



Management of Patients with Insulin Pumps in the Perioperative Setting

Anna Mae Josue, BSN, RN, CPAN & Katherine Coll, BSN, RN

Background

The implementation of an institutional policy regarding diabetic patients with insulin pumps in the Perioperative setting posed concerns among nursing team members.

The perioperative nursing team observed and identified knowledge deficits and inconsistent management related to the insulin pump-dependent patient population.

An opportunity was identified to initiate educational in-services and insulin pump resource nurses with a goal to improve patient care.

Aim

- Evaluate barriers to nursing care associated with insulin pumps
- Increase staff awareness and compliance related to the institutional insulin pump policy
- Improve collaboration among the health care team members
- Enhance nursing knowledge by creating an insulin pump flowchart to standardize care and ensure sustainability and compliance
- Promote safe practices in the management of diabetic patients

Implementation

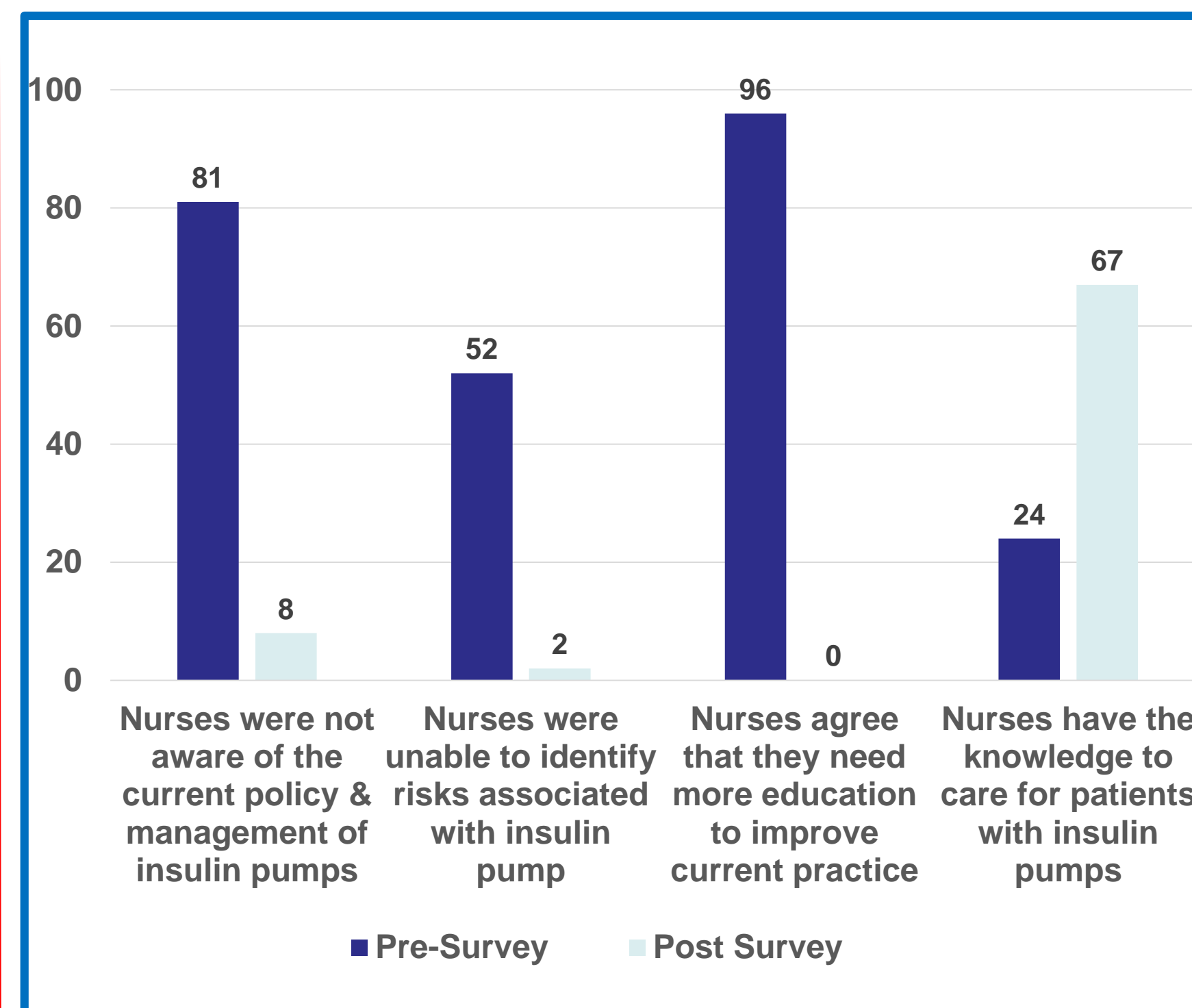
An online nursing survey provided to perioperative nursing staff indicated that 81% were not aware of the current policy and management of insulin pumps.

Additionally, 52% were unable to identify risks associated with care of insulin pumps in the perioperative setting.

Furthermore, 96% of clinical nurses requested additional education to improve their knowledge and skills in managing insulin pumps in the perioperative setting.

A team of nurses reviewed the institutional policies and developed an action plan. Education related to a new institutional insulin pump policy and a perioperative insulin pump flowchart was created to assure compliance and reduce knowledge deficits among nursing colleagues.

Results



Successful Practice

Collaboration was enhanced amongst interdisciplinary teams to address individual patient needs by utilizing the standardized Insulin Pump Flowchart. Resource nurses were developed to assure sustainability of the newly developed guidelines.

A post education survey revealed that knowledge in the management of patients with insulin pumps had improved from 24% to 67% in the perioperative setting.

The post education survey also indicated that 98% of respondents were able to identify risks associated with insulin pump management in clinical setting as opposed to 48% pre education.

Nursing Implications

Education and utilization of an insulin pump management tool in the perioperative setting can enable nurses to provide safe and efficient patient care from admission to discharge.

Team Members

Staci Eguia, MSN, RN, CCRN
 Cori Kopecky, MSN, RN, OCN
 Elizabeth Trejo, BSN, RN
 Sara Maes, BSN, RN
 David Reams, RN
 Llana Saquion, BSN, RN, CPAN
 Reshma Thomas, BSN, RN, CCRN
 Monica Climaco, BSN, RN, CMSRN

Insulin Pump Flowchart in the Perioperative Setting

On Admission	If patient arrives with Insulin Pump: <ul style="list-style-type: none"> • Request endocrine consult • Obtain blood glucose level
Radiology Procedures	<ul style="list-style-type: none"> • Disconnect patient from the insulin pump • Insulin Pump should remain outside of the imaging room for any of the radiology procedures (i.e. X-ray / MRI / PET scan) • If the Insulin Pump is disconnected for greater than one hour, the responsible Authorized Provider should be contacted.
Operating Room	The Insulin Pump must be disconnected once the patient is in the operating room.
PACU	Notify Endocrine of patient location and glucose level post procedure. Notify the Endocrinologist on-call if: <ul style="list-style-type: none"> • Signs and symptoms of hyperglycemia or diabetic ketoacidosis present. • RN has activated the Inpatient Hypoglycemia Management Algorithm and has suspended the Insulin Pump. • Patient is unable to participate in their own care due to cognitive motor or neurological deficit. • The Daily Insulin Pump Log is consistently not updated by the patient.
TPACU	Verify Endocrine Consult Patient signs Insulin Pump Patient Agreement Form with Endocrine Team. Verify Updated medication list including the name of the insulin and use of the pump. Obtain baseline assessment (pump site, supplies and function) at admission, every shift change, and prn as appropriate. Use only MDACC glucometers for accuchecks. Patient to document in Daily Insulin Pump log provided by RN. Document in MAR any additional SQ injections of insulin administered by RN. Document insulin pumps in MAR as "given by other".

