

**NK3 – Clinical nurses evaluate and use evidence-based findings in their practice.**

Provide one example, with supporting evidence, of how clinical nurses used evidence-based findings to implement a practice new to the organization.

And

Provide one example, with supporting evidence, of how clinical nurses used evidence-based findings to revise an existing practice to improve care.

Example 1: New Practice: Gum Chewing to Prevent Ileus

Postoperative ileus is a common surgical complication. Patients who experience an ileus receive multiple anti-emetics and often require the placement of a nasogastric tube. These procedures place the patient at risk for medication side effects, uncomfortable tube insertions and prolonged lengths of stay.

Using the Health Sciences Library databases, Carolin Connelly, BSN, RN, PCCN, Clinician III, performed a literature review. Carolin identified strong evidence that chewing gum contributes to reductions in postoperative ileus. Data reveal that patients who chew gum during the postoperative period decrease the amount of time to passing flatus and bowel movements. After synthesizing the available evidence, Carolin began to advocate for gum chewing in the postoperative adult hepatobiliary surgical patient population. She shared her findings with unit-based peers and interdisciplinary team members through the local Quality, Practice and Education Shared Governance Committee ([Exhibit NK3.a: Gum Chewing Literature Review](#)). She emphasized the effectiveness of the low-cost and low-risk intervention. She drafted a proposal and action plan to implement gum chewing within the postoperative hepatobiliary, urology and abdominal transplant surgery unit. The plan was approved, and the process began to roll out in August 2013.



Chewing gum is currently available to all adult abdominal surgery patients to help reduce the incidence of postoperative ileus.

During her literature review, Carolin noted that other adult abdominal surgery patient populations also benefited from gum chewing. In November 2013, she presented her comprehensive gum chewing findings to the PNSO Clinical Practice Committee. ([Exhibit NK3.b: 112613 CPC minutes](#)) The committee supported her evidence-based-practice approach and voted in favor of implementing gum chewing in all adult abdominal surgical patient populations. With backing of the PNSO Clinical Practice Committee, Carolin proceeded to the Adult Acute Care Quality Committee. The interprofessional committee approved the proposal in January 2014. ([Exhibit NK3.c: 012314 ACSC minutes](#)). Packs of gum were made available to the units through Nutrition Services. Gum chewing is started postoperatively on day one, when the patient is assessed by the RN to be alert and oriented, and has a care partner at the bedside to monitor gum chewing. The patient is instructed to chew gum three times per day for 30 to 60 minutes to decrease postoperative ileus.



Participants:

NK3 Table 1. Participants in Gum Chewing Practice Initiative

Name	Discipline	Title	Department
Carolyn Connelly	Nursing	RN Clinician II	5 West
Kayla Reynolds	Nursing	RN Clinician II	5 West
Kristen Davis	Nursing	Registered Nurse-MC Pool	Staffing Resource Office
Kim Elgin	Nursing	Advanced Practice Nurse II-Clinical Nurse Specialist	5 West/SIMU
Beth Quatrara	Nursing	Advanced Practice Nurse III-Clinical Nurse Specialist	Nursing Governance

Chewing gum is currently available to all adult abdominal surgery patients to help reduce the incidence of postoperative ileus. This new practice was shared with nurses through the December 2013 edition of PNSO Practice News ([Exhibit NK3.d: 12/2013 Practice News](#)) and was also featured in the UVA Health System newsletter: UVA Connect. This newsletter is published electronically and is sent to all employees ([Exhibit NK3.e: 041114 UVA Connect Gum Chewing Article](#)).

Example 2:

Practice: Therapeutic Hypothermia and Intravascular Temperature Management (IVTM)

Revision: Expansion Beyond Coronary Care, Medical ICU and Neuro ICU Patients from Pre-hospital Arrests to Include In-house cardiac Arrest Patients

In accordance with the 2010 American Heart Association guidelines,¹ the teams in the Coronary Care Unit (CCU), Medical Intensive Care Unit (MICU) and Nerancy Neurological Intensive Care Unit (NNICU) were trained in using IVTM to induce hypothermia in pre-hospital post-cardiac arrest patients.

¹ Field JM, Hazinski MF, Sayre MR, Chameides L, Schexnayder SM, Hemphill R, Samson RA, Kattwinkel J, Berg RA, Bhanji F, Cave DM, Jauch EC, Kudenchuk PJ, Neumar RW, Peberdy MA, Perlman JM, Sinz E, Travers AH, Berg MD, Billi JE, Eigel B, Hickey RW, Kleinman ME, Link MS, Morrison LJ, O'Connor RE, Shuster M, Callaway CW, Cucchiara B, Ferguson JD, Rea TD, Vanden Hoek TL. Part 1: executive summary: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2010;122(suppl 3):S640–S656.



The strong evidence surrounding this practice in out-of-hospital cardiac arrests guided the practice, and the intervention was well established in these units. However, the evidence surrounding IVTM use with in-house cardiac arrest patients was initially less rigorous and was not transitioned as a standard of care at UVA until early 2013, when additional studies supported the intervention.

In early 2013, a Therapeutic Temperature Management (TTM) work group was established to address a revision of this practice to include the cooling of in-house cardiac arrest patients. The TTM group included an interprofessional team of clinicians from pharmacy, emergency medicine, interventional cardiology, rapid response team and experienced clinicians from the three adult ICUs. The group established plans to introduce IVTM to in-house patients meeting return of spontaneous circulation criteria for the intervention. Mark Adams, BSN, RN, CCRN, Clinician IV, in the CCU, serves as the organizational nursing resource for this practice. He has presented at national conferences and presented educational webinars to disseminate this practice. He partnered with Dea Mahanes, MSN, RN, CCRN, CNRN, CCNS, Advanced Practice Nurse 3-Clinical Nurse Specialist, of the NNICU and Sarah Kaplan, BSN, RN, CCRN, Clinician IV, of the MICU to expand this practice within the organization.



Sarah Kaplan, BSN, RN, CCRN, Clinician IV and Dea Mahanes, MSN, RN, CCRN, CNRN, CCNS, APN III-CNS worked to expand the practice of Therapeutic Temperature Management.



To ensure that adequate clinical resources were in place as they expanded this practice, the team evaluated and updated the existing Epic order sets ([Exhibit NK3.f: TTM Order Set Overview](#)), checklists and tools.

TTM nurse champions were identified to serve as on-unit experts in therapy advocacy, staff coaching and quality issue resolution. Classes were held on May 14 and May 20, 2013, to provide the champions with a historical overview of the intervention, a review of neurophysiology and an introduction to the physiology of cooling and methods, as well as shivering management, troubleshooting and documentation. [Exhibit NK3.g](#) shows one of the PowerPoint presentations used during the training ([Exhibit NK3.g TTM RN Champions training](#)). TTM nurse champions receive ongoing continuing education and program updates to share with peers. A post-training communication from Mark is provided in [Exhibit NK3.h: TTM RN champions training email](#).

There are now 25 TTM nurse champions spread throughout the Emergency Department and five adult ICUs to assist with the care of patients needing TTM. Plans are underway to identify two or three TTM trainers to manage initial therapy education and equipment in-service with new Emergency Department and ICU staff.

Three new intravenous cooling devices were purchased to support the practice implementation. The new equipment, totaling \$92,000, assists clinicians in more rapidly attaining the goal temperatures needed to improve patient outcomes.

Participants:

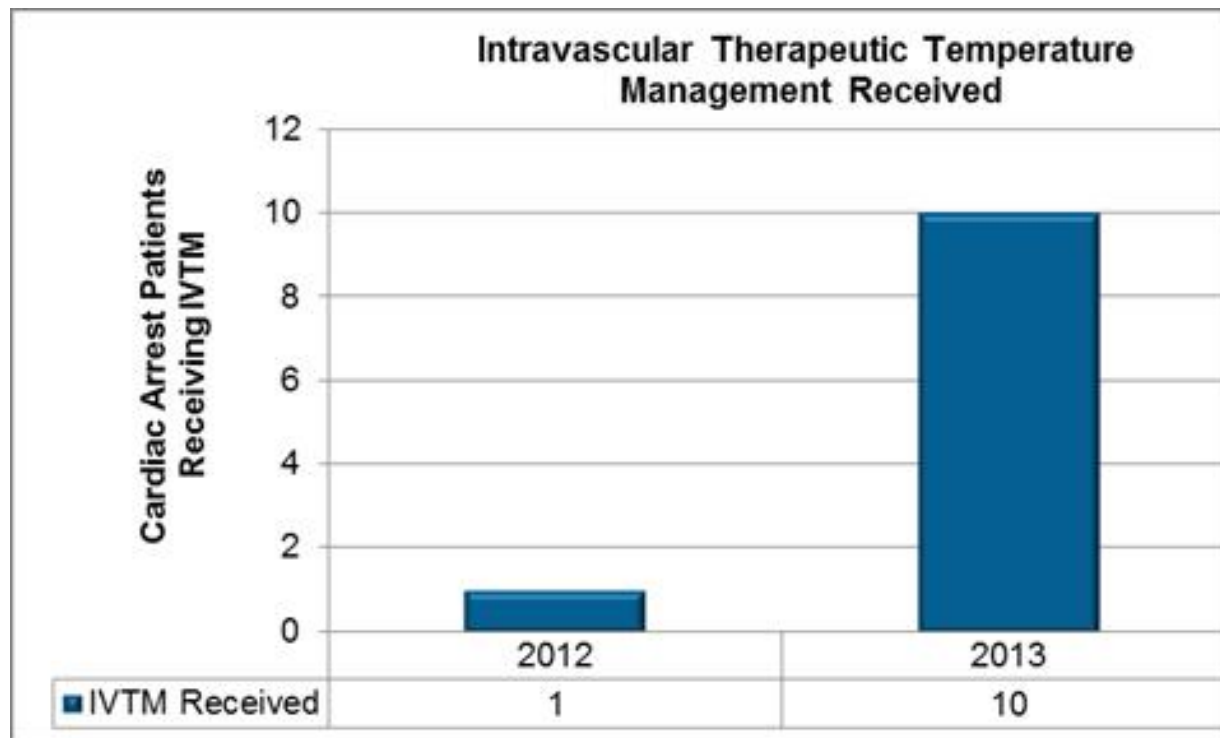
NK3 Table 2. Participants in TTM Work Group

Name	Discipline	Title	Department
Mark Adams	Nursing	Clinician 4	CCU
Sarah Kaplan	Nursing	Clinician 4	MICU
Dea Mahanes	Nursing	Advanced Practice Nurse 3-Clinical Nurse Specialist	NNICU

In 2013, a total of 10 inpatients at UVA suffered a cardiac arrest and received TTM. This increase, from one patient receiving this intervention in 2012, is reflective of the TTM work group efforts. The TTM champions' training to advocate for and serve as experts in TTM implementation is evident. Their role in expanding this AHA-endorsed evidence-based practice contributes to improved patient outcomes. The organization's support of time in training and improved equipment to expand this practice reflects the commitment to this evidence-based practice.



NK3 Figure 1. Intravascular Therapeutic Temperature Management Received, 2012-2013



1 out of 197 in-hospital cardiac arrests received IVTM in 2012; 10 out of 192 in 2013. This represents a 900% increase in IVTM use.