

Northwest Community / Northern Lake County MOBILE INTEGRATED HEALTHCARE (MIH) PROGRAM CLINICAL GUIDELINES / STANDING MEDICAL ORDERS

2024

An effective system of care for healthcare delivery requires **structure** (people, equipment, education) and **processes** (policies, protocols, procedures) that, when integrated, produce a **system** (programs, organizations, cultures) that leads to **optimal outcomes** (client, safety, quality, satisfaction) within a framework of continuous quality improvement (AHA, 2020).

These protocols have been approved by the NWC EMSS Medical Director who also leads and directs the MIH Program to provide guidelines for MIH Clinicians within an integrated system of care.

TYPES of CLIENTS ACCEPTED: Eligibility for MIH services

All ages with appropriate legal decision-maker's consent; living in the geographic catchment area served by a participating MIH Agency, in a structurally sound and safe dwelling, and meeting one or more of the following eligibility criteria with an analysis by the MIH Coordinators at Wauconda FPD that the program is safe and appropriate for them:

- High utilizer group (HUG) of EMS services or EMS encounter with a person having an imminent safety risk to achieve better care navigation and connection to needed resources
- Individuals who have received hospital ED services ≥ 3 times in a period of 4 consecutive months in the past 12 months or an individual who has been identified by a health care provider as an individual for whom MIH services would likely prevent admission or readmission to or would allow discharge from a hospital, behavioral health facility, acute care facility, or nursing facility.
- Adults at risk for unplanned readmission within 30 days of discharge for index conditions or procedures under the CMS Hospital Readmissions Reduction Program (HRRP) and other high risk diagnoses such as diabetes
- Persons at risk due to behavioral health conditions and substance use disorder
- Persons with medical complexity, identified service needs, chronic clinical conditions, functional limitations, high utilization of health resources, and those with special needs.
- Previous EMS patient requests assistance with services that fall within the scope of MIH
- Client's primary care practitioner (PCP) or discharging facility requests MIH services to assist in transitions of care from a hospital, behavioral health facility, acute care facility, or nursing facility.

High risk populations for readmission under the HRRP include adults with a diagnosis of:

- Status post-Acute Myocardial Infarction (AMI)
- Heart failure
- Coronary artery bypass graft (CABG) surgery
- Chronic obstructive pulmonary disease (COPD)/asthma
- Pneumonia (high risk for sepsis)
- Elective primary total hip arthroplasty and/or total knee arthroplasty (THA/TKA)

Credentialed NWC/NLC MIH Clinicians in good standing are authorized to implement these Guidelines/SMOs within their scopes of practice

If a client situation is not covered by these protocols, contact the EMS/MIH Medical Director or his designees as soon as possible for consultation and instructions.



Matthew T. Jordan, MD, FACEP

Northwest Community EMS MD and the MIH Program Medical Director (EMS/MIH MD)

NWC/NLC MIH Program Clinical Guidelines/SMOs

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MIH SERVICE AREA: Persons living in the communities served by the **Wauconda FPD; Greater Round Lake FPD, the First FPD of Antioch, Countryside FPD and the Libertyville FD** who meet eligibility criteria.

CONTACT INFORMATION

MIH SOURCES OF REFERRALS for Eligible Clients

- **HUG clients** are defined in the Program Plan and identified via EMS Patient Care Report (ePCR) repeat patient data run by MIH case managers. They will be contacted by the MIH Coordinator at the Wauconda FPD and offered the option of MIH visits to address care gaps and connect them with needed resources.
- **OTHERS:** Referrals may be initiated by individuals; family/friends; community and social service workers; counselors, clergy, chaplains, law enforcement, or health care providers

Contact the **MIH Call Center** at Wauconda Station 1: **(847) 526-2821** | This number brings the caller to a phone directory that forwards calls to the MIH coordinator(s): Erik Christensen and Mike Wagner. OR

Access an **online Referral Form** by going to: https://hctxt.us/Wauconda_referral | This opens a **link** to a HIPAA compliant and secure site where demographic and medical information can be entered and uploaded. Once the referral form has been completed and submitted, the request will be sent to the MIH coordinator(s).

MIH Coordinator at Wauconda: Erik Christensen cell: (847) 276-7329

Authorized PHYSICIAN CONSULTANTS during MIH visits:

| | |
|-----------------------------------|----------------|
| Dr. Matthew T. Jordan, EMS/MIH MD | (847) 962-6008 |
| Dr. Michael Pearlman: | (847) 736-8624 |
| Dr. Mayank Shah: | (847) 414-4459 |

NWC/NLC MIH Program Policies

Mobile Integrated Healthcare is an innovative way for Community Paramedics (MIH-CPs) and other clinicians to deliver planned **NON-EMERGENCY** care visits to eligible clients where they live to support them in optimizing their health and wellness. The NWC/NLC MIH Program provides end-to-end services within a Community System of Care using a person- and family-centered approach that meets the needs of clients, families and healthcare providers.

Clients are assisted in effectively navigating through their episodes of care, partnering with their healthcare team, and connecting them with needed resources to minimize or eliminate health care disparities. The diversity of cultures, customs, languages and preferences are considered while addressing the many dimensions of wellness and their health management.

GOALS:

- **Build healthy communities.** Meet or exceed the IHI Quintuple Aims of improved patient experience, better outcomes, lower costs, clinician wellbeing, and health equity to achieve optimal wellness and improved economy.
- **Deliver 6R Service:** Right care, Right place, Right timeframe, Right resources, Right Quality, and Right cost with strong consideration for client convenience and choice through patient defined goals and personalized methods of care.
- **Provide evidence-based MIH care** that is population-based and addresses the social determinates of health.
- **Encourage appropriate use of healthcare resources** to improve capacity, decrease non-emergency use of 911 and EDs; assist clients to safely transition from hospital to home, reduce preventable readmissions, and prevent complications.

MIH practice is outside of the usual and customary EMS duties and work schedule. The Scope of Practice is commensurate with the qualifications and initial and ongoing education required for MIH clinicians and the populations served. All MIH clinicians function within their practice privileges authorized by the Illinois Department of Public Health and NWC EMS/MIH MD; and as defined in the MIH Clinician Position Description, Program Plan, HealthCall® Assessment tool, and these SMOs.

NUMBER and TIMING of VISITS per Client

Depends on the client's degree of acuity, potential for risk, unsatisfied needs, or continued calls for non-emergency EMS assistance. The number of visits may be modified but must be approved by the MIH Coordinators at Wauconda FPD.

Typically 4 visits are planned

- 1st (enrollment) visit: Baseline full H&P; targeted care based on diagnosis and MIH Clinical Guidelines; dwelling safety assessment & risk mitigation; client education, and connection to resources
- 2nd & 3rd: Follow-up visits (if needed); assess progress towards meeting healthcare targets
- 4th (discharge) visit: Provide Satisfaction survey/Program evaluation to client/caregiver

VISIT TIME ALLOWANCES: Vary depending on nature and complexity of client

- Enrollment visit patient care contact time: 1.5 hours; follow-up visits: 45 minutes
If translation services are required, the visit may take longer to allow for 3-way communication.
- 15 min for travel each way | 30 min for documentation and communication

MIH-CP STAFFING

- A team of two MIH clinicians respond to each visit. Ideally, at least one of the same MIH-CPs completes all visits for an individual client to enhance continuity of care.
- **Master calendars:** A centralized On-call schedule and visit calendar is maintained in HealthCall software. Volumes are trended to determine if additional capacity is needed.
- **Cross coverage:** Agencies perform MIH-CP visits across the entire service area (Ex MABAS plan).

DUTIES and PROCESSES PRIOR to ENROLLMENT VISIT

MIH Call Center- Wauconda FPD

- Confirm 1st visit date, time, location, and considerations re: to parking, access, presence of animals, etc. with client/caregiver.
- Determine if interpretive services are needed and make arrangements to have interpreter available.
- Determine if any DC instructions, medical records, POLST orders, advance directives, or patient care plans are available for the team to review prior to the visit. Ask about special needs, technology use by client.
- Consult the on-call calendar; affirm the availability of two MIH CPs to conduct the visit
- **Inform the client** regarding the names of the CPs, send them photos if they can receive an electronic file; explain the type and branding of the MIH vehicle, uniform and ID badge that will be worn by MIH clinicians.
- **Confirm scheduled date, time, and location of visit with MIH-CPs;** inform them of any site-specific concerns or instructions; and make previous medical records/care plans available to them for advance review.

MIH-Clinicians

- Review client health history, previous EMS calls, ED visits, hospitalizations, baseline status, and desired outcomes/health targets if available. If HUG client: assess previous calls for etiology, time of day, etc. for possible trends or causes.
- Review MIH protocols for client's condition(s); prep for assessments, care, education, community resources that may be needed

NWC/NLC MIH Program Policies cont.

MIH clinicians examine, screen, treat and coordinate MIH health services.

"Mobile integrated health care services" include health assessment, chronic disease monitoring and education, medication compliance, immunizations and vaccinations, laboratory specimen collection, hospital discharge follow-up care, and minor medical procedures as approved by the applicable EMS Medical Director.

Services provided by MIH clinicians are broadly grouped into three categories:

- Assessment and evaluation: History and physical exam
- Care at home or housing location
- Chronic disease monitoring; hospital discharge follow up; prevention; education; and connecting to resources

Psychomotor skills may include, but not be limited to competently measuring height and weight, measuring limb circumference; assessing for jugular vein distention, performing a neuro exam; auscultating lung, heart, and bowel sounds and carotid bruits; obtaining accurate vital signs (VS) including systolic/diastolic and mean arterial pressures, trending pulse pressures and checking for orthostatic changes; applying leads/sensors correctly and monitoring SpO₂; EtCO₂, ECG (rhythm strip and 12 L) and interpreting numeric readings and waveforms, obtaining a capillary glucose reading; assessing limb ROM, skin, wounds, and changing dressings.

"Self-neglect": Means a condition that is the result of an eligible adult's inability, due to physical or mental impairments, or both, or a diminished capacity, to perform essential self-care tasks that substantially threaten his or her own health, including: providing essential food, clothing, shelter, and health care; and obtaining goods and services necessary to maintain physical health, mental health, emotional well-being, and general safety. The term includes compulsive hoarding, which is characterized by the acquisition and retention of large quantities of items and materials that produce an extensively cluttered living space, which significantly impairs the performance of essential self-care tasks or otherwise substantially threatens life or safety. (320 ILCS 20/) Adult Protective Services Act.

"Emergency" under the above Act means a situation in which an eligible adult is living in conditions presenting a risk of death or physical, mental or sexual injury and the provider agency has reason to believe the eligible adult is unable to consent to services which would alleviate that risk.

Consider if a client meets the eligibility requirements for "Self-neglect" emergency. If yes, call 911 for an EMS response.

MIH VEHICLES

Each Participating Agency will supply its own MIH vehicle that has easily identifiable department markings and will also sport two magnets that identify it as an MIH vehicle. All vehicles are appropriate for the clinical encounter and shall meet all Motor Vehicle standards for legal and safe operations. **No MIH client with a need for immediate medical attention shall be transported by an MIH agency in any vehicle except an ambulance.**

SUPPLIES/EQUIPMENT used in the delivery of MIH care

Supplies/equipment are commensurate with the practice standards approved by the EMS/MIH MD and within the scope of practice for MIH clinicians. All equipment and medical devices shall be maintained in good working order at all times and in accordance with manufacturers' recommendations. These include, but may not be limited to the following:

- Appropriate size PPE for each responder; extra procedural masks for clients/caregivers
- **Assessment/diagnostic equipment**
 - Stethoscope (diaphragm & bell); aneroid sphygmomanometer (assorted size cuffs)
 - Thermometer (non-mercury) ; tongue depressors
 - Wound gauge card; near card for visual acuity assessment; eye occluder
 - Cardiac monitor designed for EMS use with NIBP, SpO₂, & quantitative/waveform EtCO₂, (appropriate sensors); rhythm & 12 L ECG; paper for printing strips; ECG leads; alcohol wipes, dry cloth or 4X4s, hair clipper to prep skin
 - Strong light source to assess pupils; nose, ears, mouth | monofilament line (sensory integrity)
 - Glucose meter; test strips; high/low test solution; chlorhexidine wipes; lancets
 - Portable scale (450 lb. rating); peds length-based tape; flexible tape to measure limb circumference
- Hold harmless/consent agreements for home safety check (electronic option acceptable); HIPAA Notices of Privacy Practices (electronic option acceptable)
- Educational materials; community resource fliers, pill sorters
- Gorilla or duct tape to secure electrical cords and area rugs
- Smoke/CO detectors; spare batteries

There is currently no cost to MIH clients. Insurance companies and 3rd party payers will be invoiced to compensate for services within contractual provisions and state law.

SERVICE LEVEL COMMITMENTS

MIH Clinicians shall comply with and abide by all federal, state, and local laws, rules, regulations, and Program standards (including mission, vision, values, policies and protocols) now in force, or which may hereafter be in force, pertaining to MIH healthcare in the jurisdictions in which they are located or conduct of MIH professional activities.

MIH General ASSESSMENT

No financial, technical, social, physical, or age-related barriers should exist for those eligible for MIH services unless the client refuses the visit, is not accessible when MIH arrives, exhibits violent behavior, or the scene is unsafe
If a client requires lifting or moving: Call 911 for assistance
If non-urgent transport to another location is needed: Offer transportation options to the client/caregiver based on community services agreements

1. **Scene safety/dynamic risk assessment** (when arriving, prior to entering, while engaged with client); control and correct hazards | If unsafe; withdraw; Call 911 and report safety concerns to the MIH Coordinator at Wauconda FPD. Infection control body substance isolation (BSI) precautions; use appropriate PPE prn
2. **Introduce yourself to those present**; establish rapport.
3. **Start MIH Client Assessment tool**: Document date; location of visit; time of arrival and visit start time
4. Determine client's English proficiency; preferred language; and **need for interpretive services**. Make appropriate arrangements for teleconferencing with an interpreter prn.
5. **Obtain best possible history | Client demographics**: Legal and preferred names; contact information; type of dwelling; historian; legal/decisional capacity; military status; sexual orientation/gender identity (SOGI) data; preferred pronouns; cultural heritage/ethnicity. (Healthcare clinicians must ask a client about their gender, sex assigned at birth, and preferred pronouns, but there is no legislation requiring them to disclose this information.)
Confirm source of referral; enrollment criteria for MIH; and purpose of this visit
Height (Client or record) | **Weight** (in kg using scale); explore causes of changes from last measurement
Complete PMH inventory - **Allergies**: Meds | Environment | Foods - **Vaccination history**
Social history: Exposure to violence/ abuse/ neglect/trafficking | Alcohol and/or substance use disorders | Housing stability | Social isolation | Stress | Tobacco use (vaping)
Other addictions/compulsive behaviors? Risk factors; barriers to achieving optimal health
6. **Complete Medication reconciliation and explore compliance**: (See Appendix)
 - Obtain best possible medication/supplement list (name, concentration, dose, route, timing; toxidromes); compare what the client is actually taking to the plan, identify discrepancies; explore causes of nonconformities; note time and amount of last dose
 - Ensure medication access/delivery from hospital, selected pharmacy, or other legitimate resource.
 - Ensure meds are stored safely and appropriately and removed from location and discarded appropriately when no longer indicated/prescribed or expired
 - Obtain pill sorters and identify sources of drug information to use as references
 - Ensure client/caregiver understanding and provide education regarding medication administration and need for adherence to medication dose and schedule; importance of follow-up lab testing (if applicable), potential drug-drug and drug-food interactions, and the potential for adverse drug reactions.
7. **Vital signs (full set)**
If meets target: 1 set | Variance from baseline, new abnormality or client is symptomatic: 2 sets 15 min apart
 - **BP**: Systolic/diastolic readings; trend MAP, pulse pressure; note pulsus paradoxus; consider orthostatic VS
 - **Pulse**: HR, quality, rhythmicity; pulse deficits if tachycardic or ectopics
 - **Respirations**: Rate, pattern, depth, effort
 - **Temp**: Digital ear; Forehead (temporal); or non-contact (note type) – HealthCall will report in °F and °C**SpO₂**: If actual or potential cardiorespiratory (CR) condition or hypoxia; note number & pleth waveform
EtCO₂: If actual or potential impact to ventilation, perfusion or metabolism; note number & waveform
8. **Consider need for ECG**: (rhythm strip/12 L) based on PHM and MIH care plan; actual or potential CR compromise; dysrhythmia, evidence of F&E imbalance (see notes), etc. If obtained, append to record.
If 12 L shows new-onset changes of ischemia or infarction; call 911; if change but stable call EMS/MIH MD
9. If any new onset AMS, neuro deficits, diaphoresis, tachycardia, tachypnea, dehydration, or seizure: **Assess blood glucose (bG)**. If 1st reading is out of normal ranges or inconsistent with client's clinical presentation, obtain a 2nd sample from a different site. Asymptomatic clients with 2 or more consecutive bG measurements >180 without S&S of dehydration and/or acidosis should be advised to contact their PCP within 24 hours. (See Diabetes SMO)
If >180 with S&S of DKA or HHNS or <60 & AMS, immediately contact 911 for an EMS response.

MIH General ASSESSMENT cont.

10. Mental status exam: determine baseline or alteration from baseline; decisional capacity

Alertness (Abn. GCS 13 or less): rapidly consider AEIOU=TIPS ; If new onset deterioration/changes - call 911

Orientation X 4: Answers accurately person, place, time, and situation (Abn. X 3 or less / 4)

Speech: Speaks with normal rate, volume, articulation, content | (Disorganized, repetitive utterances?)

Affect: Mood/emotional response

Behavior: Posture, gestures, abnormal movements, repetitive behaviors; is client quiet, restless, inattentive, hyperactive, agitated, violent? Is client cooperative or uncooperative?

Cognition: Intellectual ability/thought processes - Note if confused, disorganized, obsessive thoughts, not making sense; evidence of delusions, delirium, dementia, hallucinations, phobias, suicidal or homicidal ideations.

Memory: Immediate, recent, remote (amnesia/dementia?)

Insight: Can client articulate lucid and logical implications of their situation and consequences to their choices? Do they understand relevant information? Can they draw reasonable conclusions based on facts and communicate a safe and rational alternative choice to recommended care?

Assess for causes of AMS (Consider baseline/normal ranges for pt)

| | |
|---|--|
| HPI/ PMH Look for medical causes | - Denies PMH or unable to obtain PMH |
| | - A: Alcohol/drugs/toxins (substance use); ACS/HF, arrhythmias, anticoagulation, anemia |
| | - E: Endocrine/exocrine, particularly thyroid/liver/renal/adrenal dx; electrolyte/fluid imbalances; ECG: dysrhythmias/prolonged QT |
| | - I: Insulin disorders: ✓glucose for hypo or hyperglycemia (DKA/HHNS) |
| | - O: O ₂ deficit (hypoxia – ✓ SpO₂), opioids/OD , occult blood loss (GI/GU) |
| | - U: Uremia; other renal causes including hypertensive problems |
| | - T: (recent) Trauma, temperature changes (hypo-hyperthermia) |
| | - I: Infections, neurologic and systemic (sepsis) |
| | - P: Psychological*; poisoning; perfusion deficits; massive pulmonary embolism |
| | - S: Space occupying lesions (epi or subdural, SAH, tumors); stroke, shock (hypotension), seizures |
| Neuro: Delirium, dementia (Alzheimer's dx), developmental impairment, autism, Parkinson's dx; migraine/other HA | |
| Metabolic: Acidosis (✓ EtCO₂), vitamin/dietary deficiencies; disordered eating / malignancies | |
| *Psych/behavioral: Anxiety or mood disorders; PTS, mental health crisis; personality and bipolar disorders; delusions, psychosis; hallucinations (auditory, visual, tactile) | |

11. If client has a behavioral health comorbidity or exam reveals high risk criteria: Use the Columbia **SUICIDE SEVERITY RATING SCALE** (See MIH Behavioral Health protocol). Ask about suicidal thoughts, plan, intent, self-and other-harm behaviors, situational stress; psychosis; substance use disorder; warning signs, behavioral changes, mitigating/ protective factors and support systems. Rate risk of suicide/harm to self or others (current, recent, or lifetime SI attempts) **If positive risk: Call 911 for transport.**

12. **Pain Assessment** consistent with the client's age, condition, ability to understand & communicate:

- Note nature of pain: Acute, chronic, or acute on chronic
- OPQRST: Quantify using a numeric scoring system; Wong-Baker Faces Scale; or Abbey pain scale if dementia present (see back of protocols)
- Interference with ADLs/IADLs, normal work or social activities
- Consider their current status and discharge plan if known | **Pain interventions prescribed/being used**
- Compliance; efficacy, causes of nonconformity
- Explore the risks and benefits of pain mgt strategies, potential risks for dependency, addiction, and abuse

13. **Review of Systems** using the maneuvers of inspection, palpation, percussion, and auscultation as appropriate to the diagnoses and care plan – see HealthCall® Assessment software for detailed information to obtain: HEENT, Thorax and lungs; Abdomen; Extremities; Back; Skin (incision if post-op wounds; pressure or diabetic ulcers); neuro exam. Note location client was found (bed/chair/ambulatory); general appearance (expected baseline; acute distress)

Additional screening tools used prn: Columbia Suicide Severity Rating Scale; AHA Life's Essential 8; Dimensions of Wellness; COPD Assessment Test (CAT) questionnaire; Wagner-Meggitt Classification of Diabetic Foot Ulcer System; Braden Risk Assessment Scale for Pressure Ulcers; Pneumonia Acuity Assessment Worksheet.

14. **Chronic disease monitoring** Review discharge instructions, care plans, and health targets with client/caregiver if available. Compare current state to known baseline. Discuss progress in meeting health targets. Explore challenges or barriers, identify therapy failures, and narrow or close care gaps. Support clients in setting their own health goals. Determine what can be done to meet their goals and maintain quality of life given the current evidence base.

MIH General ASSESSMENT cont.

Assess Social/Emotional and Functional Needs

15. **Dimensions of Wellness:** Identify each person's highest level of well-being in the physical, social, emotional, spiritual, intellectual, financial, environmental, and occupational dimensions of wellness.
Personal habit inventory: Adhering to healthy diet; adhering to exercise regimen; sleep pattern. See notes.
16. **Social Determinants of Health (SDoH):** Assess need for services or care navigation to support safety and self-management in 5 domains: Economic stability | Education access and quality | Health care access and quality | Neighborhood and built environment | Social and community context.
- | | | | |
|------------------|-------------------------------------|--------------------|--|
| Housing/shelter | Clothing (size/climate appropriate) | Food/water | Transportation |
| Medical care | Dental care | Emotional security | Financial security (social welfare & employment) |
| Legal assistance | Safety | Home health aide | Heat/utilities |
17. **Functional independence: Activities of daily living (ADLs)/Instrumental ADLs:** Assess activities related to mobility and personal care: ability to transfer (get in or out of a chair or bed), walk, dress themselves, eat, and do personal hygiene such as bathing or showering, oral care, and toileting independently. IADLs are more complex skills needed to live independently and include using a telephone, shopping, preparing meals, housekeeping, using transportation, taking medications, and managing finances.
18. **Disabilities and accommodations:** Note if present
Disabilities: Cognitive; visual; hearing/auditory processing; behavioral/emotional; speech/communication
Life support system: Client is physically linked or has implanted devices needed to sustain their life (ICD; VAD).
 Medical equipment | Service or emotional support animal
Assess if medical resources are needed: Batteries for medical devices; O₂, mobility aids; hospital bed or commode; disability accommodation equipment. Explore barriers to access. Work with social services to acquire.

19. Provide care and interventions consistent with MIH protocols and care plan

Prevention, Education, and Resources

20. **Making healthy choices:** Affirm understanding and compliance with AHA's Life's Essential 8 (see notes), abstaining from unhealthy substances; hydration, nutrition, hygiene, skin, and oral care; stress reduction; and mitigating risks (including compliance with vaccinations).
21. **Nutritional resources:** Determine if client has access to adequate healthy foods and is compliant with diet appropriate for their condition(s)/needs. Explore root causes of noncompliance. Work with Community Impact & Engagement and social services resources to acquire.
22. **Psychosocial needs:** Anxiety, stress, fear, education, poverty, social exclusion, discrimination, violence, developmental problems, disability, pain, and limitations in daily living. Work with Community Impact & Engagement and social services resources to address.
23. **Affirm client/caregiver understanding/competent ability to perform self-care involving the following:**
- | | | |
|---|--------------------------------------|---|
| Breathing Rx (MDI, nebulizer, O ₂) | Incentive spirometer | Peak flow meters/monitoring |
| BP checks/Halter monitors | Glucose reading | Medication administration (devices) |
| Peripherally inserted central venous catheters (PICC lines) | | Hemodialysis AV fistulas |
| Indwelling urinary catheters | Gastric tubes/tube feedings | Tracheostomies, stoma care; ventilators |
| Prevention of skin ulcers | Drain/dressing/wound care | Prescribed exercise |
| Application of ice/cold | Pain mgt via non-pharmacologic means | |
- Answer questions; ensure that the client/caregiver understands the benefits of all available treatment options and accepts the options that best align with their individual goals through shared decision-making.
Coach self-management skills using a teach-back strategy as needed.
24. **Conduct a residential safety/fall risk assessment** using the HealthCall® STEADI Fall Risk evaluation tool if authorized by client/legal decision maker. Remove or mitigate hazards; observe if appropriate assist devices are present. Discuss needs with clients/caregivers. Forward results/ongoing needs to PCP or social services.
Affirm that smoke detectors are installed or arrangements are made to install. Exchange batteries if nonfunctioning.
25. Connect clients to appropriate **OB** and postnatal care prn to reduce maternal and infant mortality: Educate on safe sleeping and feeding practices for infants, access to well-baby checks, immunizations, safe cribs and car seats.
26. Note if client/caregiver has **any questions or needs** that MIH cannot answer or provide. Encourage them to **Call 211** or (855) 677-5253; or text their zip code to 898-211, or access online at [Call 211 for Essential Community Services | United Way 211](#). Available 24/7. Note resources or information provided.

MIH General ASSESSMENT cont.

27. Assign an MIH Acuity rating after assessment / related actions

Emergent (high risk): Client currently unstable/critical threat level

S&S suggest a high probability of imminent risk of harm if intervention is not taken urgently to mitigate threat/provide emergency care; or client meets the requirements for a "Self-neglect" emergency. MIH CPs shall initiate treatment within their resources available and immediately **CALL EMS/911** for response and transport to ED. Also Contact EMS/MIH MD.



Urgent (rising risk): Patient currently stable; Not meeting outcome targets

Potential to deteriorate or experience complications w/ a high probability for morbidity if interventions are not begun quickly and sustained. Contact EMS/MIH MD (designee) for consultation. Notify PCP (if known) regarding risk findings. Notify community partners for access to needed resources prn.

Routine (low risk): Patient currently stable; meeting outcome targets

Answer questions, provide coaching/further instruction prn; ensure ongoing adherence to care plan

28. **Communication:** Ensure understanding re: follow-up with PCP/specialists and appointments for diagnostic, rehab, and social services. Report health status; acuity, compliance, response to Rx; education provided, and significant findings since discharge, last EMS encounter, and/or MIH visit to PCP if known. Document name and time of contact.

All clients should receive a phone call within 24 hours of each visit to see if their healthcare needs have been met or whether they have additional questions.

29. **Documentation:** Note all assessments, interventions, and education/resources provided, and the need for additional resources into the client's EHR using HealthCall® software. Highlight need for social, behavioral, or dietician services, home care aide, Pharmacist review of medication reconciliation, etc.

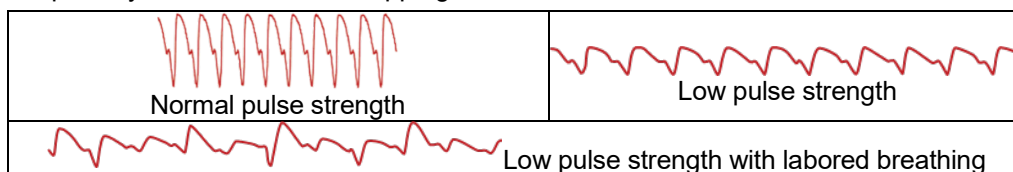
Send link to EHR with MIH-CP contact information to PCP if applicable. Note if the PCP changes the care plan. Provide client with HIPAA Notice of Privacy Practices and obtain signature.

MIH General ASSESSMENT Caveats & Resources

Pulse oximetry considerations when desaturating: Pulse wave distortions can cause inaccurate SpO₂ readings

- **Low pulse strength** – Poor circulation/cold hands can result in low pulse strength.
- **Labored breathing** can cause chest movements that create pulse wave distortions.

Other factors affecting readings: Motion artifact (shivering, tremors); ambient light, anemia, smoking; electrical noise; dark skin color (routinely overestimates SpO₂ levels); dark/metallic nail polish. As a result, it is harder for the oximeter to find the true pulse, especially when O₂ level is dropping. Use a central sensor. Offset with clinical correlation.



| CAPNOGRAPHY | | |
|--|---|--|
| ABSENT | DECREASED | INCREASED |
| M E T A B O L I S M | | |
| Malfunction: sensor/monitor ✓ sensor; exhale into | Hypothermia | Hyperthermia; Shivering Pain |
| P E R F U S I O N | | |
| Cardiac arrest w/o CPR Exsanguination | Shock; cardiac arrest w/ CPR Pulm embolism; ↓ Cardiac output | ↑ Cardiac output Reperfusion after ROSC |
| V E N T I L A T I O N | | |
| Apnea; ET extubation; airway obstruction; esophageal tube | HYPER ventilation Bronchospasm; Mucus plugging | HYPO ventilation; Resp depression COPD |

MIH General ASSESSMENT Caveats & Resources cont.

30-20-10 Rule for Orthostatic Vital Sign Measurement

Indications

- At risk for hypovolemia (PMH vomiting, diarrhea, dehydration, bleeding)
- Complaining of lightheadedness (feeling faint), dizziness (spinning sensation or feeling off-balance), syncope or near syncope (transient loss of consciousness),
- After a fall; Complains or has S&S that may be due to orthostasis (e.g., lightheadedness)
- HTN + diabetes mellitus or those who have HTN and are 80 years and older even if no S&S
- Routine assessment in those who take meds that cause orthostasis and have other risk factors for falls

Contraindications

- Supine hypotension or a sitting BP $\leq 90/60$ | S&S of severe AMS | Unable to stand

Procedure

1. Instruct client on the process and its rationale; assess their ability to safely stand.
2. Position supine for a minimum of 3-5 minutes. Assess BP and P while supine.
3. Sit up for 1 minute. Ask about dizziness, weakness, or visual changes associated with position change. Note diaphoresis or pallor. Assess sitting BP and P. If S&S with position change or sitting BP $\leq 90/60$, return supine.
4. If sitting position is tolerated, ask them to stand. Ask about dizziness, weakness, or visual changes. Note diaphoresis or pallor. Assess BP & P immediately; repeat in 3 min. Support forearm at heart level to prevent inaccurate reading.

Interpretation of findings

1. **Compare values 3 minutes after position change.** A drop of **SBP ≥ 20** or **DBP ≥ 10** = orthostatic hypotension. A HR increase of at least **30** suggests hypovolemia independent of other criteria for orthostatic hypotension.
2. A BP drop immediately after standing that resolves by 3 minutes does not indicate orthostatic hypotension. This finding may be useful to confirm a patient's complaint of feeling dizzy upon standing; caution pt about position changes.

Reference: Ringer, M. & Lappin, S.L. (Updated, 2023 May 16). Orthostatic hypotension. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK448192/>

[AHA Life's Essential 8](#) metrics; associated with life expectancy free of chronic diseases such as CVD, cancer, diabetes, and dementia; serves as the basis for life-style healthy choices education and coaching. (Great teaching tools on website)

Not smoking Regular physical activity Healthy diet
Healthy ranges for weight; sleep (average of 7-9 hours/day); BP; Blood glucose; Non-HDL cholesterol

Dimensions of Wellness

Wellness is the full integration of multiple dimension that act and interact in a way that contributes to a person's quality of life and should be explored with MIH clients:

- **Physical Wellness:** The ability to maintain a healthy quality of life that allows us to get through our daily activities without undue fatigue or physical stress. The ability to recognize that our behaviors have a significant impact on our wellness and adopting healthful habits (balanced diet, exercise, etc.) while avoiding destructive habits (tobacco, drugs, alcohol, etc.) will lead to optimal Physical Wellness.
- **Social Wellness:** The ability to establish and maintain meaningful and harmonious relationships with family, friends and colleagues.
- **Emotional Wellness:** Self-awareness and the ability to successfully cope with stresses, adapt to change and difficult times, acknowledge and express feelings, and validate and self-regulate emotions in a healthy and productive manner.
- **Spiritual Wellness:** The ability to establish internal peace and harmony; develop congruency between values and actions with a sense of purpose and meaning. It may or may not involve religious activities.
- **Environmental Wellness:** Includes recognizing our impact on the environment and responsibility for air, water, and ecosystem quality. Examples: Conserving natural resources, being mindful of consumption, and recycling.
- **Occupational Wellness:** Satisfaction and enrichment in the workplace. The ability to develop job-related skills, make a positive impact, and get personal fulfillment from one's chosen career while balancing work and leisure. A desire to contribute and to make a positive impact on the organizations we work in and to society as a whole.
- **Intellectual Wellness:** Openness to explore new ideas, learn new concepts, enhance critical thinking skills, apply new ways of thinking to current obstacles, and challenge the mind in pursuit of lifelong learning (Growth mindset).

Fluid and Electrolyte Imbalances

Divided into four main types:

- Volume disturbances; either too much or too little fluid. Acute Wt. change of 1 kg (2.2 lbs) = fluid loss/gain of 1 L. Requires ~3 L deficit for S&S of dehydration.
- Irregularities in fluid transport seen in conditions such as HF and shock
- Electrolyte ratio imbalances resulting in acidosis, alkalosis, cardiac rhythm and output disturbances, and tetany
- Shifts of fluid to the wrong places, i.e., edema and ascites (abdominal edema)

Significant changes occur before VS changes. Plasma volume gains/losses occur faster than interstitial or intracellular.

| Clinical finding fluid imbalance | Overhydration | Dehydration |
|--|--|--|
| Blood pressure: Cardiac output (SV X HR) X Peripheral vascular resistance; influenced by vascular volume and distribution; pump performance, heart rate, vessel dynamics | Increased; can indicate fluid overload, but can also indicate anxiety | Fluid deficit of 25-30% before SBP falls. Postural (orthostatic) changes; narrowed pulse pressure may also indicate volume deficit. |
| Jugular veins: When sitting at a 45° angle with neck straight, jugular pulse should be visible no higher than 2 cm above sternal angle. Pulsations above this indicate JVD. | JVD | Jugular veins flat |
| Pulse: Normal HR & pulse quality without other S&S suggests normal fluid balance unless on rate suppressing meds or elderly | Tachycardia | Tachycardia |
| Skin: Poor turgor: aging, cold and cachexia. Dry mouth: mouth breathing or a SE of meds. Peripheral edema: RHF, pts with hypoalbuminemia (vascular depletion) | Peripheral edema; 6-8 lb. weight gain. Sacral swelling if on bed rest; ascites | Dry skin, mucous membranes, poor skin turgor, sunken eyes, furrowed tongue, absence of normal sweating/ tears |
| Respiratory exam | Dyspnea; orthopnea; crackles; ↑ coarseness w/ ↑ congestion | Tachypnea |
| Neuro exam | Headaches, mental confusion, double vision, coma, seizures | Confusion; coma (10% deficit) Death (10-12% deficit) |
| General signs | High LV systolic ejection fraction, mild mitral regurgitation | ↓ output <60 mL/h (<1 mL/kg/h) = need for fluids. Concerns: concentrated, amber colored urine w/ odor, fever, acute wt loss, thirst, constipation; AMS |

| Ion | Too much | Too little |
|------------------|---|--|
| Sodium | Na and water retention due to inability to excrete normal amounts of Na (starvation, severe illness) or ↑ sodium reabsorption (aldosterone release, steroid use). Edema may be a primary result of ↑ hydrostatic pressure in HF or venous/lymph obstruction, ↑ capillary permeability in inflammation or allergic states, or ↓ plasma proteins in nephrosis and cirrhosis. All from secondary renal Na retention. If crackles present, volume ↑ at least 1500 mL | Mental confusion, delusions Decreased blood volume, hypotension, tachycardia Muscle weakness, abdominal cramping; headache ↓ saliva, tears, furrowed tongue, dry mucous membranes; flat or collapsed neck veins Restlessness and weakness to delirium Hyperpnea, followed by sudden cardiac arrest Flushed skin, increased body temperature |
| Potassium | Muscle weakness to paralysis; irritability Abdominal distention, intestinal colic; diarrhea, dizziness, oliguria; muscle cramps or pain ECG findings w/ cardiotoxicity: Tall, peaked T waves; flattened or absent P waves; prolonged PR interval; depressed S-T segments; widened QRS , bradycardia, sine-wave pattern, IVR, cardiac arrest High index of suspicion if on lisinopril (retains K); generalized fatigue, weakness, flaccid paralysis, paresthesias, palpitations, dyspnea, chest pain, nausea or vomiting | Apathy, lethargy, malaise, or apprehension Muscle weakness, ↓ reflexes Nausea, vomiting, anorexia, excessive thirst Tachycardia; weak pulse, faint heart sounds Paralytic ileus or abdominal distention/gas Falling BP; SOB, shallow respirations ECG findings: <ul style="list-style-type: none"> • Low voltage of all ECG waves • Flattened T wave; depression of S-T segment • Presence of U wave • Dysrhythmias; PACs; VF |

| Ion | Too much | Too little |
|----------------------------|---|--|
| Calcium | <p>Anorexia, wt loss; N / V, metallic taste</p> <p>Thirst helps maintain urine flow & hydration, polyuria is an attempt to excrete excess Ca</p> <p>Kidney stones: When Ca increases, serum becomes supersaturated and precipitation occurs in the form of kidney stones.</p> <p>Muscle hypotonicity, weakness</p> <p>Drowsiness, confusion, stupor, lethargy, progresses to coma</p> <p>Abdominal / deep bone pain, peptic ulcers, GI atony, constipation</p> <p>DTRs decreased to absent</p> <p>HTN; predisposes myocardium to bradydysrhythmias including AVB. Shortened QT intervals and impaired intraventricular conduction may lead to cardiac arrest.</p> | <p>Increases cell membrane permeability producing ↑ neuro-muscular excitability: anxiety; psychosis; paresthesias: numbness or tingling around mouth or in extremities; seizures, movement disorders (Parkinsonism); coma</p> <p>Smooth muscle effects: Diarrhea, abdominal cramps; N / V</p> <p>Skeletal muscle effects (neuromuscular cells depolarize unchecked ; increased excitability, tetany; muscle aches and cramps, weakness; spasmodic contractions; carpal-pedal spasms; laryngeal spasms/ stridor; hypoxia</p> <p>Cardiac effects: Decreased threshold requirement for stimulation, complete AVB; Prolonged Q-T interval may lead to VT; ↓ BP, HF</p> <p>Ectodermal abnormalities: Cataracts; dry skin, alopecia (hair loss); brittle nails; dental carries, defective enamel and root formation</p> <p>Assessment tests for hypocalcemia</p> <ul style="list-style-type: none"> • Chvostek's sign: Tap the facial nerve (CN VII) anterior to the external ear and immediately below the temporal bone; note spasmodic contractions of the facial muscles on the same side. • Trousseau's sign: Place BP cuff on arm and inflate to exceed SBP for 3 min; note carpal spasm with contraction of thumb and fingers and inability to open the hand. Hyperexcitability due to hypocalcemia is enhanced by ischemia. |
| Magnesium (Mg++) | <p>Neuromuscular: Decreased DTRs: respiratory depression, respiratory arrest</p> <p>CV: ECG changes: shortened QT interval, prolonged PR and QRS intervals (5 mEq/L), bradycardia, complete heart block (15 mEq/L), cardiac arrest (17-20 mEq/L)</p> <p>Metabolic: hypocalcemia, hyperkalemia</p> <p>Mental status: lethargy, confusion, somnolence, coma</p> <p>GI: Nausea and vomiting (3 mEq/L)</p> <p>Skin: Cutaneous flushing</p> | <p>Neuromuscular: Chvostek's sign; Trousseau's sign; Hyperreflexia; Muscular fasciculations, tremor, weakness; Vertigo; seizures</p> <p>Cardiovascular: ECG changes: prolonged PR and QT intervals; U waves; widened QRS, T-wave flattening;</p> <p>Dysrhythmias: SVT: AF, multifocal atrial tachycardia, PSVT; Ventricular: PVC's, prolonged QT syndromes, monomorphic VT, polymorphic VT with prolonged QT segment (Torsades de pointes), VF; Increased sensitivity to digoxin; Coronary artery spasm; AMI; Possible increased incidence of sudden death; HTN; Increased systemic vascular resistance</p> <p>Metabolic: Insulin resistance; Hypokalemia; Hypocalcemia; Hypophosphatemia</p> <p>Mental status: agitation, confusion, hallucinations, psychosis</p> <p>Replenishment of intracellular K impeded, leaves an irritable cell</p> |

BEHAVIORAL HEALTH CO-MORBIDITY | Suicide screen

COLUMBIA-SUICIDE SEVERITY RATING SCALE

Suicide Screen: Explore **risk of suicide/harm to others** (current, recent, or lifetime SI attempts); warning signs/behavior changes; mitigating/protective factors/support systems. Bring suicide notes to hospital.

Possible RISK FACTORS for suicide

- Mental health or illness disorders (esp. depression and bipolar disorder)
- Previous suicide attempts or self-inflicted injury | Access to lethal means coupled with suicidal thoughts
- Hx of trauma, loss, marginalizing experiences (adverse childhood experiences; family history of suicide, bereavement, or economic loss); discrimination based on socioeconomic factors, race/ethnicity or gender/sexual identity
- Serious illness, or physical or chronic pain or impairment; substance use
- Social isolation; barriers to healthcare; pattern/history of aggressive or antisocial behavior; family or peer conflict
- Discharge from inpatient psychiatric care, particularly within first weeks and months after discharge

Always ask questions #1 & #2

Yes/ No in
past
month

1. **Wish to be dead:** Have you wished you were dead or wished you could go to sleep and not wake up?

2. **Suicidal thoughts:** Have you actually had any thoughts about killing yourself?

If YES to #2, answer questions 3, 4, 5 & 6 If NO to #2, go directly to question 6

3. **Suicidal thoughts w/ method** (no plan or intent to act): Have you thought about how you might do this?

4. **Suicidal intent, no specific plan:** Have you had any intention of acting on these thoughts of killing yourself, as opposed to you have the thoughts but you definitely would not act on them? Have you had these thoughts and had some intention of acting on them?

5. **Suicidal intent with plan:** Have you started to work out or have worked out the details of how to kill yourself? Do you intend to carry out this plan?

ALWAYS ASK QUESTION #6

In past 3
mos.

6. Have you done anything, started to do anything, or prepared to do anything to end your life?
Ex: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, held a gun but changed your mind, cut yourself, tried to hang yourself, etc.

Any YES must be taken seriously

Items 1 & 2 Behavioral Health Referral: Contact EMS/MIH MD or designee for consult

Items 3-- 6 Call 911; take Patient Safety Precautions until EMS arrives

SCENE SAFETY: If safety in jeopardy, request law enforcement protection; withdraw until scene is safe for EMS

- Assess for imminent risk of harm to self or others: **verbal; non-verbal, or written threats/threatening behavior** (shaking fists, intentionally slamming doors, punching walls, destroying property, vandalism, sabotage, theft, or throwing objects), self-injurious behaviors, disordered eating, **physical attacks** (hitting, shoving, biting, pushing or kicking). Extremes include rape, arson, and use of lethal force).
- Inspect environment for clues suggesting substance use; suicide notes, plans to harm others
- **General pt appearance;** hygiene, grooming, odors | Inspect for Medic alert jewelry; impairment; trauma
- **Collateral information from informants:** History (if known) and recent mood, behavior, or thought changes

Assess DECISIONAL CAPACITY and RISK (per SMO):

Ability to understand and appreciate the nature and consequences of a decision re: medical Rx or foregoing treatment and the ability to reach and communicate an informed decision (755 ILCS 40/10 [1996], as amended by P.A. 90-246).

Capacity can be influenced by medications, pain, time of day, mood, medical or mental illness. If any S&S below are abnormal/impaired the pt may lack capacity Attempt to assess if changes are new (acute) or features of chronic dx and how grossly abnormal findings appear to be. **If new altered capacity or + risk: Call 911 for EMS response.**

Carefully assess for new medications; medication compliance; medical and psychological causes of behavior changes

Ensure that client is aware of the 988 Suicide and Crisis helpline. A call connects the person to counselors who provide support and additional resources as needed.

COPD / Asthma

GENERAL MEDICAL ASSESSMENT plus Special considerations:

1. History

- Administer the **COPD Assessment Tool (CAT) questionnaire** (see below) plus ask about the following:
 - How often do they feel short of breath? Most days; several days/week; occasionally; rarely?
 - Does dyspnea on exertion (DOE) or dyspnea at rest (DAR) interfere with activities of daily living?
 - Do they get exhausted easily?
 - How often do they experience episodes of dyspnea/attacks of wheezing? Most days; several days/week; rarely; only with chest infections; not at all? If they have a wheeze, is it worse in the morning?
 - Ask about orthopnea:** Note # pillows or amount of incline they need to breathe
 - Ask about nature of cough and sputum production:** Productive or non-productive; color, amount, odor. Cough with whitish-gray mucus common. Changes in sputum color suggest purulence or respiratory infection. See caveats below.
 - Sleep quality** is known to be poor in these pts and sleep disturbance is linked to low overall quality of life (QoL). How often do they wake up at night with cough and/or dyspnea? Have they been diagnosed with sleep disordered breathing? What are their risk factors? What interventions do they use?
- Ask about adherence to management guidelines; tobacco use, drug and alcohol use; and whether weight or appetite has changed. For asthma: Assess triggers

2. Evaluate client's **medication compliance** including use of inhalers and home nebulizer treatments.

- How often do they need to use Quick-Relief or Rescue Inhalers?
- Teach back (if applicable): Have client demonstrate how to use the following:
 - Metered dose inhaler (MDI) (with or without spacer) and/or nebulizer
 - Peak flow meter; keep a peak flow diary

3. **ROS:** Assess ventilation/oxygenation, degree of airway obstruction/resistance, cerebral function, fatigue, and cardiac status. Compare to baseline and best predicted targets.

HEENT: Examine mouth and nose for congestion, drainage, or inflammation. Note breath odor: Halitosis can be a sign of pulmonary infection. Inspect the neck for distended veins and palpate for tenderness, masses, and enlarged lymph nodes. If JVD, suspect Cor Pulmonale.

Pulmonary/CV: Assess for change/compare to baseline; assess for pneumonia, atelectasis, pneumothorax

- Inspect:** WOB/accessory muscle use, pursed lip breathing, retractions, unequal chest expansion; prolonged expiration time; chest contour (barrel chest). Note if client can speak in full sentences or is reduced to word clusters; pacing of speech to breathing.
- SpO₂** (worsening hypoxia - see caveats below) and **EtCO₂ readings** (hypercarbia; air trapping)
- Auscultate breath sounds:** **COPD:** May expect decreased/diminished breath sounds in all lung fields unless infection present; then may or may not hear wheezes or crackles depending on the degree of air flow obstruction. Coarse crackles can be due to occlusion of the larger airways with mucus plugs; wheezing common.

GI/GU: Hepatic congestion occurs with Cor Pulmonale - Assess for hepato-jugular reflux

Extremities:

- Clubbing of the nail beds:** The fingertip will enlarge and will lose the normal angle at the nail bed. Clubbing causes a 180° + angle. Seen with polycythemia and chronic hypoxemia.
- Peripheral edema suggests Cor Pulmonale; obtain wt; measure ankle circumference; check for pitting edema.

Skin:

- Emphysema:** Polycythemia causes increased blood viscosity = decreased O₂ to tissues. Cyanosis: late and unreliable sign. Need > 5 Gm desaturated Hb or pO₂ < 40 mmHg.
- Cor Pulmonale** with peripheral fluid retention (dependent edema); more likely to appear cyanotic.

4. Answer client/caregiver questions and provide explanations if necessary.

5. Provide information/resources as indicated about smoking cessation; asthma/COPD support groups <https://www.lung.org/quit-smoking> | **Lung HELPLINE:** 1-800-LUNG-USA (1-800-586-4872)

6. If pt's condition requires action, contact the PCP and request that they give instructions directly to the client or call the EMS/MIH MD or designee to consult about best plan.

COPD / Asthma cont.

COPD Assessment Test (CAT) questionnaire

| Score based on the rating that best describes the pt's experience re: symptoms, activities and impact to ADLs | | | | | | | Score |
|---|---|---|---|---|---|---|---|
| I never cough | 0 | 1 | 2 | 3 | 4 | 5 | I cough all the time |
| I have no phlegm (mucus) in my chest at all | 0 | 1 | 2 | 3 | 4 | 5 | My chest is completely full of phlegm (mucus) |
| My chest does not feel tight at all | 0 | 1 | 2 | 3 | 4 | 5 | My chest feels very tight |
| When I walk up a hill (incline) or one flight of stairs I am not short of breath | 0 | 1 | 2 | 3 | 4 | 5 | When I walk up a hill (incline) or one flight of stairs I am very short of breath |
| I am not limited doing any activities at home | 0 | 1 | 2 | 3 | 4 | 5 | I am very limited doing activities at home |
| I am confident leaving my home despite my lung condition | 0 | 1 | 2 | 3 | 4 | 5 | I am not at all confident leaving my home because of my lung condition |
| I sleep soundly | 0 | 1 | 2 | 3 | 4 | 5 | I don't sleep soundly due to my lung condition |
| I have lots of energy | 0 | 1 | 2 | 3 | 4 | 5 | I have no energy at all |
| Total Score | | | | | | | |

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Scoring range 0-40 - A change of 2 or more units over 2-3 months suggests a clinically significant difference or change in health status. Worsening scores may indicate exacerbations or that the client has stopped/is not taking their Rx effectively. Check inhaler technique and adherence. If rapid disease progression is suspected, refer to PCP.

| CAT Score | Impact level | Broad clinical picture of the impact of COPD by CAT score |
|-----------|--------------|--|
| >30 | Very high | Their condition stops them doing everything they want to do and they never have any good days. If they can take a bath or shower, it takes them a long time. They cannot go out of the house for shopping or recreation, or do their housework. Often, they cannot go far from their bed or chair. They feel as if they have become an invalid. |
| >20 | High | COPD stops them doing most things that they want to do. They are breathless walking around the home and when getting washed or dressed. They may be breathless when they talk. Their cough makes them tired and their chest symptoms disturb their sleep on most nights. They feel that exercise is not safe for them and everything they do seems too much effort. They are afraid and panic and do not feel in control of their chest problem. |
| 10-20 | Medium | They have a few good days a week, but cough up sputum on most days and have one or two exacerbations a year. They are breathless on most days and usually wake up with chest tightness or wheeze. They get breathless on bending over and can only walk up a flight of stairs slowly. They either do their housework slowly or have to stop for rests. |
| 5 | Little | Upper limit of normal in healthy nonsmokers |

In addition to the guidance provided for patients with low impact CAT scores consider:

What activities make them feel breathless?

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Talking | <input type="checkbox"/> Walking on level floor/ground | <input type="checkbox"/> Bending over | <input type="checkbox"/> Walking up stairs |
| <input type="checkbox"/> Getting washed or dressed | <input type="checkbox"/> Walking up hills | <input type="checkbox"/> Housework; shopping; gardening | |
| <input type="checkbox"/> Exercise; explain | | | |

Impact on activities of daily living due to breathing limitations:

- ☐ Cannot exercise, play sports or games that require movement
- ☐ Cannot go out for entertainment or recreation
- ☐ Cannot go out of the house to do the shopping
- ☐ Light housework: Cannot perform; takes a long time & needs to stop for rests; or no impact
- ☐ Grooming/toileting: Cannot perform; takes a long time & needs to stop for rest; or no impact
- ☐ Client walks more slowly than others or needs to stop for rest
- ☐ Climbing stairs: must go slowly or stop; no impact
- ☐ Cannot move far from their bed or chair

COPD Caveats

Rate the client's assessment of how asthma/COPD affects their ADLs/IADLs/QoL

- ☐ It does not stop me doing anything I would like to do
- ☐ It stops me doing one or two things I would like to do
- ☐ It stop me doing most of the things I would like to do
- ☐ It stop me doing everything I would like to do

CAVEATS regarding COPD diagnosis with spirometry

Asthma and COPD both present with similar respiratory symptoms, including dyspnea, cough, wheeze, and/or chest tightness, and the two conditions share expiratory airflow obstruction as a common physiologic impairment that can be detected with lung function testing (spirometry). Discuss need to keep appointments for accurate and early diagnosis based on spirometry testing and follow-up. Early and intensive management of asthma or COPD improves QoL, symptoms, and lung function and reduces subsequent health care utilization for respiratory illness.

EB COPD/asthma guidelines: There is increased emphasis on management of the disease as well as the prevention of exacerbations that worsen a client's subjective rating of their health, lead to reduced lung function, and increase mortality. Optimizing health requires an MIH CP to monitor treatment plan and medication compliance to determine if referral to their PCP and advocating for advancement to COPD triple therapy appears warranted.

- **No PMH of exacerbations:** Treatment generally starts with either single- or dual-bronchodilator therapy.
- **If client has exacerbations** and >100-300 eosinophils on a CBC with differential: PCPs may increase to triple therapy with a LAMA/LABA/ICS [long-acting muscarinic antagonist/long-acting beta-2 agonist/inhaled corticosteroid].
- **If client is seen for the first time with a strong history of exacerbations:** PCPs often go directly to triple therapy.

Sample medications these clients may be taking

| | |
|---|---|
| Brovana (arformoterol) | Classification: Long acting beta agonist (LABA) . Used as a long-term (maintenance) treatment to prevent and decrease wheezing and dyspnea caused by COPD. Works by opening bronchioles and relaxing muscles. Does not work right away and should not be used for sudden attacks. PCPs will also prescribe a quick-relief inhaler (albuterol) for sudden SOB. Arformoterol is usually used in combination with other meds (such as inhaled corticosteroids). It should not be used with similar long-acting inhaled beta agonists (such as formoterol, salmeterol) since this may increase risk for side effects. |
| DALIRESP® (roflumilast) | Phosphodiesterase inhibitor indicated to reduce the risk of COPD exacerbations in severe COPD associated with chronic bronchitis and a Hx of exacerbations. It is not a bronchodilator and is not indicated for the relief of acute bronchospasm. Be alert for the worsening of insomnia, anxiety, depression, suicidal thoughts or other mood changes, Contact their PCP. |
| Spiriva Respimat (tiotropium bromide) | Classification: Anticholinergic . Long-term maintenance treatment of bronchospasm due to COPD to reduce exacerbations; and as long-term maintenance treatment of asthma in those ≥6yrs (such as wheezing, SOB). It relaxes the muscles around the airways so that they open up and the client can breathe more easily. Must be used regularly to be effective. It does not work immediately and should not be used to relieve sudden breathing problems. If wheezing or sudden shortness of breath occurs, the client should use a quick-relief inhaler (such as albuterol, also called salbutamol in some countries). |
| Stiolto Respimat (tiotropium bromide, olodaterol) | Classification: Anticholinergic + long-acting beta-2 agonist (LABA) combination, approved as long-term maintenance treatment of airflow obstruction in COPD, including chronic bronchitis and/or emphysema. The Respimat inhalers deliver the drug into the lungs as a slow-moving mist and does not depend on clients' inspiratory efforts. |
| Lonhala Magnair (glycopyrrolate) | Classification: First nebulized long-acting muscarinic antagonist (LAMA) inhalation solution for the long-term, maintenance treatment of airflow obstruction in clients with COPD, including chronic bronchitis and/or emphysema. The Magnair Nebulizer uses eFlow technology to deliver the med via oral inhalation in 2–3 minutes. The portable and closed system nebulizer allows users to breathe normally as they use the device. |
| Triple therapy | Once-daily combination of an inhaled corticosteroid (ICS), a long-acting muscarinic antagonist (LAMA), and a long-acting β ₂ -agonist (LABA). Triple therapy inhalers currently available are: Trimbrow®pMDI (beclometasone with formoterol and glyccpyrronium); Trelegy®Ellipta® (fluticasone with umeclidinium and vilanterol); and Trixeo®Aerosphere® (fluticasone with glyccpyrronium and budesonide) |

COUGH and SPUTUM PRODUCTION – Evaluate changes from baseline

- Does their cough make them feel tired?
- If mucus production has lasted a month or longer, it could indicate lung disease.
How much sputum do they cough up each day? At what time of day do they produce the most sputum?
- Is sputum production affected by food ingestion, activities, or environment?
- Has the pt has noticed an increase in sputum production? This may result from external stimuli or from internal causes, e.g., infection or a lung abscess.
- Ask about the color, odor, and consistency of sputum. Blood-tinged or rust-colored sputum may result from trauma due to coughing or from an underlying condition, (e.g. pulmonary infection). Foul-smelling sputum may suggest an anaerobic infection, such as bronchitis or a lung abscess.
- Any pain associated with coughing? If so, ask about location and severity and whether it radiates to other areas.

| Differential for SOB | | | | |
|----------------------------|--|--|--|--------------------------------------|
| S&S | HF/PE | AMI | COPD | Pneumonia |
| SOB | + | + | + | + |
| Cough | -/+ | - | + / early am | + |
| Sputum | Frothy (pink) | - | Clear | Yellow/green |
| Fever | - | - | - | + |
| Sweats | + Cold/moist | + Cold/moist | - | + / Hot |
| Chest pain | - | +/- | - | +/- |
| Chest pain nature | - | Heavy, tight | - | Sharp, pleuritic |
| Chest pain duration | - | Varies; usually > 20 min | - | Gradually worsening, then constant |
| Smoking Hx | + Risk | + Risk | Almost always | +/- |
| Hypertension | + Risk | + Risk | - | - |
| Cyanosis | +/- | +/- | + | +/- |
| Air entry to lungs | Good upper/worse at bases | Good | Poor | Patchy |
| Wheezing | +/- | +/- | Must have air entry to wheeze | +/- patchy |
| Crackles | + | + with HF/ otherwise clear | - | + patchy; isolated to infected lobes |
| BP | ↑ is a risk factor; ↓ if severe S&S | ↑ is a risk factor; ↓ if severe S&S | Usually unaffected; ↓ if severe S&S | Usually unaffected |
| Tachycardia | +/- | +/- | + | + |

| Heart Failure | | COPD / Asthma |
|---|--|--|
| <ul style="list-style-type: none"> ▪ PMH/meds for: CVD, CAD, MI, HF, HTN, cardiomyopathy, high cholesterol, ICD, bivent. pacing, DM, renal failure, smoking, alcoholism ▪ PMD; orthopnea ▪ Dyspnea on exertion ▪ Cough: (non-productive or productive; frothy, clear, white, pink) | <ul style="list-style-type: none"> ▪ Wt gain (tight shoes, belt, watch, rings) ▪ Fatigue Crackles or wheezes ▪ Capnograph: square waveform ▪ 12-L abnormal (AMI, AF, LVH, ischemia, BBB, “age-undetermined infarct) ▪ S3 best heard at LV apex ▪ JVD, pedal edema (RHF) | <ul style="list-style-type: none"> ▪ PMH/meds for: asthma, COPD ▪ Cough: productive – yellow/green ▪ S/S respiratory infection: fever, chills, rhinorrhea, sore throat ▪ Capnograph: “sharkfin” waveform ▪ Wheezes (initially expiratory) |

Pneumonia

Pneumonia is among the top 10 most common causes of death in the United States and is listed as the 7th leading cause of death in adults > 65 years of age. The annual incidence is as high as 4 million cases, resulting in 500,000 to 1 million hospitalizations per year.

Pneumonia can have more than 30 different causes including bacteria, viruses and fungi. Understanding the cause of pneumonia is important because treatment depends on its cause.

Classifications of pneumonia:

- Community acquired pneumonia (CAP)
- Healthcare-associated pneumonia (HCAP),
- Hospital acquired pneumonia (HAP)
- Ventilator associated pneumonia (VAP)

S&S: Fever, wheezing, cough, sputum production, chills, tachypnea, chest pain, anorexia and malaise,

COMPLICATIONS of pneumonia are more likely to affect older adults, young children, those with a weakened immune system and people with other medical problems, and include (but may not be limited to):

- Acute respiratory distress syndrome (ARDS)
- Lung abscesses: A microbial infection of the lung that results in necrosis of the pulmonary parenchyma. Depending on the duration, it can be classified as acute (< four weeks) or chronic (> four weeks)
- Empyema: A collection of pus in the pleural cavity, gram-positive, or culture from the pleural fluid; usually associated with pneumonia but may also develop after thoracic surgery or thoracic trauma.
- Respiratory failure (hypoxia and/or hypercarbic).
- **SEPSIS**, meningitis, multiple organ failure; long-term impacts on pulmonary function and QoL

GENERAL MEDICAL ASSESSMENT | Special considerations:

1. Assess mental status, headache, VS (including temperature); SpO₂, EtCO₂, peak flow (if available); cough (frequency, severity), sputum (amount, odor, color), dyspnea, tachypnea, work of breathing (accessory muscle use/orthopnea), breath sounds, ECG, general fatigue or malaise, painful joints, nuchal rigidity, evidence of impending or actual sepsis.
2. Review discharge instructions and assess client compliance with incentive spirometers, breathing treatments, medications, and hydration.
3. Compare findings with baseline and/or previous assessment and determine if symptoms have improved or worsened; **rate acuity using the Pneumonia Acuity Assessment Worksheet** (below). Explore possible causes of deterioration.
4. If stable, but not meeting targets or condition deteriorating, contact the PCP. Client may need chest X-Ray, pulmonary rehab, a change in medications, or other therapy. Request that they give instructions directly to the client.

If no PCP, contact the EMS/MIH MD or designee to consult on best plan.
5. Answer client/caregiver questions; provide explanations and health coaching as needed.
6. **CAVEAT:** The flu is a common cause of pneumonia, so preventing the flu is a good way to reduce the risk of pneumonia. In addition, those at risk can get vaccinated against pneumococcal pneumonia. Anyone who smokes, has a chronic disease, immunocompromising condition, or is aged 65 or older should talk with their PCP about pneumococcal vaccination or re-vaccination.

Notes on sepsis: NEED HIGH INDEX of SUSPICION

1.6 million cases/yr in US; 10-20% mortality; up to 80% mortality in septic shock

#1 cause of in hospital death and early readmission | Most expensive condition in US: \$24 B911

Recognize early with EtCO₂ <31 and suspicion of infection + ≥2 qSOFA criteria (See EMS SOPs): CALL 911

Think - TOO GROSS:

Combination of VS that are TOO fast or TOO slow; TOO high or TOO low.

G Gastro/GU; **R** Respiratory (pneumonia), **OS** Open sores, **S** Surgeries



NWC/NLC Mobile Integrated Healthcare - Community Paramedic Pilot Pneumonia Acuity Assessment Worksheet

| GREEN ZONE: Doing well | What this means |
|---|---|
| If you have | Your symptoms are under control |
| <input type="checkbox"/> Less and less cough with clear phlegm <input type="checkbox"/> No fever or chills <input type="checkbox"/> Good appetite <input type="checkbox"/> Plenty of fluid intake and restful sleep <input type="checkbox"/> Ability to do daily activities | <input type="checkbox"/> Take your medications as ordered <input type="checkbox"/> Continue to do cough and deep breathing exercises as prescribed <input type="checkbox"/> Wear oxygen as prescribed <input type="checkbox"/> Keep all physician appointments |
| Keep up the good work! | |
| YELLOW ZONE –GETTING WORSE | What this means |
| If you have ANY of the following | Caution |
| <input type="checkbox"/> Increased cough or you begin to cough up blood/ rust or green colored mucus; may have a bad odor <input type="checkbox"/> Chest pain that gets worse when you cough or breathe in <input type="checkbox"/> Fever higher than 101°F or chills <input type="checkbox"/> Feeling tired, weak or sleeping more than usual <input type="checkbox"/> Loss of appetite, nausea, or vomiting | Call your doctor; your symptoms indicate that you may need to be seen right away <input type="checkbox"/> Use oxygen if prescribed <input type="checkbox"/> Continue taking medications as prescribed <input type="checkbox"/> Drink plenty of fluids <input type="checkbox"/> Do good oral care; brush teeth, use mouthwash; put on lip balm if getting dehydrated <input type="checkbox"/> If you have been prescribed an expectorant, inhaler, or incentive spirometer use as directed |
| If you are in the YELLOW zone, work closely with your health care team! | |
| RED ZONE – Medical Emergency | What this means |
| If you have ANY of the following | MEDICAL EMERGENCY – CALL 911 |
| <input type="checkbox"/> Symptoms are the same or getting worse after 24 hours in the yellow zone <input type="checkbox"/> Chest hurts, trouble breathing or breathing faster than normal and it is harder to get air in or out <input type="checkbox"/> Confusion or you cannot think clearly <input type="checkbox"/> Lips or fingernails turn grey or blue <input type="checkbox"/> Urinating less or not at all; very dry mouth and parched or cracked lips; dry eyes <input type="checkbox"/> Your heart rate is faster than 100 per minute | <input type="checkbox"/> You need to go to the hospital right away. Call 911. <input type="checkbox"/> If possible, notify your primary care provider's office (service on call) Doctor: _____ Phone number: _____ |
| DANGER – Get HELP IMMEDIATELY | |

Teaching points -Every Day!

- ✓ Take your medicines exactly as ordered by your doctor. Do not stop unless directed by your doctor.
- ✓ Practice deep breathing and coughing as directed by your doctor. May use incentive spirometer device several times a day.
- ✓ Drink plenty of healthy water, juices, and fluids as directed by your doctor. Avoid sugary soft drinks.
- ✓ Being malnourished can delay your recovery. Eat healthy foods with a balance of protein (meat or plants – nuts, beans, soybeans or tofu) – protein shakes or bars may supplement meals; lots of fresh fruits and vegetables, and some breads rice or potatoes as directed by the hospital nutritionist or your doctor. Ask your doctor if a multi-vitamin would help during recovery.
- ✓ Balance activity and rest. Do not overdo movement and exercise to the point of being exhausted.

Adapted from Ada County Paramedics Community Paramedic Program

Post-Acute MYOCARDIAL INFARCTION

Coronary artery disease (CAD) is the leading cause of death in the USA. Acute coronary syndrome (ACS) is classified into three types: unstable angina (UA), non-ST-segment elevation MI (NSTEMI), and ST-segment elevation MI (STEMI). Mortality rates at 30 days for patients presenting with STEMI are 2.5% to 10%. The leading co-morbidities leading to ACS are HTN, hyperlipidemia, diabetes mellitus, and coronary artery disease (CAD). STEMI is treated via percutaneous coronary intervention (PCI) which is the principal reperfusion strategy. Continuing GDMT after STEMI and PCI aims at preventing recurrences of ischemic cardiac events and improving morbidity and mortality of clients discharged with a diagnosis of ACS. They may have a high residual cardiovascular risk and the potential for major bleeding events (Latifi et al, 2020).

GENERAL MEDICAL ASSESSMENT | Special considerations:

1. Review the client's discharge diagnosis, clinical information, comorbidities and cardiovascular risk factors | PCI information if applicable (approach - radial or femoral artery); complications during PCI; number of arteries treated; number of stents implanted; type of stents implanted (BMS, BVS, DES); and instructions. Obtain the name of the PCP and cardiologist.
2. Assess for fever or chills, chest pain, pressure, or palpitations, lightheadedness, vomiting or nausea.
3. **Guideline-directed medical therapy (GDMT)** - Anticipate the following medication regimen: Dual antiplatelet therapy (DAPT); OAC, beta blocker, ACE inhibitor or ARB; lipid lowering therapy. Assess for client's medication compliance; discuss specific understanding of anti-platelet and anticoagulant medications.
 - DAPT is a combination of aspirin + a P2Y₁₂ inhibitor such as Prasugrel (Effient); BRILINTA® (ticagrelor) or the older clopidogrel (Plavix)
 - People taking DAPT or OACs are at risk for bleeding complications (GI). Rarely, they can experience bleeding inside their skull. They can bleed excessively after a fall or a cut.
 - Encourage client to take all medications exactly as prescribed. If they miss a dose or stop taking one of the medications, they could develop a clot.
4. Assess VS, SpO₂, auscultate lung sounds and perform a 12 Lead ECG.
If post PCI: assess site for infection, swelling, bleeding, and distal sensory, motor, circulatory deficits.
5. Assess compliance with enrolling in/participating in Cardiac Rehab DC plan: Assess dietary and exercise compliance. Review recommended lifestyle changes.
6. Review all follow-up appointments for compliance. Recommended follow-up times: PCP Every 3 months | Cardiologist: 1, 3, 6, 12 months, annually thereafter in the absence of a recurrence
7. **Answer client/caregiver questions and provide explanations if necessary.**
 - If taking DAPT or anticoagulants: Wear an emergency medical ID (such as a bracelet) or carry a card. The ID should include the name of the medications and the client and provider's contact info.
 - Tell all healthcare providers that they are taking DAPT or anticoagulants, including their dentist. They may have to stop taking them before medical or dental procedures.
 - DAPT can interact with other medications such as: Anticoagulants (blood thinners); Antidepressants; Nonsteroidal anti-inflammatory drugs (NSAIDs); and Proton pump inhibitors, which are used to treat GERD (gastroesophageal reflux disease).
 - Advise client to call their healthcare provider immediately if they experience any signs of bleeding while taking DAPT or anticoagulants including: abdominal pain; black stools or blood in the stool; chest pain; confusion; dizziness, lightheadedness or fainting; vomiting blood (blood may be red or brown, or it may look like coffee grounds); severe, sudden headache; or trouble breathing.
8. **Rate acuity**; document findings, and communicate per acuity rating. If their condition requires action, contact the PCP and request that individual give instructions directly to the client.
9. **Target outcomes:** Prevent cardiac readmissions for unplanned revascularization, recurrent MI, heart failure, arrhythmia, unstable angina, and major adverse cardiovascular events (MACE). Secondary outcomes (1) adherence to GDMT and (2) impacting CV risk factor control (SBP, LDL, and HbA1c).

ACE: angiotensin-converting enzyme; ARB: angiotensin receptor blocker; BMS: bare-metal stent; BVS: bioresorbable vascular scaffold; DAPT: dual antiplatelet therapy; DES: drug-eluting stent; OAC: oral anticoagulant; PCI: percutaneous coronary intervention.

Latifi, A.N., Akram, A., Dengle, et al. (2020). Use of guideline-directed medical therapy in patients with ST-elevation myocardial infarction. Cureus. 12(7):e9398. doi: 10.7759/cureus.9398. PMID: 32864229; PMCID: PMC7449638.

HEART FAILURE (HF)

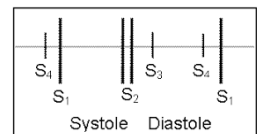
- HF is a clinical syndrome with current or prior S&S caused by structural and/or functional cardiac impairments resulting in reduced cardiac output or elevated ventricular filling pressure at rest or during stress. Perfusion is inadequate to meet metabolic demands. Acute decompensated HF results in pulmonary edema that may progress to cardiogenic shock. Recognizing a patient's clinical trajectory allows for optimal treatment and informs patient-centered discussions.
- Persistent HF despite guideline-directed therapy suggests a worse prognosis and requires further optimizing therapy.
- 'HF in remission' refers to patients who have resolution of both S&S of HF and structural or functional heart disease after treatment (Mew & Atherton, 2023).
- Differentiate HF from COPD/asthma by PMH, meds, S & S, and oximetry (see charts after COPD).

GENERAL MEDICAL ASSESSMENT | Special considerations:

- Review discharge instructions (if known) and assess compliance within scope of practice: Diet, exercise, medications. Answer client/caregiver questions and provide explanations if necessary.
- Assess for changes in exercise tolerance, fatigue, dyspnea, cough, sputum, chest pain, palpitations, and sleep habits; any light headedness or syncope
- Assess position; I/E ratio; work of breathing (accessory muscle use, retractions); speech
- Auscultate: lung sounds over all lobes, front & back; report timing/location of diminished or adventitious sounds; heart sounds for S3 & S4 (See notes)
- Assess for JVD; hypoxia, hyper/hypodynamic state; pulse deficits if fast HR or ectopics; hypoperfusion and CR compromise: Mental status, VS, SpO₂, skin color, perform a 12 L ECG; compare to baseline if known; inspect neck veins for distension, auscultate heart sounds, assess abdomen for new or worsening edema (ascites); and extremities for temperature, moisture, edema, pulses, motor and sensory deficits.
- Weigh client, measure ankle circumference; note areas of pitting edema (see notes). Verify scale at location and daily weights logged as prescribed. If not, facilitate procuring a scale and ensure that they have a means of documenting wt trends. Contact PCP within 24 hrs if asymptomatic & unexplained recent weight gain or loss.
- Concerning S&S:** New or worsening fatigue, weakness, hypoxia, dyspnea, orthopnea, paroxysmal nocturnal dyspnea (PND), exercise intolerance, chest pain, rapid or irregular heart rhythm, new 12 L ECG changes suggesting ischemia or ventricular hypertrophy, peripheral or dependent edema, wheezing or crackles, productive cough of white, pink, or foamy mucus; rapid wt gain of ≥5 lbs (2.3 kg) within a few days from water retention, or unintentional weight loss, and nausea and anorexia. Explore cool, pale, mottled, ashen, cyanotic, and diaphoretic skin for cause.
- Compare findings with baseline and/or previous assessments and determine if S&S have changed. Rate acuity; document findings, and make appropriate notifications.

Notes:

- 12 L ECG findings:** Ventricular hypertrophy will be evident in leads that overlie the affected ventricle. R wave may be very tall in V5 or may be seen in V6, >25 mm in height. Also look for a deep S wave (>25 mm) in V1 or V2. Look for ST depression or T wave inversion in those leads suggesting ventricular strain.
- Heart sounds:** S3 (ventricular gallop): Occurs early in diastole immediately after S2 with a cadence like "Ken-tuck-y". Thought to be caused by the early, rapid filling of a dilated left ventricle. Dull, low pitched sound most audible at the LV apex with client on their L side. Abnormal in pts >30; early sign of CHF.
- Pitting edema:** A variety of clinical conditions are associated with the development of peripheral edema, including heart failure, cirrhosis, nephrotic syndrome, sodium retention, pre-eclampsia,, as well as local conditions such as venous and lymphatic disease



| Grade | Depth of depression following application of pressure | Rebound time |
|-------|--|--------------|
| Trace | Minimum depression noted when pressure applied | Immediately |
| +1 | up to 2 mm; barely visible; | Rapidly |
| +2 | 3 to 4 mm | ~10-15 sec |
| +3 | 5-6 mm; area appears swollen | 1 minute |
| +4 | 8 mm; very deep indentation; area is grossly edematous | 2-3 minutes |

HEART FAILURE (HF) cont.

■ NYHA Classification Stages of Heart Failure:

Class I - No symptoms and no limitation in ordinary physical activity

Class II - Slight limitation- Comfortable at rest. Ordinary activity results in fatigue, palpitation, or dyspnea.

Class III - Marked limitation. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.

Class IV - Inability to carry on any physical activity without discomfort. S&S present even at rest or minimal exertion. If any physical activity is undertaken, discomfort is increased.

■ The universal definition of HF proposes classifications based on **LV ejection fraction (LVEF)** to guide Rx:

HF with LVEF $\leq 40\%$ is known as HF with reduced ejection fraction (HFrEF).

HF with LVEF of 41 to 49% is HF with mid-range ejection fraction (HFmrEF).

HF with LVEF $\geq 50\%$ may be caused by HF with preserved ejection fraction (HFpEF) or a cardiomyopathy (restrictive, hypertrophic, or noncompaction).

Patient teaching points:

- **Daily weights:** Helps to detect fluid retention caused by worsening heart function. Stand on the same scale at the same time every day (e.g., in the morning after urinating but before breakfast). Wear the same amount of clothing each time. If wt increases by 2 lbs (~1 kilogram) in one day or if wt increases by four lbs (2 kg) in one week, call the PCP.
- **Decrease sodium intake:** Dietary sodium can cause fluid retention. Read all food labels! Review medical record for recommended sodium intake per day. See "[Patient education: Low-sodium diet \(Beyond the Basics\)](#)".
- **Limit fluid intake:** For people with **severe HF**, doctors often recommend drinking <2 L (66 ounces) of fluid per day.
- **Maintaining a healthy weight:** If overweight, the heart must work harder to supply blood and O_2 to tissues. However, losing a lot of weight quickly without trying can be a sign of severe heart failure. See "[Patient education: Losing weight \(Beyond the Basics\)](#)".
- **Avoid smoking:** Use of tobacco products causes vasoconstriction and can worsen HF. See "[Patient education: Quitting smoking \(Beyond the Basics\)](#)".
- **Limit alcohol:** Drinking too much alcohol is not good for the heart or health generally. People with HF should not drink more than one serving of alcohol per day. One serving = 12 ounces of beer or 5 ounces of wine. If HF is related to drinking too much or is severe, stop drinking alcohol completely. See "[Patient education: Alcohol use — when is drinking a problem? \(Beyond the Basics\)](#)".
- **Regular exercise:** If symptoms allow, exercising most days of the week can help to improve CV fitness and strengthen muscles. This can improve dyspnea and fatigue. Before starting a new exercise routine, client should talk their PCP. They may recommend a "**cardiac rehab**" program, which is a personalized approach to exercising safely to improve heart function and overall health. See "[Patient education: Heart attack recovery \(Beyond the Basics\)](#)", section on 'Cardiac rehabilitation after heart attack'.
- **Medications** —Critical to take meds on time every day. If client cannot afford or has trouble taking meds, talk with PCP/local social services.

Medicines for heart failure with reduced ejection fraction (Men with a LV EF $<55\%$ - 60% and women with any reduced ejection fraction) Most people with this type of HF take ≥ 3 meds. They include:

- **Diuretic**— Dosing requires careful monitoring and adjustment by the PCP, taking into consideration changes in diet, underlying condition, or other meds. (See "[Patient education: Edema \(swelling\) \(Beyond the Basics\)](#)".)
- **ACE inhibitor, ARNI, or ARB** — Angiotensin-converting enzyme (ACE) inhibitor, angiotensin receptor-Neprilysin inhibitor (ARNI), and angiotensin II receptor blocker (ARB) meds all dilate blood vessels and lower BP, making it easier for the heart to pump. They also directly improve heart function. One should generally take only one of these types of meds. An ARNI contains an ARB plus another drug. All of these medicines also protect the heart from hormone effects that can occur when a person has HF. ACE inhibitors can sometimes cause a dry cough, in which case an ARNI or ARB may be preferred. These meds can help prolong life. If you have client has a PMH of angioedema (sudden swelling of the face, mouth, tongue, or other parts of the body), it's important to tell the PCP, since people with angioedema should not take an ACE inhibitor or ARNI.
- **Beta blocker:** Can slow HR, lower BP, and protect the heart from the adverse effects of certain hormones that are increased when a person has HF. They can take time to start working, and some feel worse right after they start taking them. To minimize side effects, the PCP will start a low dose and then increase prn every few weeks.
- **HCN** (hyperpolarization-activated cyclic nucleotide-gated (HCN) channel blockers): [Ivabradine](#) (brand name: Corlanor) is used to slow the HR if still a little fast with a beta blocker or if client cannot take a beta blocker.

HEART FAILURE (HF) cont.

In addition to the above, many also need to take other medications to control their symptoms. These might include:

- **Mineralocorticoid receptor antagonist**– Type of diuretic that helps the body get rid of extra salt and fluid. However, it also cause potassium retention. That's important because other diuretics sometimes make the body lose too much potassium, which the body needs to work normally. Mineralocorticoid receptor antagonists might also protect the heart from hormone effects that can happen when a person has HF. Critical to have regular blood tests to check potassium levels and assess kidney function.
- **SGLT2 inhibitor**– These meds have historically been used to treat T2 diabetes; but can also be used to treat HF in people with or without diabetes. These meds have proven to help prevent episodes of worsening HF.
- **Nitrate with hydralazine** – Work together to relax and dilate blood vessels making it easier for the heart to pump blood throughout the body. This combination is sometimes used in those who cannot take an ACE inhibitor, ARB, or ARNI. Unfortunately, the medicines often cause side effects (headaches and nausea), so doctors usually try other options before suggesting them. These two meds come in a single pill, but it is possible to get the two ingredients separately for much less money. The two ingredients come in pills of "isosorbide dinitrate" and "hydralazine."
- **Digoxin** – Slows HR and helps the heart pump with more force to help reduce some of the symptoms of HF.

Medicines for HF with preserved ejection fraction (HFpEF)

- **Diuretic**–See above; A loop diuretic may be added to control volume status. + "Patient education: Edema (swelling) (Beyond the Basics)".
- **Sodium-glucose cotransporter 2 (SGLT2) inhibitors** – See above.
- **Mineralocorticoid receptor antagonist**– See above
- **ARNI**– See above
- **Medicine to control high BP**–Patient-specific.

Review medical record (if available): Check for an elevated NT-proBNP > 125 pg/mL (picogram is one-trillionth of a gram) and evidence of diastolic dysfunction on echocardiogram. Clients with obesity and HFpEF have up to 50% lower BNP concentrations than those without obesity.

| Sampling of drugs prescribed for clients with CV disease/Heart Failure | |
|---|--|
| ACE Inhibitors (ACEi): Benzapril (Lotensin), captopril (Capoten), enalapril (Vasotec), fosinopril, monopril, lisinopril (Prinivil/Zestril), moesipril (Univasc), perindopril (Aceon), quinapril, accupril, Ramipril (Altace), trandolapril (Mavik) | |
| Angiotensin Receptor Blockers (ARB): candesartan (Atacand), eprosartan (Teveten), irbesartan (Avapro), losartan (Cozaar), olmesartan (Benicar), telmisartan (Micardis), valsartan (Diovan) | |
| Angiotensin Receptor-Neprilysin Inhibition (ARNi): Sacubitril-valsartan | HCN Channel blocker : Ivabradine (Colanor, Lancora, Procoralan) |
| Anticoagulants : apixaban (Eliquis), aspirin, argatroban, bivalirudin (Angiomax), clopidogrel (Plavix), dabigatran (Pradaxa), endoxaban (Savaysa/Lixiana), eptifibatide (Integrilin), lepirudin (Refludan), presugrel (Effient), rivaroxaban (Xarelto), ticagrelor (Brilinta), ticlodipine (Ticlid), warfarin (Coumadin, Jantoven); SUBQ route: dalteparin (Fragmin), enoxaparin (Lovenox), fondaparinux (Arixtra), tinzaparin (Innohep); Heparin (IV & SUBQ) | |
| Beta Blockers : acebutolol (Sectral), atenolol (Tenormin), betaxolol (Betopic,Kerlone), bisoprolol (Zebeta), carvedilol (Coreg), esmolol (Brevibloc), labetalol (Normodyne, Trandate), levobunolol (Betagan), metoprolol (Lopressor/Toprol), Kapsargo Sprinkle (metoprolol succinate extended-release), nadolol (Corgard), pebutolol, pindolol (Visken), propranolol (Inderal), timolol (Blocadren, Timoptic), sotalol (Betapace) | |
| Calcium channel blockers : amlodipine (Norvasc), felodipine, diltiazem (Cardizem), nicardipene (Cardene), nifedipine (Procardia, Adalat), verapamil (Calan, Isoptin) | |
| Diuretics : amiloride (Midamor), bumetanide (Bumex), chlorothiazide (Diuril), diazide, furosemide (Lasix), hydrochlorothiazide (Hydrodiuril), indapamide (Lozol), metolazone (Zaroxolyn), Polythiazide, torsemide | |
| HCN (hyperpolarization-activated cyclic nucleotide-gated (HCN) channel blockers): Corlanor (ivabradine) | |
| Mineralocorticoid Receptor Antagonists (MRAs) : spironolactone (Aldactone); eplerenone (Inspra); finerenone (Kerendia) | |
| Sodium-glucose cotransporter-2 inhibitors : canagliflozin (Invokana); dapagliflozin (Farxiga); empagliflozin (Jardiance) | |
| Vasodilators : hydralazine (Apresoline), isosorbide dinitrate (Isordil), minoxidil (Loniten), nesiride (Natrecor), Nitrates/NTG | |
| Aldosterone antagonists : (K sparing diuretics) Eplerenone, spironolactone (Aldactone); triamterene (Dyrenium) | |

References:

Mew, C. & Atherton, J.J., (2023). New definition for heart failure: implications for general practice. Cardiology Today, 13(1), 87-91

Major Joint Replacement

GENERAL MEDICAL ASSESSMENT | Special considerations:

1. Review the client's discharge instructions and note name of the PCP/surgeon. Compare findings with the client's discharge baseline and/or previous assessment and determine if symptoms have worsened.
2. Assess the surgical site for state of healing and evidence of infection. An infection may develop in the wound after surgery. It may also occur around the artificial implant that is used to replace the original joint. A person who experiences one or more of the following may have an infection:
 - Inability to walk without pain after the point where the surgeon said walking should be pain-free
 - Increasing pain and stiffness in the artificial joint
 - Warmth, redness, and tenderness around the incision or the joint
 - Gray liquid draining from the incision, especially if it smells bad
 - A fever above 100° F (37.8° C); chills or night sweats; fatigue
3. Evaluate extremities for evidence of VTE: Skin, temperature, color, circulation, motor, sensation. Implement planned infection prevention and control activities per discharge plan.
4. Evaluate mobility; pain; nutrition; medication compliance.
5. Perform home safety inspection and verify that any client assistive devices are in good condition and easily accessible. For patients with concern over fall prevention, encourage removal of loose rugs; observe if appropriate assist devices are present (handrails are present on all steps; restrooms have hand rails and slip resistant surfaces in showers/tubs) and communicate these issues to the patient/family. Forward information to primary care provider or social services for follow-up.
6. Answer client/caregiver questions and provide explanations if necessary. If needed, refer client back to primary care provider.
7. Rate acuity; document findings, and communicate with primary care provider.
8. If client's condition requires action, contact the PCP and request that individual give instructions directly to the client.

Surgical Wound Care

- Wash hands before and after changing a dressing; wear gloves during all dressing changes
- Use an aseptic, non-touch technique for all dressing changes
- Dispose of the old dressings in a plastic bag before placing into the garbage.
- Cleanse the wound before applying a new dressing with saline spray or Hibiclens or other recommended solution.

| Assessment | Prevention and Treatment | When to contact the PCP |
|--|--|---|
| During every dressing change, check for: Anatomic location of wound Peri-incision skin appearance Wound moisture balance S&S of infection: - Redness; Swelling - A change in wound drainage (color or amount); incision site abscess or breakdown - Separation of wound edges (spontaneous dehiscence) or has been opened to drain pus - Increased pain | - The patient should shower per surgeon's orders (usually after 48 hrs) - No baths until they are cleared by the surgeon - Use prescribed dressing (usually a plain or silicone nonstick dressing) | - If the client has a fever or chills - If there is an increased amount of pain, swelling, or redness - If the wound separates - If there is a change in wound drainage (color, odor, or amount) |

See **Braden Risk Assessment Scale for Pressure Ulcers**

DIABETES

Goal: To ensure the proper maintenance of blood glucose (bG) and insulin levels in a client with diabetes accomplished via careful self-managing of diet, exercise, appropriate use of prescription drugs, recognition of desired drug effects as well as S&S of hypo and hyperglycemia, and prevention/treatment of disease complications .

GENERAL MEDICAL ASSESSMENT | Special considerations:

1. Review health history, physical exam, and care plan for diet, weight, exercise, bG, medication use, and other targets, prior to appointment.

2. **OBSERVE** client's physical state/general well-being

- Complete General MIH Assessment. Calculate BMI
- Inquire about episodes of polyuria, polydipsia, polyphagia, hypo/hyperglycemia; changes in vision
- Ask about urine test results for proteinuria and microalbuminuria (if negative for proteinuria)
- Discuss blood test results: HbA_{1c}, creatinine, fasting lipids and LFTs (if taking or starting statin therapy)

ASSESS the following carefully:

- **Cardiovascular:** Observe for S&S that suggest coronary heart and peripheral vascular disease
 - Skin/limb temp, moisture (deficient sweating), turgor, peripheral pulses, and sensory integrity
 - Claudication (pain when walking), hair loss, and pale, thin, shiny, or cool skin (potential ischemia)
 - Erectile dysfunction may be the first indicator of cardiovascular disease
- **INSPECT patient's FEET; discuss foot care with client (see instruction sheet)**
 - Proper foot care is critical for clients with diabetes. They are prone to problems caused by neuropathy and poor circulation which can lead to loss of feeling in their feet, changes in the shape of their feet, and foot ulcers or sores that do not heal.
 - Inspect for deformity: Abnormal foot anatomy with clawing of the toes, high arch, and subluxed metatarsophalangeal joints, leading to excess pressure, callus formation and ulcers; and nail abnormalities.
 - Perform microfilament testing for peripheral neuropathy and assess pedal pulses
 - **Diabetic ulcers** are caused by poor circulation and cause increased risk for infection and nerve damage from high bG levels
 - Note presence of discoloration, necrosis, or areas of drainage
 - Measure wound size and depth and amount of necrotic tissue. Classify stage using the Wagner-Meggitt Classification of Diabetic Foot Ulcer System (See below)
 - Take a medical photo of just the ulcerated area and append to the EHR
 - Inspect shoes: Client's footwear can be a contributing factor to the development of foot ulceration.
- **Psychosocial issues:** Ask about the patient's coping with the illness and mood; screen for depression.

3. **Medication regimen:** A statin, aspirin and ACE inhibitor (ACEI) are likely prescribed meds in people with DM >40 years of age in addition to their glycemic control drugs.

Aggressive BP mgt requiring more than one agent may be needed to achieve a BP of $\leq 130/80$ mmHg.

A tighter target of 125/75 mmHg may be appropriate if the client has proteinuria or microalbuminuria.

An ACEI is a suitable first choice agent because of its renal protective properties. A calcium antagonist is a reasonable addition. If a 3rd agent is required, a diuretic may be added.

Caution: detrimental effect of thiazide diuretics on lipids and renal function.

Evaluate **conformity with diabetic medications:**

- Tight glucose control is important: Duration of diabetes and level of glycemic control correlate with the risk of microvascular complications including retinopathy, nephropathy and neuropathy.

- Assess if the client is using medications as prescribed and inform the PCP if they are not.

Teach back (if applicable): Have client demonstrate how they administer/take prescribed medications.

If the patient is on insulin: Ensure correct use of an automated insulin delivery system (AIDs) and/or insulin injections. Ensure correct storage of vials and injection technique (i.e., clients must visualize the correct amount of insulin they are to inject, use correct injection sites, injection technique, and site rotation, changing needles with each injection, Ensure that opened insulin bottles, reservoirs, or pens are stored at room temperature of 59°F to 86°F (15°C to 30°C) for a maximum of 28 days. Keep insulin away from direct heat and sunlight (do not keep on a windowsill or on the dashboard of a car). (See Use and Storage of Insulin)

INSPECT injection and/or delivery sites for redness or irritation.

DIABETES cont.

4. **Disease Self-management:** Tailor management needs to the individual. Needs stringent control of risk factors.
- Assess the patient's understanding of the disease
 - Ensure conformity with accurate **GLUCOSE MONITORING** via a glucose meter and test strips or a Continuous Glucose Monitoring (CGM) system. Encourage maintenance of blood glucose logs per instructions. Inspect the **home glucose meter** to ensure it turns on when a strip is inserted. Troubleshoot error messages. If not working, refer to a pharmacy or social services for a new meter.
Observe the client as they perform a blood glucose reading using their personal equipment.
Ask client to read out loud the reading. Review usage with them if required.
Encourage the use of a new lancet with each test if applicable
 - Provide coaching on the positive impacts of a **healthy diet and exercise**. Explain the diabetic (DASH) diet, types of recommended exercise, and mouth/teeth, skin, eye, vision, foot, and nail care (See notes). Even low physical activity preserves or increases muscle mass and better controls bG with a decrease in glycosylated hemoglobin (A1C), while insulin sensitivity and glucose tolerance improves. The Am Coll of Sports Medicine and the Am Diabetes Assoc recommend at least 150 minutes of moderate exercise weekly with strength training 2-3 X/week for those with Dt2
 - Advise re: risk for infections and delayed healing; burns and trauma owing to peripheral neuropathies

Notes if finding of hypo or hyperglycemia from client self-glucose check

- If blood glucose (BG) is <70 +** client is awake (GCS 14-15) and can swallow safely (+ gag reflex), and experiencing S&S of hypoglycemia: Give **up to 15 g** of a rapidly-absorbed **oral carbohydrate** if available
Options include (not limited to) any one of the following:
 - Glucose tablets (5 g per tablet) | Glucose gel (15 g per tube) | 6 LifeSavers® (1=2.5 g of carbs)
 - Sweetened fruit juice: 12 g carbs / 4 oz (120 mL) | Regular soda (not diet): 18 g carbs / per 6 oz (180 mL)
 - Honey: 17 g carbs / 1 T (15 mL) | Granulated sugar: 12.5 g sugar / 1 T dissolved in water
- REPEAT** bG measurement in 10-15 mins. If <60 +client remains awake, repeat oral carbohydrate
 - If the next meal is more than one hour away, they should eat a snack, such as a half- sandwich or cheese and crackers (something with 15 grams of carbohydrate and a protein source).
 - CONTACT EMS/MIH MD or designee** for further direction.
- Asymptomatic clients with **≥2 consecutive bG readings >180** without S&S of dehydration and/or acidosis should be advised to contact their PCP within 24 hours.
If >180 with S&S of DKA or HHNS or <60 & AMS, immediately contact 911 for an EMS response.

4. Refer client to community resources for

- Retinal screening Depression screening Foot care (podiatrist) Smoking cessation
- Influenza vaccination Pneumococcal vaccination if not previously given

5. Typical Treatment Targets

HbA1C < 7%* BP ≤ 130/80 mm Hg
Smoking – cessation Exercise – 30 minutes of aerobic exercise on most days of the week
Fasting glucose ≤ 70–130 mg/dl (3.9–7.2 mmol/l) (ADA) and at <110 mg/dL (6.1 mmol/L) or 100 mg/dl (5.5 mmol/L) for the Am College of Endocrinologists and the International Diabetes Federation respectively
Total cholesterol <4 mmol/L or a 25% reduction LDL cholesterol <2 mmol/L or a 30% reduction
*A1C test results are reported as a percentage. The higher the %, the higher the bG levels have been over the past 2-3 months. A1C can also be used for diagnosis based on the following guidelines:
Normal A1C level: < 5.7% **Prediabetes** A1C 5.7 -<6.5%, **Diabetes** range: A1C ≥ 6.5%

7. Answer client/caregiver questions and provide coaching as necessary. See Self-care recommendations.
8. Document concerns about treatment (e.g., insulin, blood sugar levels, foot problems, etc.) and MIH findings; report them to the PCP, and collaborate with other health care team members to provide support as appropriate. If client's condition requires action, contact the PCP and request that they give instructions directly to the client or call the EMS/MIH MD or designee to consult about best plan.

Wagner-Meggitt Classification of Diabetic Foot Ulcer System

| | |
|---|---------------------------------------|
| Grade 1 - Superficial ulcers involving skin and subcutaneous tissue | Grade 3 - Ulcer with bone involvement |
| Grade 0 - Foot symptoms like pain, only | Grade 4 - Forefoot gangrene |
| Grade 2 - Deep ulcers involving ligaments, muscles, tendons, etc. | Grade 5 - Full-foot gangrene |



NWC/NLC Mobile Integrated Healthcare - Community Paramedic Program

DIABETIC SELF-CARE RECOMMENDATIONS

FOOT CARE

According to the National Institute of Health, simple daily footcare can prevent serious problems.

1. **Check your feet every day**

- Check your feet for cuts, sores, red spots, swelling, and infected toenails. You may have foot problems, but feel no pain in your feet.
- Check your feet each evening when you take off your shoes.
- If you have trouble bending over to see your feet, use a mirror to help. You can also ask a family member or caregiver to help you.
- Call your doctor right away if a cut, blister, or bruise on your foot does not begin to heal after a few days.

2. **Wash your feet every day**

- Wash feet in warm, not hot, water. Do not soak them because your skin will get dry.
- Before bathing or showering, test the water to make sure it is not too hot. You can use a thermometer (32° to 35° C is safe) or your elbow to test the water.
- Use cornstarch to keep the skin between your toes dry to prevent infection.

3. **Keep your skin soft and smooth**

- Rub a thin coat of skin lotion or cream on the tops and bottoms of your feet.
- Do not put lotion between your toes because this might cause an infection.

4. **Smooth corns and calluses**

- Thick patches of skin called corns or calluses can grow on your feet. Check with your foot doctor about the best way to care for them.
- If your doctor tells you to, use a pumice stone to smooth corns and calluses after bathing or showering. A pumice stone is a type of rock used to smooth skin. Rub gently, only in one direction, to avoid tearing the skin.
- Do not cut corns and calluses. Do not use razor blades, corn plasters, or liquid corn and callus removers - they can damage your skin and cause an infection.

5. **If you can see, reach, and feel your feet, trim your toenails regularly**

- Trim your toenails with nail clippers after you wash and dry your feet.
- Trim your toenails straight across and smooth the corners with an emery board or nail file. This prevents the nails from growing into the skin. Do not cut into the corners of the toenail.
- Have a foot doctor trim your toenails if:
 - You cannot see or feel your feet or you cannot reach your feet
 - Your toenails are thick or yellowed or curve and grow into the skin

6. **Wear shoes and socks at all times**

- Wear shoes and socks at all times. Do not walk barefoot. It is easy to step on something and hurt your feet. You may not feel any pain and may not know that you hurt yourself.
- Wear socks or stockings with your shoes to prevent getting blisters and sores.
- Choose clean, lightly padded socks that fit well. Socks that have no seams are best.
- Check inside before putting shoes on. Lining should be smooth with no objects in the shoe.
- Wear shoes that fit well and protect your feet.



NWC/NLC Mobile Integrated Healthcare - Community Paramedic Program

DIABETIC SELF-CARE RECOMMENDATIONS cont.

7. **Protect your feet from hot and cold**

- Wear shoes at the beach and on hot pavement. You may burn your feet and not know it.
- Put sunscreen on the tops of your feet to prevent sunburn.
- Keep your feet away from heaters and open fires.
- Do not put hot water bottles or heating pads on your feet.
- Wear socks at night if your feet get cold. Choose socks carefully. DO NOT wear socks with seams or bumpy areas. Padded socks protect your feet and make walking more comfortable.
- Wear lined boots in the winter to keep your feet warm. In cold weather, check your feet often, keep your feet warm, and avoid frostbite.

8. **Keep the blood flowing to your feet**

- Put your feet up when you are sitting.
- Wiggle your toes for 5 minutes, 2 or 3 times a day. Move your ankles up and down and in and out to help blood flow in your feet and legs.
- Do not cross your legs for long periods of time.
- Do not wear tight socks, elastic, or rubber bands around your legs. Do not wear restrictive footwear or foot products. Foot products that can cut off circulation to the feet, such as products with elastic, should not be worn by persons with diabetes.
- Do not smoke. Smoking can lower the amount of blood flow to your feet.

9. **Be more active**

- Being active improves blood flow to the feet. Ask your health care team for safe ways to be more active each day. Move more by walking, dancing, swimming, or riding a bike.
- If you are not very active, start slowly. Find safe places to be active.
- Wear athletic shoes that give support and are made for your activity.

Insulin storage and safety

If you use insulin, it must be stored and used properly to maintain potency and work as intended. Safe use and disposing of syringes helps protect people around you from injury.

INSULIN STORAGE

Insulin is sensitive to temperature and light. Sunlight and temperatures that are too hot or too cold can affect how well insulin works. Proper storage will keep insulin stable.

General tips - Follow the manufacturer's instructions

- Store unopened insulin in the refrigerator at a temperature between 36°F to 46°F (2°C to 8°C)
- Store **opened** insulin bottles, reservoirs, or pens at a room temperature of 59°F to 86°F (15°C to 30°C) for a maximum of 28 days. Discard insulin after 28 days from the date of opening. Write the date and time the vial was opened on the label to help prevent the insulin from being used beyond its use date.
- Keep insulin away from direct heat and sunlight (do not keep on windowsill or car dashboard)
- Do not freeze insulin (sometimes insulin can freeze at the back of the refrigerator). Do not use insulin that has been frozen.
- Store insulin until the expiration date on the label. Always check the expiration date before using.



NWC/NLC Mobile Integrated Healthcare - Community Paramedic Program DIABETIC SELF-CARE RECOMMENDATIONS cont.

INSULIN STORAGE and USE in an INSULIN PUMP:

- Insulin removed from its original vial (for pump use) should be used within 2 weeks and discarded after that date. Insulin stored in the reservoir or infusion set of an insulin pump should be discarded after 72 hours, even if it is stored at the proper temperature.
- Discard insulin if the storage temperature goes above 98.6°F (37°C).

HANDLING INSULIN

Before using insulin (vials, pens, or cartridges), follow the instructions below:

- Wash your hands well before touching the vial
- Check the label to ensure that it is not expired or beyond use
- Check the insulin to make sure it is clear. **Do not use if the insulin is:**
 - o Unclear, discolored, or cloudy. (Note: NPH or N insulin is expected to be cloudy after mixing). If you use a cloudy insulin, mix by rolling the vial between your palms. Do not shake the container as it can cause air bubbles
 - o Crystallized or has small lumps or particles | Frozen | Viscous | Bad smelling
 - o The stopper is dry and cracked
- **If using a multi-dose vial:** Disinfect the stopper with an alcohol or chlorhexidine/alcohol swab before each use. Wipe for 5 seconds. Let air dry without blowing on the stopper before inserting the needle to withdraw the drug.

SHARPS (SYRINGES, NEEDLES, & LANCETS) SAFETY

Syringes, needles, and lancets are made for single use. Use a new sterile needle and syringe to draw up and deliver each dose.

Used sharps are dangerous to people and pets if not disposed of safely because they can injure others and spread infections that cause serious health conditions.

The most common infections are:

- Hepatitis B (HBV),
- Hepatitis C (HCV), and
- Human Immunodeficiency Virus (HIV).

Safe injections
1 Needle
1 Syringe
1 Lancet
+ 1 Time

0 Infections

Safe sharps disposal is important no matter where they are used. See:

<https://safeneedledisposal.org/sharps-management/fda-cleared-sharps-containers/>

- **Immediately** place all used sharps into a safe FDA-cleared sharps disposal container. Do not recap needles. Sharps that retract after use, or are very small, should be disposed of like all other sharps.
- **Never place loose sharps into household or public trash or recycling bins, and never flush them down a toilet.** This puts everyone who may come in contact with that waste at risk of harm.
- **FDA-cleared sharps containers** come in many sizes (including travel sizes) and are generally available through pharmacies, medical supply companies, health care providers, and online. Check with your insurer to see if the cost is covered.

These containers are made of puncture-resistant plastic with leak-resistant sides and bottom and have a tight fitting, puncture-resistant top.

- **Alternative to FDA-cleared Containers:** Heavy-duty plastic laundry detergent container with a screw top. The container must remain upright during use. When $\frac{3}{4}$ full; screw on the lid, secure it with duct tape, and label the container: SHARPS WASTE- DO NOT RECYCLE.



NWC/NLC Mobile Integrated Healthcare - Community Paramedic Program DIABETIC SELF-CARE RECOMMENDATIONS cont.

Needle Clippers

- Needle clippers are FDA-cleared sharps containers that automatically store cut needles, making an insulin syringe or pen needle unusable. This device can safely hold up to 1,500 clipped needles.
- Once a clipper safely removes the needle from a syringe, an empty syringe can be placed in the regular household trash. When a needle clipper is full, it should be disposed of according to state or local regulations.
- Needle clippers are typically available for purchase at pharmacies, medical supply stores and major retailers. Check with your prescriber or pharmacist to make sure your needle device is compatible with a needle clipper before purchasing one.

Safe sharps waste disposal depends on where you live. Follow your local community guidelines.

- Call your local trash or public health department to find out the best way to dispose of sharps. Or check out the US Food and Drug Administration webpage [Safely Using Sharps – https://www.fda.gov/medical-devices/consumer-products/safely-using-sharps-needles-and-syringes-home-work-and-travel](https://www.fda.gov/medical-devices/consumer-products/safely-using-sharps-needles-and-syringes-home-work-and-travel) for more information on where to dispose of sharps in your area.
- Many locations allow you to place approved, labeled, and sealed sharps containers in the household trash – not the recycling bin.
- If a trash collector is reluctant to collect a red sharps container or safe alternate laundry detergent container, refer to [Bureau of Land Contacts \(illinois.gov\)](https://www.illinois.gov/bureau-of-land-contacts) or go to [Medication Disposal \(illinois.gov\)](https://www.illinois.gov/medication-disposal)
- If you would like to bring your sealed container to a community sharps disposal program, there are drop-off locations in several cities and towns. **You can find a listing of these sites in Illinois at:** <https://safeneedledisposal.org/states/illinois/#showTable>

What to do if you are accidentally stuck by a used needle or other sharp

- Wash the exposed area right away with water and soap or use a skin disinfectant (antiseptic) such as rubbing alcohol or hand sanitizer.
- Seek immediate medical attention by calling your physician or local hospital.

NOTIFY YOUR HEALTHCARE PROVIDER OR HEALTH CARE TEAM IF:

- **GLUCOSE LEVELS** fall outside acceptable ranges as noted on care plan
- You experience any self-care challenges; vision problems; or inability to perform your own footcare due to mobility, co-ordination, diminished sensation, or other difficulties.

State of Illinois - Drug Take Back Product Stewardship Program:

Through the passage of the Drug Take-Back Act (learn more below), every person in Illinois has safe, convenient, and free access to prescription drug disposal. This Act developed an implementation plan for a statewide network of drop-off sites funded and managed by the pharmaceutical manufacturers. These drop-off sites are located conveniently around the state but mailback envelopes are also available upon request free of charge.

For more information, direct inquiries via email to Illinois@med-project.org and/or the Help Desk at 1-833-633-7765 or for online information, go to: [Illinois - MED-Project](https://www.illinois-med-project.org)

Resources

MIH will partner with impacted stakeholders to promote wellness and the appropriate use of EMS, MIH, and social services. MIH clients may be vulnerable based on their physical condition and/or have unfavorable social determinants of health. MIH clinicians shall identify possible community-based, prevention and resource-oriented services and make this information available as needed.

The importance of health and wellness is highlighted through educational efforts designed to inform clients about the dangers of smoking, substance use, unrecognized or undertreated diabetes, hypertension, and obesity, etc. and promoting the benefits of exercise, adequate sleep, healthy nutrition and stress outlets, etc.

Home safety checks will be conducted as consented and smoke detectors shall be installed where needed.



United Way of Lake County

<https://211lakecounty.org/index.php/about-211/what-is-211>

211 is a 24-hour information and referral helpline that complements 911 by filling the gap between emergencies and non-public safety needs like food and shelter. Like MIH, 211 helps relieve the burden of non-emergency calls to 911, and reduces time and frustration for residents by acting as a central access point to the **health and human services** in Lake County communities. 211 creates efficiencies by helping individuals find the right solution in one call. This approach increases accurate referrals to service providers.

HOW THEY HELP

- Housing; utilities; food
- Crisis help; Mental Health & Addiction; Health care
- Financial support; education; personal, child & family support
- Employment; transportation; legal & immigration; government
- Volunteering; disaster Information

If looking for help in Lake County or cannot reach 211, call 1-855-677-5253 toll free.

Call: 211 - Multi-lingual with English and Spanish speaking staff, and a professional 24-hour phone interpretation service for over 150 languages.

Text a zip code to 898211. Two-way texting is available in English and Spanish. 211 contact center is staffed 24/7 and an expert navigator will text back. Person texts their question to begin getting the help they need.

211 is always free and completely confidential. It's also anonymous—the caller does not need to give their name or provide personal details to get information.

Community Violence and Child/Edler Abuse Resources

Bridge Youth and Family Services

Children's Advocacy Center

Catholic Charities

FIND (Family Involvement Nurtuing Development)

Maryville Academy

Northwell Collaborative (Healthcare/gun violence)

POC (Partners for our Communities

NWCASA (Northwest Center Against Sexual Assault)

Shelter, Inc.

WINGS (Women in Need Growing Stronger)

Braden Risk Assessment Scale

NOTE: Bed and chairbound individuals or those with impaired ability to reposition should be assessed upon admission for their risk of developing pressure ulcers. Patients with established pressure ulcers should be reassessed periodically.

Patient Name: _____ Room Number: _____ Date: _____

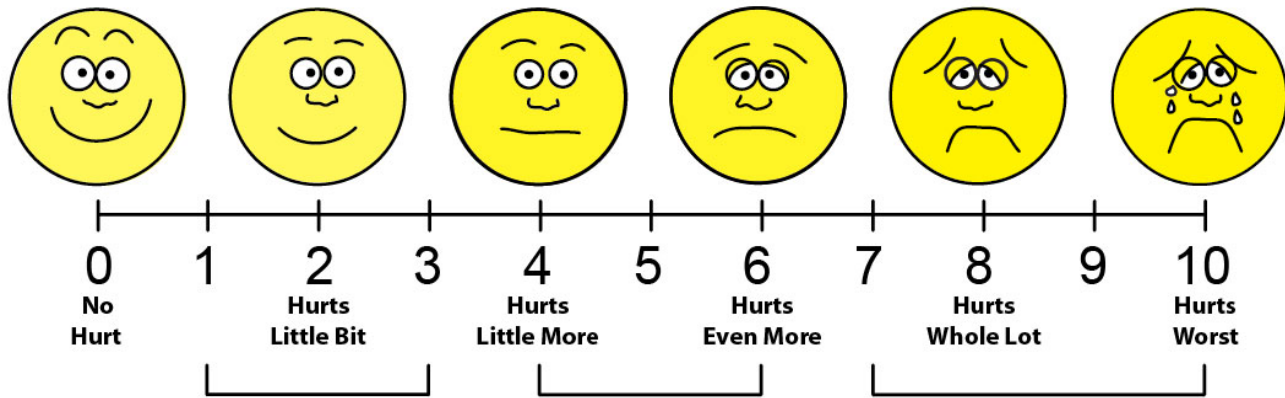
| Sensory Perception | 1. Completely Limited | 2. Very Limited | 3. Slightly Limited | 4. No Impairment | Indicate Appropriate Numbers Below |
|--|--|---|---|--|------------------------------------|
| Ability to respond meaningfully to pressure-related discomfort | Unresponsive (does not moan, flinch or grasp) to painful stimuli, due to diminished level of consciousness or sedation. OR limited ability to feel pain over most of body surface. | Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness. OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body. | Responds to verbal commands, but cannot always communicate discomfort or need to be turned. OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities. | Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort. | |
| Moisture | 1. Constantly Moist | 2. Very Moist | 3. Occasionally Moist | 4. Rarely Moist | |
| Degree to which skin is exposed to moisture | Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned. | Skin is often, but not always, moist. Linen must be changed at least once a shift. | Skin is occasionally moist, requiring an extra linen change approximately once a day. | Skin is usually dry. Linen only requires changing at routine intervals. | |
| Activity | 1. Bedfast | 2. Chairfast | 3. Walks Occasionally | 4. Walks Frequently | |
| Degree of physical activity | Confined to bed. | Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair. | Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair. | Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours. | |
| Mobility | 1. Completely Immobile | 2. Very Limited | 3. Slightly Limited | 4. No Limitations | |
| Ability to change and control body position | Does not make even slight changes in body or extremity position without assistance. | Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently. | Makes frequent though slight changes in body or extremity position independently. | Makes major and frequent changes in position without assistance. | |
| Nutrition | 1. Very Poor | 2. Probably Inadequate | 3. Adequate | 4. Excellent | |
| Usual food intake pattern | Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement. OR is NPO and/or maintained on clear liquids or I.V.'s for more than 5 days. | Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement. OR receives less than optimum amount of liquid diet or tube feeding. | Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered. OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs. | Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation. | |
| Friction and Shear | 1. Problem | 2. Potential Problem | 3. No Apparent Problem | | |
| | Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation lead to almost constant friction. | Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair restraints, or other devices. Maintains relatively good position in chair or bed most of the time, but occasionally slides down. | Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times. | | |

NOTE: Patients with a total score of 16 or less are considered to be at risk of developing pressure ulcers. (15 or 16 = low risk; 13 or 14 = moderate risk; 12 or less = high risk)

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Total Score:

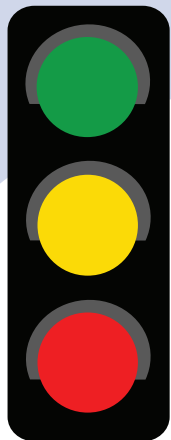
Wong-Baker FACES Pain Rating Scale



| No pain | Mild pain (1-3) | Moderate pain (4-6) | Severe pain (7-10) | English |
|--------------|-----------------|----------------------|-------------------------|------------|
| Sin dolor | Dolor leve | Dolor moderado | Dolor agudo | Spanish |
| Bez bolova | | Umjereni bolovi | Najgori bolovi | Bosnian |
| Schmerzfrei | | Ertagbarer schmerz | Unvorstellbarer schmerz | German |
| Tsis mob | Mob me ntsis | Mob hauj sim | Mob heev | Hmong |
| No dolore | | Dolore moderato | Dolore fortissimo | Italian |
| Nie bólu | | Umiarkowany | Bardzo mocny ból | Polish |
| He болит | | Умеренная боль | Едва переносимая боль | Russian |
| Không có đau | Hỏi đau | Không có đau cho lắm | Rất đau | Vietnamese |

| Abbey Pain Scale Use to assess pain in people with dementia who cannot verbalize Score each as Absent 0; Mild 1; Moderate 2; Severe 3 | | | | | Score |
|---|----------|---------------|------------|--------|-------|
| Vocalization: Whimpering, moaning, groaning, crying | | | | | |
| Facial expression: Looking tense, frowning, grimacing, looking frightened | | | | | |
| Change in body language: Fidgeting, rocking, guarding part of body, withdrawn | | | | | |
| Behavioral Change: ↑ confusion, combativeness, refusing to eat, alteration in usual patterns, difficulty sleeping, increased wandering, decreased social interactions | | | | | |
| Physiological change: T, P, or BP outside normal limits, perspiring, flushing or pallor | | | | | |
| Physical changes: Skin tears, pressure areas, arthritis, contractures | | | | | |
| Interpretation: 0-2 No pain | 3-7 Mild | 8-13 Moderate | 14+ Severe | Total: | |

Assess if pain is acute; chronic; or acute on chronic for this client



Zone Tool

Blood Thinner

The name of my blood thinner* is _____

I take my blood thinner because: _____

My target INR: _____ My weight: _____

Name of your nurse: _____

Phone: _____

Name of your physician: _____

Phone: _____

Check your “zone” often to stay healthy and safe

Green Zone: Great Control

- No swelling
- No increase in shortness of breath
- No chest pain
- No active signs of bruising or bleeding
- Taking medication every day at the same time
- Rotating injection sites; at least 4 inches from navel

If taking warfarin:

- You get your INR blood test regularly and results are fine
- Your diet has not changed in regards to foods high in vitamin K (such as green, leafy vegetables)

GREEN ZONE means:

- ✓ Your symptoms are under control
- ✓ Continue taking your medications as ordered
- ✓ Continue with daily weights
- ✓ Keep your diet consistent
- ✓ Keep all physician appointments
- ✓ Refill any medications as needed



Zone Tool Diabetes

All Clear Zone... *This is the safety zone if you have:*

Green Zone Means:

- Your blood sugars are under control.
 - Continue taking your medications as ordered.
 - Continue routine blood glucose monitoring.
 - Follow healthy eating habits.
 - Keep all physician appointments.
- A1c under 7 percent
 - Fasting blood sugar 90–130
 - Blood sugar less than 180 (one to two hours after eating)
 - Blood pressure less than 130/80
 - LDL cholesterol target less than 100mg/dL if no cardiovascular disease
 - LDL less than 70mg/dL for those with a history of cardiovascular disease (e.g., ischemia, angina, stroke, heart attack)

Warning Zone ... *This is the watch zone if you have:*

Yellow Zone Means:

- Your blood sugar may indicate that you need an adjustment of your medications.
- Improve your eating habits.
- Increase your activity level.

Call your doctor, nurse or diabetes educator if changes in your activity level or eating habits don't decrease your fasting blood sugar levels.

- A1c between 7 and 8 percent
- Blood sugar of less than 60 or 70, or if you are having signs/symptoms of low blood sugar
- Average blood sugar is 150–210
- Most fasting blood sugars under 200
- Blood pressure greater than 140/90

Work closely with your health care team if you are going into the YELLOW zone.

Medical Alert Zone... *This is the danger zone if you have:*

Red Zone Means:

- You need to be evaluated by a doctor.
- If you have a blood glucose over _____, call your doctor and call 911.
- Doctor Phone _____

- A1c greater than 9 percent
- Blood sugar less than 50
- Average blood sugars are over 210
- Most fasting blood sugars are well over 200

Call your physician if you are in the RED ZONE.



Zone Tool

Blood Thinner

Yellow Zone: Caution, call your physician!

Call your physician if you experience any of the following:

- Black or tarry stools
- Vomit that looks like coffee grounds
- Bleeding at a surgical site
- Bleeding gums
- Bruises for no reason
- Blood in urine
- Weight gain of more than 3 pounds in a day or 5 pounds in a week
- You are ordered a new medication or begin taking an over-the-counter medication
- Scheduled medical procedure, surgery or major dental work
- Pregnant or plan to become pregnant
- Trouble affording your blood thinner or your insurance won't cover it
- Trouble getting your blood thinner from the pharmacy
- Miss doses or sometimes go without taking your blood thinner

If taking warfarin:

- You don't get your INR test regularly and your results are out of range

YELLOW ZONE means:

- ✓ Your symptoms indicate you may need an adjustment in your medications
- ✓ The physician or pharmacist may adjust your blood thinner if you are ordered any other new medications
- ✓ Call your nurse or physician to evaluate your symptoms
- ✓ These changes or symptoms may put you at risk of bleeding or clotting!

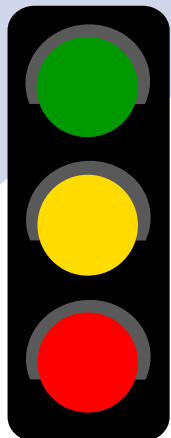
RED ZONE: Take action!

- Uncontrolled bleeding that you cannot stop in 5 minutes when pressure is applied
- Frothy or pink sputum (spit)
- Bright red blood in your urine or stool
- Severe stomach or back pain, headache, dizziness, fainting or body weakness that will not stop
- Had a major accident, serious fall or hit your head (even if you don't look hurt)

RED ZONE means:

- ✓ Call 911 or go to the Emergency Room to seek medical attention

*Other medicines can change the way your blood thinner works. Your blood thinner can also change how other medicines work. It is very important to talk with your doctor about all the medicines you take, including other prescription medicines, over-the-counter medicines, vitamins and herbal products. The following is a list of some common medicines that you should talk with your doctor or pharmacist about before using: **pain relievers**, such as: aspirin, ibuprofen (Advil, Midol, Motrin, Nuprin, Pamprin HB), naproxen (Aleve) and Excedrin; **cold medicines**, such as Sine-Off and Alka-Seltzer; **stomach remedies**, such as cimetidine (Tagamet HB), bismuth Subsalicylate (Pepto Bismol) and laxatives and stool softeners; **herbal products**, such as garlic, ginkgo biloba and green tea.



Zone Tool Heart Failure

Every Day:

- ✓ Weigh yourself in the morning before breakfast and write your weight down.
- ✓ Eat low-salt/low-sodium foods.
- ✓ Balance activity and rest periods.
- ✓ Check for swelling in your feet, ankles, legs and stomach.
- ✓ Take your medicine as ordered.

All Clear Zone ... *This is the safety zone if you have:*

- No shortness of breath
- No weight gain more than two pounds (it may change one or two pounds some days)
- No swelling of your feet, ankles, legs or stomach
- No chest pain

Warning Zone ... *Call your doctor if you have:*

- Weight gain of three pounds in one day or five pounds or more in one week
- Increased swelling of your feet, ankles, legs or stomach
- Difficulty breathing when lying down and feel the need to sleep up in a chair
- An uneasy feeling and/or you know something is not right
- Fatigue or no energy
- Shortness of breath
- Dry hacking cough
- Dizziness

Medical Alert Zone ... *Go to the Emergency Room or call 911 if you have:*

- A hard time breathing
- Unrelieved shortness of breath while sitting still
- Chest pain
- Confusion or inability to think clearly



Zone Tool

Renal Failure

Green Zone

- No shortness of breath
- No swelling
- Urinating with no problems
- Watching intake of foods/fluids
- No pain, not tired or weak
- Monitoring foods with potassium, protein and salt

Your symptoms are under control.

- Continue taking your medications as ordered
- Continue daily weights
- Keep all physician appointments
- Keep scheduled dialysis appointments
- Eat small, frequent meals throughout the day

Yellow Zone

- Some shortness of breath
- Increased swelling—some edema
- Increased tiredness with any activity
- Decreased urine output
- Nausea and vomiting
- Poor appetite, headache, muscle aches
- Changes in blood pressure (higher or lower than usual)

Your symptoms may indicate you need an adjustment in your medication, plan of care or weight management.

- Call your physician, dialysis team or home health nurse

Red Zone

Call your physician right away or call 911

- Increased shortness of breath (faster, unrelieved, etc.)
- Faster heart rate—palpitations
- Fatigued, trouble staying awake
- Increased swelling—edema
- Increased pain—generalized
- Increased nausea and vomiting, loss of appetite
- Fever, chills
- Unable to urinate at all

For dialysis patients to make a grievance, please contact Network 14 at

Phone: 972-503-3215

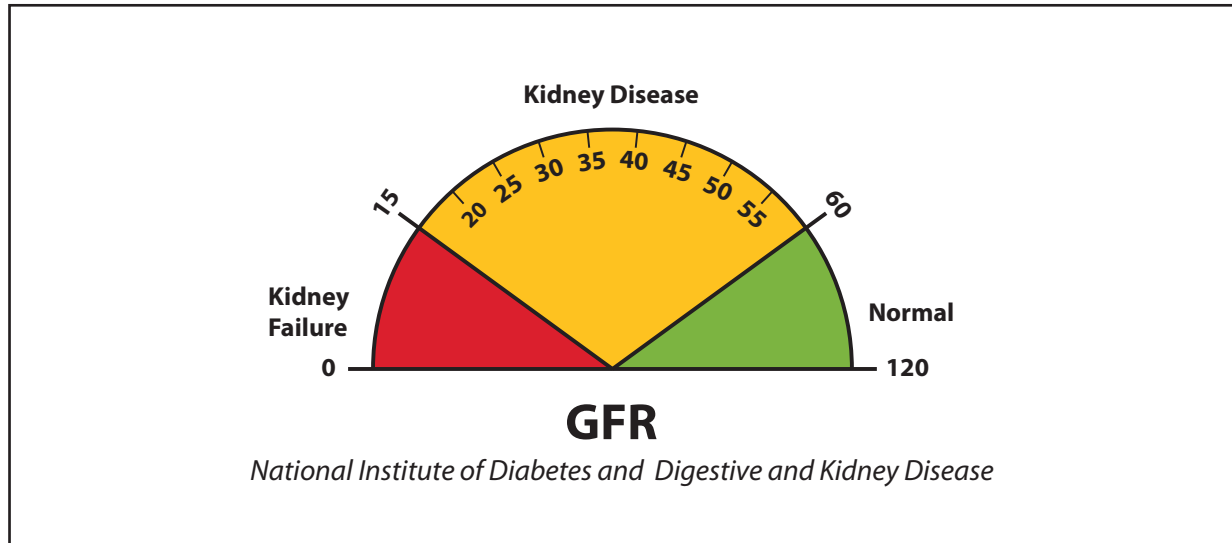
Email: info@nw14.esrd.net

Web: <http://www.esrdnetwork.org>



GFR stands for glomerular (glow-MAIR-you-lure) filtration rate. A blood test checks your GFR, which tells how well your kidneys are filtering.

It's important to know your GFR if you are [at risk for kidney disease](#). A [urine test](#) will also be used to check your kidneys.



GFR is reported as a number.

- A **GFR of 60 or higher** is in the normal range.
- A **GFR below 60** may mean you have kidney disease.
- A **GFR of 15** or lower may mean kidney failure.

NWC/NLC MIH Past Medical History Inventory

Check all that apply

| | | | |
|---|--|---|--|
| Neurological <input type="checkbox"/> ALS (Lou Gehrig's dx) <input type="checkbox"/> Aphasia <input type="checkbox"/> AVM/cerebral aneurysm <input type="checkbox"/> Concussion <input type="checkbox"/> Delirium/dementia <input type="checkbox"/> Dizziness <input type="checkbox"/> Fainting/syncope <input type="checkbox"/> Headache <input type="checkbox"/> Intracranial bleed <input type="checkbox"/> Multiple sclerosis <input type="checkbox"/> Numbness/neuropathies <input type="checkbox"/> Parkinson's Dx <input type="checkbox"/> Seizure <input type="checkbox"/> Spinal cord injury <input type="checkbox"/> Stroke/TIA <input type="checkbox"/> Traumatic brain injury <input type="checkbox"/> Tremors <input type="checkbox"/> Vertigo <input type="checkbox"/> Other: | Cardiovascular <input type="checkbox"/> Atherosclerosis/CAD <input type="checkbox"/> Angina/chest pain <input type="checkbox"/> AMI (heart attack) <input type="checkbox"/> Aortic aneurysm <input type="checkbox"/> Cardiac arrest <input type="checkbox"/> Cardiac stent placed <input type="checkbox"/> Carotid stenosis <input type="checkbox"/> Dysrhythmia <input type="checkbox"/> Heart assist device <input type="checkbox"/> Heart failure <input type="checkbox"/> Hypertension <input type="checkbox"/> ICD implanted <input type="checkbox"/> Pacemaker <input type="checkbox"/> Peripheral vascular dx <input type="checkbox"/> Prosthetic heart valve <input type="checkbox"/> Swelling feet/legs <input type="checkbox"/> Other: | Behavioral/mental health <input type="checkbox"/> Anxiety disorder <input type="checkbox"/> ADD/ADHD <input type="checkbox"/> Autism spectrum disorder <input type="checkbox"/> Dissociative disorders <input type="checkbox"/> Eating disorders <input type="checkbox"/> Factitious disorders <input type="checkbox"/> Hallucinations <input type="checkbox"/> Homicidal thoughts <input type="checkbox"/> Impulse control disorders <input type="checkbox"/> Mood disorders <input type="checkbox"/> Personality disorders <input type="checkbox"/> Post-traumatic stress <input type="checkbox"/> Schizophrenia/psychosis <input type="checkbox"/> Self-harm behaviors <input type="checkbox"/> Somatoform disorders <input type="checkbox"/> Substance-related disorders <input type="checkbox"/> Suicidal thoughts <input type="checkbox"/> Suicide attempt(s) <input type="checkbox"/> Other: | Gastrointestinal <input type="checkbox"/> Bowel/colon disease (IBS, Crohn's, Celiac dx, appendicitis, ulcerative colitis, diverticulitis, obstruction) <input type="checkbox"/> Constipation <input type="checkbox"/> Diarrhea <input type="checkbox"/> Gastric ulcer <input type="checkbox"/> GERD <input type="checkbox"/> Upper GI bleed <input type="checkbox"/> Lower GI bleed <input type="checkbox"/> Esophageal disorder <input type="checkbox"/> Incontinence stool <input type="checkbox"/> Liver dx: <input type="checkbox"/> Nausea/vomiting (freq.) <input type="checkbox"/> Gallbladder dx/stones <input type="checkbox"/> Ostomy <input type="checkbox"/> Pancreatic dx: <input type="checkbox"/> Spleen disorder: <input type="checkbox"/> Other: |
| Pulmonary/Respiratory <input type="checkbox"/> Asthma <input type="checkbox"/> COPD <input type="checkbox"/> Dyspnea on exertion <input type="checkbox"/> Dyspnea at rest <input type="checkbox"/> Home oxygen <input type="checkbox"/> Past ETI <input type="checkbox"/> Past tracheotomy <input type="checkbox"/> Pneumonia <input type="checkbox"/> Pulmonary HTN <input type="checkbox"/> Sleep disordered breathing <input type="checkbox"/> Other: | Blood/hematology/metabolic <input type="checkbox"/> Anemia/blood disorder <input type="checkbox"/> Adrenal gland disorder <input type="checkbox"/> Bleeding disorder <input type="checkbox"/> Diabetes-Type: _____ <input type="checkbox"/> Dyslipidemia <input type="checkbox"/> Obesity <input type="checkbox"/> Sickle Cell Dx <input type="checkbox"/> Thyroid disorder <input type="checkbox"/> Venous thromboembolism <input type="checkbox"/> Weight gain <input type="checkbox"/> Weight loss <input type="checkbox"/> Other: | EENT <input type="checkbox"/> Diplopia <input type="checkbox"/> Visual acuity deficits <input type="checkbox"/> Visual field losses <input type="checkbox"/> Blindness, all causes <input type="checkbox"/> Cataracts <input type="checkbox"/> Glaucoma <input type="checkbox"/> Hearing deficits/loss <input type="checkbox"/> Macular degeneration <input type="checkbox"/> Retinal detachment <input type="checkbox"/> Retinopathy <input type="checkbox"/> Tinnitus <input type="checkbox"/> Other: | Immunological/inflammatory <input type="checkbox"/> Allergic rhinitis <input type="checkbox"/> Anaphylaxis <input type="checkbox"/> Arthritis/rheumatic dx <input type="checkbox"/> Chronic fatigue syndrome <input type="checkbox"/> Eczema (atopic dermatitis) <input type="checkbox"/> Fibromyalgia <input type="checkbox"/> Gout <input type="checkbox"/> Lupus <input type="checkbox"/> Psoriasis <input type="checkbox"/> Vasculitis <input type="checkbox"/> Other: |
| Infectious disorders <input type="checkbox"/> COVID-19 <input type="checkbox"/> Flu last 12 mos <input type="checkbox"/> HIV Aids <input type="checkbox"/> Hepatitis-type: _____ <input type="checkbox"/> Lyme's disease <input type="checkbox"/> Meningitis <input type="checkbox"/> MRSA, VRSA. C-diff <input type="checkbox"/> RSV <input type="checkbox"/> Sepsis / Septic shock <input type="checkbox"/> STD- list: <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Other: | Genitourinary/reproductive <input type="checkbox"/> Chronic kidney disease <input type="checkbox"/> Dialysis <input type="checkbox"/> Incontinence urine <input type="checkbox"/> Kidney stones <input type="checkbox"/> Prostate enlargement <input type="checkbox"/> Renal disease <input type="checkbox"/> UTI (frequent) <input type="checkbox"/> Urinary retention <input type="checkbox"/> Need for home catheterization <input type="checkbox"/> Other: | Musculoskeletal <input type="checkbox"/> Previous fractures <input type="checkbox"/> Previous dislocations <input type="checkbox"/> Previous strains <input type="checkbox"/> Previous sprains <input type="checkbox"/> Osteoporosis <input type="checkbox"/> Muscular dystrophy <input type="checkbox"/> Myasthenia Gravis <input type="checkbox"/> Weakness <input type="checkbox"/> Other: | Cancer <input type="checkbox"/> Brain <input type="checkbox"/> Liver <input type="checkbox"/> Breast <input type="checkbox"/> Lung <input type="checkbox"/> Bone <input type="checkbox"/> Adrenal gland <input type="checkbox"/> Colorectal <input type="checkbox"/> Blood/leukemia/myeloma <input type="checkbox"/> Head and neck <input type="checkbox"/> Lymphoma <input type="checkbox"/> Eye/ocular <input type="checkbox"/> Gastrointestinal <input type="checkbox"/> Kidney/bladder <input type="checkbox"/> Pancreas <input type="checkbox"/> Prostate <input type="checkbox"/> Spine <input type="checkbox"/> Thyroid <input type="checkbox"/> Uterus/ovary/cervix <input type="checkbox"/> Skin <input type="checkbox"/> Soft tissue <input type="checkbox"/> Other: <input type="checkbox"/> Metastasis: |
| Skin/soft tissue <input type="checkbox"/> Burns (TBSA, depth, etiology) <input type="checkbox"/> Pressure ulcers <input type="checkbox"/> Diabetic foot ulcers <input type="checkbox"/> Wounds: <input type="checkbox"/> Bacteria: cellulitis, impetigo, staph infections <input type="checkbox"/> Viruses: shingles, warts, herpes simplex <input type="checkbox"/> Fungi: athlete's foot and yeast infections <input type="checkbox"/> Parasites: lice, scabies Other: | | Past surgeries: List <input type="checkbox"/> Amputation <input type="checkbox"/> Bariatric surgery <input type="checkbox"/> Cardiac bypass surgery <input type="checkbox"/> Major joint replacement <input type="checkbox"/> Neurosurgery <input type="checkbox"/> Spine fusion Other: | |