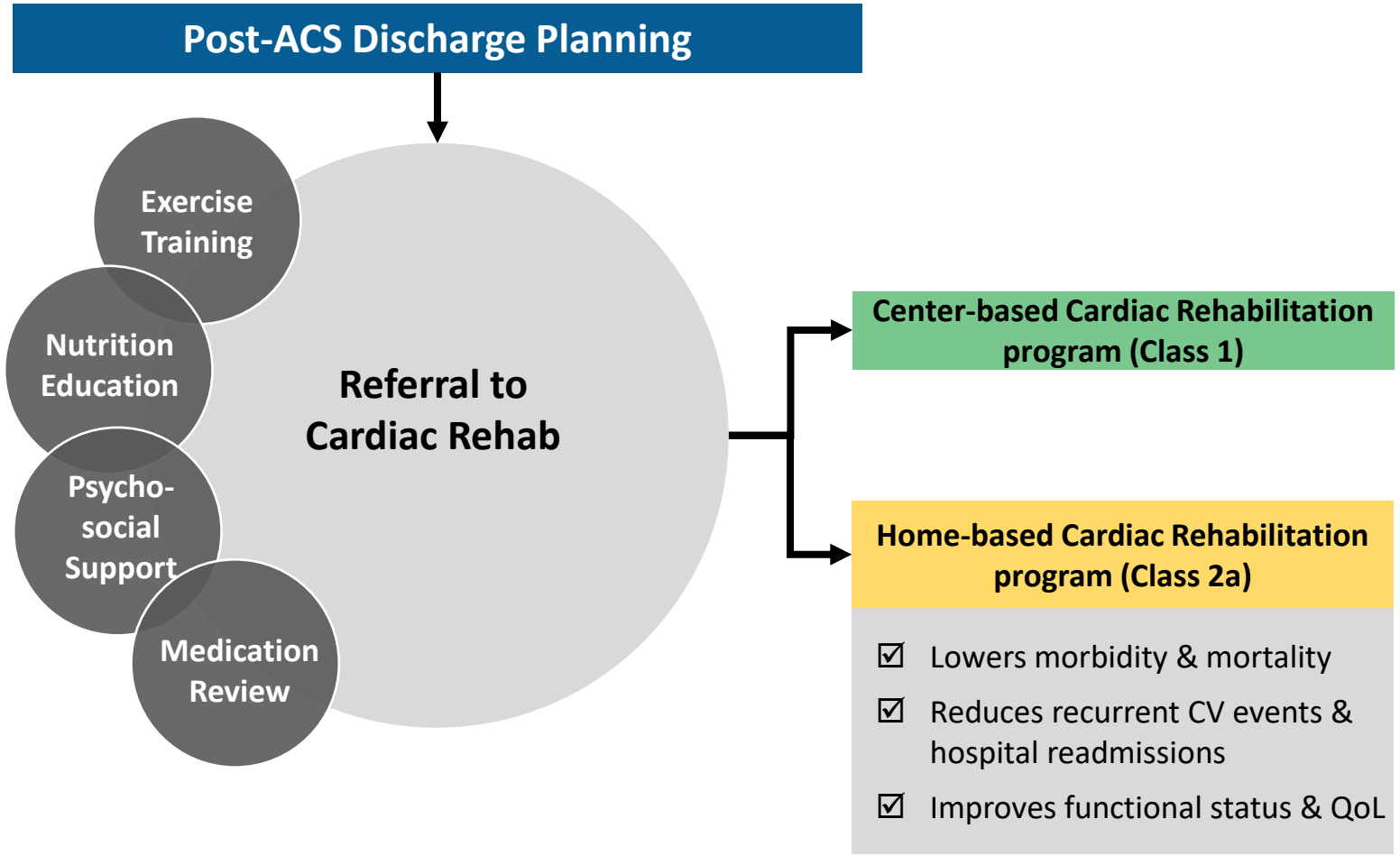
Key focus on Case management, patient navigation, care transitions and ***care connections***

POST-ACUTE CARE

Post-Acute Settings

01	**Long-Term Care Hospital**	Long-term care hospitals (LTCHs) provide care to beneficiaries who need hospital-level care for relatively extended periods
02	**Inpatient Rehab Facility**	Inpatient rehabilitation facilities (IRFs) provide intensive rehabilitation services to patients after illness, injury, or surgery
03	**Skilled Nursing Facility**	Skilled nursing facilities (SNFs) provide short-term skilled nursing care and rehabilitation services
04	**Home Health and Hospice**	Consists of services provided to beneficiaries in their homes as well as palliative and support services for beneficiaries who are terminally ill
05	**Unskilled Home Care**	In-home support services of assist patients who suffer from injuries or health conditions that impair their ability to perform daily living activities

Cardiac Rehabilitation for Patients Post-ACS



Abbreviations: ACS indicates acute coronary syndrome; CV, cardiovascular; and QoL, quality of life.

American Heart Association.

Rao, S.V., et al. 2025 AHA/ACC/ACEP/NAEMSP/SCAI Guideline for Acute Coronary Syndromes. *Circulation.*

Post Acute Systems of Care: Our Experience

Investments, Philanthropic Funding, Grant Support

a. Investing in new EMR : Closing care gaps embedded in primary care provider workflows – e.g., statin prescribed for HLD or CVD, clinical alerts for trending of uncontrolled hypertension and other CV disease

b. Mother Cabrini Grants and other Grants through private foundations to support infrastructure and Operations (new FTEs) i.e., Nurse Navigators

c. New York State Grants : DOH Vital Access Provider Grant for operations/Rural Health Grant annually funding capital for outpatient centers– support necessary equipment for patients

d. Reinvesting in our own Centers of Excellence to provide care to over 90% government payor mix

Social Care Network – Healthy Alliance – Hospital participating in social care network

a. Provide screenings to identify Health-related social needs (HRSNs): Social and economic needs that can impact a person's health and well-being. Examples include lack of stable or affordable housing, lack of access to healthy food, lack of access to transportation, financial strain and/or unemployment, and personal safety.

b. Referral to community or regional resources that can address those HRSNs

c. Screenings are embedded in Primary care setting

d. CMS Accountable Health Communities – social needs screening tool – utilized for homeless, housing, food insecurity, transportation problems, utility help

e. Kansas City Quality of life tool- for cardiomyopathy and heart failure patients

Post Acute Systems of Care in Primary care Settings

Wraparound Services

- An approach that incorporates the guiding principles that are individualized to patient care and population health
- Services are wrapped around the patient and family in their natural environments and support systems.

Rural Community HealthCare

1. Expansive Primary Care Footprint
    a. Embedded Cardiac care support systems of care:
    b. Referral process to outpatient nutritional services: community-based organizations: food banks, pantries
    c. Embedded Behavioral health specialists in each center to provide psychosocial management and referral into psychiatry program if necessary
    d. Diabetes management embedded in primary care
    e. Medication reconciliation: dedicated pharmacists responsible for post acute patients
    f. Telemedicine available
    g. Tele- monitoring – daily weights, vital signs, pulse oximetry

Post Acute Systems of Care Offerings

Rural Community HealthCare: Primary and Specialty care

a. Case management – embedded in each practice
b. Transportation services –outsourced to local healthcare consortium other non for profits
c. Medical respite assistance: home modifications, handrails, ramps, air conditioners, medical respite,
d. Educational information with focus on cultural and linguistic approaches
e. Medical insurance education embedded in hospital services with case management to assist with application process for Medicare/Medicaid services.
f. Community based organizations – housing organizations
g. Hospital Equipment Loan Program (HELP)

Collaborative Models of Community Medicine: A Novel- Innovative Approach

Mobile Integrated Health & Paramedicine

Collaborative Models of Community Medicine

Mobile Integrated Health & Paramedicine

Mobile Integrated Health Program for Columbia and Greene Counties

Enhanced Access to Care at Home

Through a partnership with Columbia Memorial Health, the Albany Med Health System Visiting Nurses, and Eddy SeniorCare, the Valatie Rescue Squad now offers comprehensive in-home care through their Mobile Integrated Health (MIH) program.

The MIH model allows paramedics to offer community-based, non-emergency care to residents living with high-risk, complex medical conditions such as diabetes, COPD, CHF, fall risk, and more. The program offers additional assistance to patients, without requiring them to leave their home to receive it.

A Mobile Integrated Health specialist will help coordinate care, developing a tailored plan for each patient to provide them with the highest quality care possible. Throughout the process, the specialist will keep meticulous documentation of the interaction, ensuring seamless communication with primary care providers.

ALBANY MED Health System

albanymed.org

What We Offer

Through this program, we are able to increase the access to care by providing:

- Scheduled in-home visits
- Patient assessments
- Vital sign evaluation
- Home safety hazard inspections
- Assistance with medication organization
- Education to patients and families on safety in and out of the home
- Unscheduled, as-needed visits
- Referrals to community resources, including VNA programs

Get in Touch

To learn more about the program or refer a patient, contact the MIH specialist.

mih@valatierescue.org
518-309-8200, ext. 122

The Mobile Integrated Health program and specialist is grant-funded by our generous sponsors Home Care Association of New York State, Iroquois Healthcare Association, and Mother Cabrini Health Foundation.

Delivery of Care in Rural Communities

- ***A grant funded Collaborative Community Paramedicine Program***
- **Hospital, home care and EMS partnering to deliver care and close care gaps in rural communities**
- **Goals – create a coordinated program to decrease unnecessary ambulance transports and ED visits**

Delivery of Care in Rural Communities: Goals of Grant

- Reduce readmissions (Cardiac, CHF, COPD)
- Decrease overutilization of emergency services
- Reduce in home falls
- Support medication management in post-acute setting

Mobil Integrated Services Duties to Our Patients

- Schedule in-home visits
- Perform patient assessments
- Obtain vital signs, including glucometry, temperature, 12 Lead EKG, SpO2, etc.
- Perform home hazard inspections/evaluations
- Medication Management: Assist patients with managing their medications, including proper dosing, scheduling, and education about their medications.
- Educate patients and their families on safe practices in and out of the home
- Work to keep patients safe at home and decrease hospital admissions
- Unscheduled visits to patients when nurses are unable to respond

Secondary Goals of the MIH

EMS recruitment challenging for rural communities. Mobile Integrated Health (MIH) allows for EMS providers to gain new, creative skills and use their training a unique way.

Hospital Partners on Training Sessions for MIH Providers

Purpose: Enhancing provider skills through hands-on training in laboratory procedures and wound care.

These trainings ensure that MIH providers are well-equipped to handle patient needs effectively, improving the quality of care delivered in the community.

Hospital Lab Draw Site – training on sample collection and workflow

Hospital Wound Care Center – shadowing for wound care management in home

Program Impact: ED and 911 Utilization Before and After MIH

Operational Performance Metrics ED Utilization

Metric	6 Months Prior to MIH	Post MIH	Change (%)
Total ED Visits	81	37	↓ 54.3%
Hospital Admissions	69	21	↓ 69.6%
30-Day Readmissions	N/A	2	N/A

Metric	6 Months Prior to MIH	Post MIH	Change (%)
Total 911 RMA	19	19	No Change
Total 911 Transports	62	28	↓ 54.8%

Key Takeaways from MIH

- ED Visit decreased by 54.3% reducing the strain on emergency services
- Hospital Admissions saw a significant 69.6% reduction- highlight the role of MIH in managing all chronic conditions at home

911 transports decreased by 54.8%- demonstrating improved patient management and proactive interventions

Preventing Hospital Visits for a post acute cardiac patient: A success story

Patient Background: patient with a history of cardiac disease has been receiving care through the program due to frequent health issues that previously led to multiple hospital visits.

Intervention: The team has conducted several urgent visits to the home where early symptoms of heart failure were identified. In coordination with their physician, the team was able to obtain increased diuretic drugs preventing hospital re-admissions. The Mobile integrated health team also worked closely with family, educating them on recognizing which symptoms require emergency care versus those that can be managed by reaching out to his physician. Additionally, the team assisted with ordering medical supplies and provided essential items through the Hospital Equipment Loan Program (HELP) to ensure that had what he needed to remain safely at home.

Outcome: The patient has experienced a significant reduction in emergency room visits, thanks to timely interventions and better symptom management at home. The family now feels more confident in managing care at home and understanding when a hospital is necessary and call to the physician's office is important.

POST-ACUTE CARE

Benefits of Post-Acute Care

Summary

If properly executed Post Acute Care of the Chronic Cardiovascular Disease Population reduces overall costs not only to the hospital systems but the larger healthcare ecosystem and moreover impacts patient outcomes positively–in quality of life and clinical outcomes.

References

Burke RE et al. Use of post-acute care after hospital discharge in urban and rural hospitals. American Journal of Accountable Care. 2017 Mar 10;5(1):16.

Cowie MR et al. Improving care for patients with acute heart failure: before, during and after hospitalization. ESC Heart Failure. 2014 Dec;1(2):110-145.

Dadosky A et al. Telemanagement of Heart Failure Patients Across the Post-Acute Care Continuum. Telemed J E Health. 2018 May;24(5):360-366.

Keeney T et al. Trends in post-acute care and outcomes for Medicare beneficiaries hospitalized for heart failure between 2008 and 2015. Journal of the American Geriatrics Society. 2023 Mar;71(3):730-41.

Stoicea N et al. Perspectives of post-acute transition of care for cardiac surgery patients. Frontiers in Cardiovascular Medicine. 2017 Nov 27;4:70.

Winters N et al. The Wraparound Approach in Systems of Care. Psychiatric Clinics of North America. 2009 Mar; 135-151.

American College of Cardiology Library of Guidelines and Clinical Documents

Upcoming sessions

Tuesday, May 20 | 11 a.m. – noon

Hypertension with Mohawk Valley Health System

Patricia Charvat - Senior Vice President, Marketing and Strategy

Tracy Leber - RN, BSN, Population Health and Lead Nurse

Lisa Volo - Senior Director, Behavioral Health and Community Services

Remaining sessions in this series:

- May 27 | COPD
- June 3 | Asthma
- June 10 | Diabetes
- June 17 | Breast Cancer
- June 24 | Mental health and substance use disorders
- July 1 | Building Community Partnerships

Care Connections

Questions?

Dorothy M. Urschel, DNP

Chief Executive Officer,

Columbia Memorial Hospital

DUrschel@cmh-net.org

Morgan Black

Director, Care Connections

mblack@hanys.org

HANYS Always There for Healthcare SINCE 1925