Timely Initiation of Therapeutic Hypothermia in Post-Cardiac Arrest Patients

Therapeutic hypothermia favorably impacts neurological outcomes in post-cardiac arrest patients (NNT = 6), and early cooling is likely associated with better outcomes. For a variety of systems-based issues, it can be challenging to initiate cooling in a timely manner in these critically ill patients.

- When consulted for therapeutic hypothermia in post-cardiac arrest patients, Neurology residents will initiate cooling measures in 80% of eligible patients within 30 minutes of the time the consult is called (10 minutes faster than the median time in pilot data collection).
- If cooling was initiated in the field (i.e., out of hospital arrest), a decision regarding continuation of cooling will be made within 30 minutes of arrival.
- Between July 2012 and May 15 2013, 22 consults were called for therapeutic hypothermia.
- Of the patients who arrested outside of the hospital, 8 had cooling initiated in the field.
- In 20 out of 22 total patients (91% of consults), cooling was initiated or continued within 30 minutes of the time when the consult was called, compared to 3 out of 7 patients in our pilot dataset (p = 0.006).

1. Documentation of consults was a challenge for some residents, due to the low frequency of cooling consults and their high acuity. Frequent reminders were important.
2. Residents felt that having a goal time frame for these consults empowered them to be more aggressive in advocating for early initiation of cooling measures.
3. Cooling in the field is becoming much more common, and so the role of the Neurology resident in these consultations is shifting over time. Communication with EMS teams and ED providers will be critical for these patients moving forward.

- Setting time goals for certain urgent consultations (e.g., code stroke, cooling consults) appears to help motivate residents to act quickly and to advocate more aggressively for time-sensitive treatment options.
- This strategy could be applied to other neurological care emergencies, such as evaluation/treatment of status epilepticus, myasthenic crisis, or management of elevated blood pressure in acute intracerebral hemorrhage.