Abbott Northwestern Hospital
NEW Post-hypothermia Patient Care Process
Hypothermia After Cardiac Arrest

- ANW has been utilizing hypothermia since 2005. We have treated more than 170 patients and have excellent outcomes for many of our patients.

- A need was identified by staff and patients to improve the coordination of care after patients are transferred out of ICU and provide improved assessment of cognitive abilities for potential impairments.

- A multidisciplinary group convened to develop a process for providing improved coordinated care to this patient population in a consistent manner.
Hypothermia After Cardiac Arrest

- Patients in an ICU: H4200 (most often), H4100 or PB2000
- Order Sets: Hypothermia Initiation Phase One and Hypothermia Initiation Phase Two - Admission
- Arctic Sun device/pads placed to cool patient’s body temperature to 33 degrees centigrade for 24 hours. Body is then slowly re-warmed over 8 hours. During this time patient is paralyzed and sedated on pain medications. Once re-warmed, the sedation is slowly weaned to allow for the patient to “wake up” and participate in breathing trials to wean off the ventilator.
Post Therapeutic Hypothermia

This patient population experiences varying degrees of brain injury due to the cardiac arrest resulting in:

- Impaired Cognition
- Impulsivity and behavior changes
- Memory loss
- Altered learning ability
The Process

- Patient is admitted to ICU
- Arctic Sun device/pads placed to cool patient’s body temperature to 33 degrees centigrade for 24 hours.
- Body is then slowly re-warmed over 8 hours. During this time patient is paralyzed and sedated on pain medications.
- Once re-warmed, the sedation is slowly weaned to allow for the patient to “wake up” and participate in breathing trials to wean off the ventilator.
- When appropriate, the patient will transfer for a telemetry unit.
Hypothermia Care Plan

- 2 New Care Plans are in Development:
  - Cardiac Arrest: Primary Care Plan to be added for patients admitted for cardiac arrest
  - Therapeutic Hypothermia: Secondary Care Plan to be added for cardiac arrest patients who are cooled: “Cool Its”
Ready for Transfer

- MUST always transfer to Telemetry
- NEW Order Set: Post Hypothermia Phase Three-Transfer
  - Highlights of Order Set:
    - Consults defaulted for
      - Physical therapy
      - Occupational therapy
      - Speech and language pathology
      - Neuropsychology
      - Physical medicine and rehab
      - Cardiac rehab
All Hypothermia patients will transfer to telemetry or be discharged to Transitional Care Unit.

Cardiology to remain Primary.

Provide Patient with Post-Hypothermia Patient Education Booklet.

ICU Social Worker will "follow" patient on Telemetry Unit.

Patient ready for transfer to Telemetry Unit.

"Phase 3" Transfer Orders completed by Provider.

New Consults to Include:
- Physical Therapy (PT)
- Occupational Therapy (OT)
- Speech/Language Pathology (SLP)
- Neuropsychology
- Physical Medicine and Rehab (PMR)
- Cardiac Rehab (CR)
- Chaplain, prn

ICU consults:
- Intensivist
- Social Work
- Chaplain
- Neurology

Patient on Telemetry Unit.
Transfer to Telemetry

- Cardiology will remain primary throughout telemetry stay and will continue to follow if DC to Sister Kenny Rehab Institute
- Cardiology will identify Primary Care Provider and communicate plans at DC
- Cardiology will complete “Phase Three” transfer orders and “Prep for Discharge” orders
Patient Assessments

- Physical Therapy Assessment
  - Safety in moving, ambulation, strength
  - Home environment

- Occupational Therapy Assessment
  - Self care
  - Home responsibilities (meal prep, information/schedule management, finances, medications)
  - Work responsibilities
  - Driving

- Speech/Language Pathology Assessment
  - Thinking skills
  - Memory
  - Problem solving

- Cardiac Rehab Assessment
  - If patient has CAD, will treat per protocol
  - In all cases, will teach family CPR
Other defaulted consults

- **Social work**
  - Will follow patients from admission to discharge
  - Will coordinate Discharge Planning meeting

- **Case management**
  - Will actively follow patients at time of transfer
  - Will coordinate required After Discharge appointments

- **Spiritual care**

- **Smoking cessation (if appropriate)**

- **Hospitalist**
  - Manages non-cardiac issues
Rehabilitation Consults

- Neuropsychology consult: Kyle Harvison, PhD
  - Will see as inpatient, depending on availability, to complete neurobehavioral status examination, interpret cognitive tests administered by speech-language pathology, and assist in rehabilitation planning
  - Will see 4-6 weeks after discharge, in conjunction with case coordinator and occupational therapist from the Brain Injury Clinic, to reassess cognitive status and assist in rehabilitation planning
Rehabilitation Consults

- Physical Medicine and Rehab
  - Will determine next organized medical rehabilitation program, if any. This may include a referral to inpatient acute comprehensive rehabilitation, referral to inpatient acute comprehensive rehabilitation, nursing home for rehabilitation program, home rehabilitation therapy, outpatient rehabilitation therapy, community-based rehabilitation program, or no post-discharge rehabilitation care.
  - Will confirm, modify if needed, and reinforce recommendations of physical, occupational, and speech therapies; as a physician there is a certain level of authority that a physiatrist can bring to recommendations that an allied health professional can not.
  - Will coordinate after discharge rehabilitation care and follow-up
Hospitalist may be consulted to manage non-cardiac issues.

Patient on Telemetry Unit

Patient ready for discharge

PMR to review Therapy assessments to confirm rehabilitation plan

Social Worker to arrange Patient/Family Discharge Planning Meeting (M-F). Attendees to include: Patient/Family SW, CM, RN, NP, Therapies, CR (to provide CPR to family), others as available and required

Written DC Plan from Therapies

Continue with Patient/Family Education
Discharge Planning

- Social Worker will
  - Coordinate patient/family discharge planning meeting (M-F)
  - Enter date and time of meeting in Staff Alert
  - Attendees MUST include:
    - Family
    - Social Worker
    - Case Manager
    - Nurse Practitioner
    - Bedside RN, if able
    - OT, if able. Otherwise will leave activity recommendations for after discharge
    - Others as able
Discharge Planning

- After Discharge Planning meeting, NP will
  - Complete “Post Hypothermia Phase 4-Prep for Discharge” order set, that includes:
    - 4-6 week post-discharge appointments for:
      - Occupational therapy
      - Neuropsychology
      - Cardiac MRI (or TTE for patients WITH devices)
      - Cardiology appointment
    - Orders for patient activity at home
      - Recommendations made from OT need to be transcribed into orders
Cardiology identifies/contacts PMD

PMD to receive DC Summary and Hypothermia Informational Packet

“Phase 4” Prep for Discharge Orders be completed after DC Planning Meeting to include 30-45-day follow-up appointments with:
- Outpatient OT
- Neuropsychologist
- Echo or MRI
- Cardiologist

Family MUST be present at time of discharge

Patient discharged to Acute Rehab

Cardiologist to follow patient if DC to SKRI

Patient Discharged to Home

2-4 Day follow Up Phone Call by HH Coordinator Staff

Case Manager to coordinate Patient/Family Call to 3-3900: MHI Coordinators will arrange conference call to:
- Sandy Schwalbe
- CVDS
To coordinate required appointments

Patient Discharged to Nursing Home
Discharge Planning

- Case Manager will initiate phone call with patient/family and 3-3900 (MHI)
- MHI will arrange conference call with
  - Patient/family
  - Sandy Schwalbe at Sister Kenny Rehabilitation Institute
  - Cardiovascular Diagnostic Services
  to ensure all return to clinic appointments are on same day
- Appointments MUST be entered into Patient Education Book
Discharge Planning

- Provider (NP or physician) will complete DC orders (whichever set is appropriate) on day of discharge
- RN will complete patient education and complete DC writer
- RN will review DC orders/writer with patient and family
- **Family must be present at time of DC to receive DC instructions!**
Patient Education Book

- Includes:
  - Information explaining Care Team Member roles
  - Patient/Family Care Map
  - Separate page for notation of Follow Up Appointments with dates and times
  - Calendar for notation of return to clinic appointments
  - Separate page for documentation of Care Team and contact numbers
# Patient/Family Care Map

**12.18.09: Draft**

In general, the below Care Map is what you can expect during your hospital stay. Your health care team may suggest changes unique to your recovery.

<table>
<thead>
<tr>
<th>Hypothermia</th>
<th>Telemetry Day 1 (day of transfer) Date:</th>
<th>Telemetry Day 2 Date:</th>
<th>Telemetry Day 3 Date:</th>
<th>Telemetry Day 4 Date:</th>
<th>Telemetry Day 5 (day to leave hospital) Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comfort</strong></td>
<td>❑ Ask your nurse about your pain goal and pain relief.</td>
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</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>❑ The nurse will check the incision site(s).</td>
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</tr>
<tr>
<td><strong>Breathing</strong></td>
<td>❑ When you can breathe comfortably on your own, the nurse will reduce your extra oxygen.</td>
<td>❑ The nurse will stop your extra oxygen. If you no longer need it.</td>
<td>❑ The nurse will stop your extra oxygen. If you no longer need it.</td>
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</tr>
<tr>
<td><strong>Tests, Labs and Procedures</strong></td>
<td>❑ You may have blood tests. ❑ You may have an EKG (electrocardiogram). ❑ You will meet with a physical therapist. ❑ You will meet with an occupational therapist. ❑ You will meet with a speech/language therapist. ❑ You will meet with a cardiac rehabilitation specialist.</td>
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# Patient/Family Care Map

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<th>Activity</th>
<th>Telemetry Day 1</th>
<th>Telemetry Day 2</th>
<th>Telemetry Day 3</th>
<th>Telemetry Day 4</th>
<th>Telemetry Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Activity Image" /></td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
</tr>
<tr>
<td></td>
<td>You will be helped out of bed three times to sit in a chair, walk around your room, or walk in the hall.</td>
<td>You will be helped out of bed five times to sit in a chair, walk around your room, or walk in the hall.</td>
<td>You will be helped out of bed five times to sit in a chair, walk around your room, or walk in the hall.</td>
<td>You will be helped out of bed five times to sit in a chair, walk around your room, or walk in the hall.</td>
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<tr>
<th>Diet</th>
<th>Telemetry Day 1</th>
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<th>Telemetry Day 5</th>
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<tr>
<td><img src="image" alt="Diet Image" /></td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
</tr>
<tr>
<td></td>
<td>Eat as you can tolerate.</td>
<td>Eat as you can tolerate.</td>
<td>Eat as you can tolerate.</td>
<td>Eat as you can tolerate.</td>
<td>Eat as you can tolerate.</td>
</tr>
<tr>
<td></td>
<td>Follow your health care team’s direction.</td>
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</tr>
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<tr>
<th>Bladder/ Bowel</th>
<th>Telemetry Day 1</th>
<th>Telemetry Day 2</th>
<th>Telemetry Day 3</th>
<th>Telemetry Day 4</th>
<th>Telemetry Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Bladder/Bowel Image" /></td>
<td>Date:</td>
<td>Date:</td>
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<tr>
<td></td>
<td>The nurse will remove your bladder catheter, if you had one.</td>
<td>The nurse will remove your bladder catheter, if you had one.</td>
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<th>Education</th>
<th>Telemetry Day 1</th>
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<th>Telemetry Day 3</th>
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<th>Telemetry Day 5</th>
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<tbody>
<tr>
<td><img src="image" alt="Education Image" /></td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
</tr>
<tr>
<td></td>
<td>You and your family will receive a booklet with education.</td>
<td>The nurse will go over the booklet with you and your family.</td>
<td>The nurse will go over the booklet with you and your family.</td>
<td>The nurse will go over the booklet with you and your family.</td>
<td>You and your family will receive CPR education.</td>
</tr>
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<th>Planning for Going Home</th>
<th>Telemetry Day 1</th>
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<th>Telemetry Day 3</th>
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<th>Telemetry Day 5</th>
</tr>
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<tbody>
<tr>
<td><img src="image" alt="Planning Image" /></td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
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<tr>
<td></td>
<td>Your care team will most with you and your family to talk with you about plans for your care after you leave the hospital.</td>
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</tr>
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<td></td>
<td>Your nurse will give you instructions for going home.</td>
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<td></td>
<td>You may go home:  * when your therapy plan is ready  * when you have safe discharge (going home) plans  * when follow-up visits are made.</td>
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After Discharge

- Hypothermia staff will call patients 2-4 days after discharge using set script
- Patient will return in 4-6 weeks for follow up appointments
- Most importantly, patient will have improved coordination of care with all disciplines on the same page.