FAST HUGS BID AND ITS COMPONENTS: KNOWLEDGE AND PRACTICE AMONG STAFF NURSES IN ICU- NARRATIVE REVIEW

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Abstract:
Critical care unit is explicated as particularly sketched and a well-equipped institution staffed by qualified employees in order to make available constructive as well as safe treatment for individuals who are facing life-threatening situations or plausibly lethal health problems. A critical care unit is a continuously over-embellished ward in which terminally ill patients are on life support treatment under intensive monitoring. New creative therapeutic modalities are constantly being introduced in the ICU setting to improve the quality of care. One tool, the FAST HUGS BID, has been established to promote communication among nursing and physician caregivers in the ICU. Following an in-depth document search, ICU staff nurses were able to have a better grasp of the Fast Hugs Bid and its component (F-feeding, i.e., Enteral Feeding). It was found that ICU staff nurses had an inadequate or moderate level of knowledge prior to the exam/test, but that their knowledge improved to a moderate or adequate level following the intervention, such as STP, Selfinstructional module, information booklet, and nutritional feeding programs. This highlights the critical need of strengthening ICU staff nurses' knowledge of Fast Hugs Bid and its enteral feeding component in order to improve patient care and safety, as well as improving Fast Hugs Bid mnemonic practice in order to improve nurse quality care. Due to a lack of basic information and practiced enteral feeding, enteral nutritional intake was insufficient in ICU patients. A nurse-led feeding Programme improved enteral nutrition delivery in ICU patients while also lowering gastrointestinal symptoms and intra-abdominal hypertension.

Keywords: - Fast hug bids, feeding, pain, anesthesia.

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INTRODUCTION

Critical care unit is explicated as particularly sketched and a well-equipped institution staffed by qualified employees in order to make available constructive as well as safe treatment for individuals who are facing life-threatening situations or plausibly lethal health problems. A critical care unit is a continuously over-embellished ward in which terminally ill patients are on life support treatment under intensive monitoring. (Deepa et al., 2021)

New creative therapeutic modalities are constantly being introduced in the ICU setting to improve the quality of care. One tool, the FAST HUGS BID, has been established to promote communication among nursing and physician caregivers in the ICU. (Rathod et al., 2019)

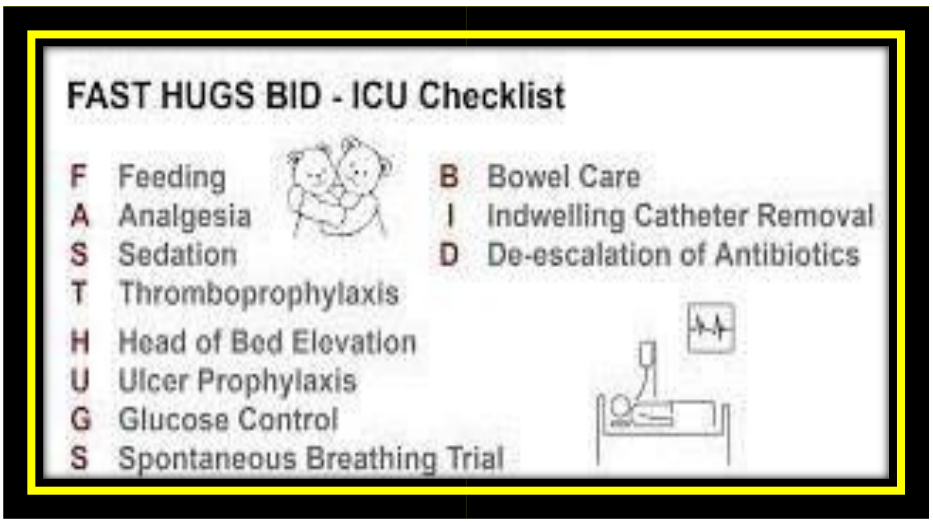

Figure 1Fast Hugs Bid Components

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FAST HUGS BID is a critical-care checklist that highlights essential areas of general care. The mnemonic emphasizes the importance of clinical procedures such as feeding, analgesia, sedation, thromboembolic prophylaxis, head-end bed elevation, stress ulcer prophylaxis, and glycemic management. All ICU patients can benefit from FAST HUG. Patients and their families with acute and unstable physiologic disorders are cared for by critical care nurses in a setting that is equipped with technologically enhanced methods for assessing and controlling their difficulties. The nurse is in charge of coordinating the heal FAST HUGS BID principle, which is used in the care of terminally ill patients. Fast Hugs Bid is a tool for identifying and assessing critical components of
ICU patient care. It is an organized method to patient care that is employed regularly throughout the work lug and prevents mistakes of omission in the basic domain of intensive care unit management that would otherwise go unnoticed in the event of more urgent care needs.

(Deepa et al., 2021)

FEEDING:
One of the most important aspects of medical care for critically ill patients in the ICU is nutrition. Malnutrition is a towering currency of morbidity and mortality, affecting up to 40% of hospitalized patients. Enteral nutrition (EN) is a method of delivering all essential nutrients, including water and minerals, into the gastrointestinal tract (via mouth or tube) and then into the stomach, duodenum, or jejunum.

EN is used in patients with functional gastrointestinal tracts when oral nutritional intake is insufficient to meet anticipated nutritional needs. EN should be started during the first 24 to 48 hours of admission for most persons in the ICU who are on ventilator support and have stable hemodynamic states with an appropriate total caloric intake of 20 to 25 calories per kilogram of body weight. It's vital to think about the underlying medical problem. Consider age, nutritional status, and accessible nutrient delivery channels when deciding on the type and amount of nutritional support. ICU nurses are essential in ensuring that patients' nutritional demands are satisfied on a consistent manner. To avoid complications related to enteral feeding and improve results, effective nursing techniques such as the use of prokinetic medicines, lowering feeding rates, assessing gastric residual volume, and maintaining the ideal placement of patients are
required.
(Tsige et al., 2022)

Patients in intensive care are distressed for a variety of reasons, with pain accounting for a considerable amount. During their critical care stay, the great majority of patients have moderate to severe pain. Many pre-existing problems, such as acute medical, surgical, or routine parts of intensive care, can cause or aggravate pain. (M Narayanan,2016)

Pain is commonly recognized as the fifth vital sign, and it causes a slew of negative physiological changes across the board. In vulnerable patients, extreme pain tachycardia, hypertension, increased

myocardial oxygen consumption, and myocardial ischemia are all symptoms of a stress response and sympatho-adrenergic activation. Pain from abdominal incisions that is not well controlled impairs diaphragmatic function, promotes hyperventilation, and produces atelectasis. Pain, especially in sedated patients, can cause agitation and delirium, and if not treated properly, can lead to psychological complications such as post-traumatic stress disorder, depression, and anxiety, as well as chronic pain. Systemic inflammatory response syndrome, hyperglycemia, immune suppression, decreased wound healing, hypercoagulability, and enhanced catabolism are all systemic negative effects of pain. All of these negative consequences can result in longer critical care and hospital stays, as well as higher mortality. (M Narayanan, 2016)

In the intensive care unit (ICU), sedation is routinely used to reduce ventilator dys-synchrony, improve patient comfort, and facilitate ICU procedures. (Lee et al., 2018)
Benzodiazepines and/or propofol have typically been used to sedate patients undergoing mechanical ventilation (MV) to make them comfortable and avoid pain and anxiety. Sedation, on the other hand, may have negative implications, such as extending the MV and weaning phase, resulting in increased expenditures. Complications such as ventilator-associated pneumonia are also a possibility. Early profound sedation, regardless of how it is delivered, has been linked to a longer time to extubation and a higher death rate. In contrast, it has been shown that patients can be comfortable during MV with no or very minimal sedation, which has been linked to decreased rates of delirium, shorter lengths of stay (LOS), and other benefits. To enhance clinical outcomes in mechanically ventilated adult ICU patients, recent recommendations and commentary have supported a review of intensive care unit (ICU) sedation procedures and the introduction of sedation techniques based on non-benzodiazepine sedatives [propofol or dexmedetomidine (DEX)]. DEX has been found to improve patient comfort during MV, has a high safety profile, and shortens the time to extubating. (Silvia L. Nunes, 2018)

Mechanical ventilation (MV), endotracheal intubation, bladder and enteral catheterization, and venous and arterial punctures are all common procedures performed in the Intensive Care Unit (ICU). Due to the employment of extensive monitoring devices and environmental noise, this setting is unpleasant. Immobility, injuries, and/or wounds lead critical patients to become frightened, agitated, disoriented, and in pain, which is exacerbated by the hostile atmosphere that surrounds ICUs. In order to alleviate discomfort, analgesia and sedation are frequently used. Therapeutic, pharmaceutical, and environmental behavior should all be examined in this context in order to reduce reactivity to stimuli and the environment. As a result, it is critical to identify and treat the underlying causes of agitation as soon as feasible (pain, delirium, hypoxia, hypoglycemia, hypotension, alcohol withdrawal syndrome and other drugs

(dos Santos, Martins and Gonçalves, 2016)
The critical patients' dynamic nature need continual monitoring of pain, sedation, and agitation measures. In addition, regular reevaluation allows for more accurate monitoring of treatment response, easier management of unwanted signs and symptoms, and avoidance of excessive sedation. In this context, it emphasizes the nursing staff's efforts to care for sedated patients and the implementation of recognized sedation guidelines that can reduce mortality, MV time, and hospitalization time. For the depth of sedation control and effective analgesia, objective, reliable, and repeatable metrics are required. Because both too much and too little sedation can be dangerous, most patients' sedation goals are to relieve anxiety, encourage sleep, enable nursing care and the MV, and reduce myocardial oxygen demand.
(dos Santos, Martins and Gonçalves, 2016)

Venous thromboembolism (VTE) is a condition in which a thrombus gets embolized into the pulmonary artery system via the inferior vena cava and right heart chambers when an embolism develops in one or more veins of the systemic venous system (usually in the lower extremities or abdomen/pelvis). A deep venous thrombosis (DVT) and pulmonary embolism are the most prevalent clinical manifestations of VTE (PE). VTE is a global public health issue, and in many affluent nations, it is the leading cause of unnecessary hospital death. VTE is a major source of morbidity and mortality that can be avoided. Increased age, APACHE (acute physiology and chronic health evaluation) score, recent surgery, sepsis, previous VTE, malignancy, major trauma, lengthy hospital stays prior to the ICU transfer, mechanical ventilation, use of paralytic drugs, insertion of a femoral vein catheter, and failure to use a femoral vein catheter are all factors that predict an increased risk of VTE associated with

ICU admission and in severe circumstances, swelling of the affected extremity might lead to the formation of venous leg ulcers. Due to their frequent prolonged immobilization, medical-surgical patients in hospitals are at a high risk for DVT. Complications can arise as a result of prolonged immobility, and they are far easier to prevent than to treat. Nurses play a critical role in reducing immobilization-related problems. Nurses who are aware of the potential for immobility changes and who implement preventive treatments will save the patient a lot of discomforts. Nurses should make it their routine to prevent VTE by risk-assessing all hospitalized patients and providing thrombus prophylaxis as needed. (Mohammed, Tahaand El, 2018)

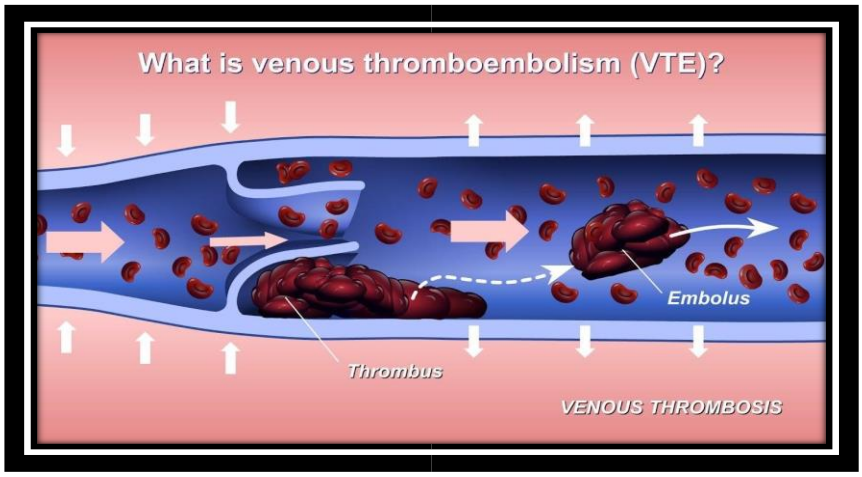

Figure 2: *Venous Thromboembolism*
(Ref: https://i.ytimg.com/vi/pHddAMauvFk/maxresdefault.jpg)

After a urinary tract infection induced by a bladder catheter, the most severe infection that might affect patients being treated in an intensive care unit (ICU) is pneumonia associated with mechanical ventilation (PAMV), which is the second most frequent hospital infection. Various scientific associations, expert groups, and healthcare organizations have studied the approaches that have been demonstrated to be beneficial in avoiding the emergence of PAMV and have developed recommendations in the form of packages of actions or "care bundles" based on this information. All of these guidelines and recommendations, both local and global propose "raising the head of the bed" as a prophylactic step. As a result, suggest or recommend that a mechanically ventilated patient's head of bed be kept at 30-—45 degrees to avoid aspirating the oropharynx or stomach contents and hence PAMV. Even the Joint Commission acknowledged this as one of the crucial procedures in enhancing vital patient. (Martí-Hereu and Arreciado Marañón, 2017)

Pressure ulcer (PU) prevention is still a significant challenge for nurses, and their incidence is considered as a sign of subpar care. Patients and their family are aware that pressure ulcers are painful and take a long time to heal. Risk factors for the development of pressure ulcers/injuries include advanced age, immobility, incontinence, poor nutrition and hydration, neuro-sensory impairment, device-related skin pressure, numerous comorbidities, and circulatory irregularities. The majority of pressure ulcers—95%—can be avoided. In acute care settings, the prevalence of adult pressure ulcers ranged from 0 to 12%; in critical care settings, it ranged from 24.3 to 53.4; and in geriatric care settings, it ranged from 1.9 to 59 percent. In Ethiopia, two cross-sectional investigations conducted at Felegehiwot and Dessie referral hospitals found that the overall prevalence rate of PU was 16.8% and 14.9 percent, respectively. Furthermore, these investigations indicated risk factors for PU, including prolonged hospitalization, a minor limit in sensory perception, irregular placement and activity, and friction/shear. (Ebi, Hirko and Mijena, 2019)

The use of histamine type 2 receptor blockers and proton pump inhibitors as stress ulcer prophylaxes has been shown to reduce the incidence of clinically significant gastrointestinal bleeding from stress ulcers, which increases patient mortality in intensive care. Although medical checklists are widely used in the intensive care field to ensure high compliance with medications and

interventions in order to improve patient outcomes, their efficacy in reducing the incidence of gastrointestinal bleeding and the unnecessary administration of stress ulcer prophylaxis medications has yet to be thoroughly investigated. (Ogasawara, 2020)

Diabetes has long been one of the world's major causes of death, illness, and disability. Patient education is important for diabetes control and management, according to the literature. However, research has revealed that nurses' (who are on the front lines of care) knowledge of diabetes varies and is insufficient in the populations studied. (Waheed N., 2017)

Diabetes mellitus is a chronic, systemic disease in which the body produces insufficient amounts of insulin or is unable to use it, leading to elevated blood glucose levels. Insulin is a hormone that allows glucose to enter cells and be broken down for energy production. Diabetes has been declared a worldwide epidemic. Nurses are well-positioned to provide care and counseling to these patients because they are the largest group of health care workers and have the longest contact time with them. According to research, patient education is essential for the management and treatment of diabetes. It was found that higher adherence to treatment plans and better blood sugar control resulted from increased patient comprehension of diabetes. A shorter hospital stays, a lower risk of developing chronic conditions, and an improved quality of life are just a few of the ways that great treatment can help diabetic patients. As a result, nurses must be well-versed in contemporary diabetic understanding and practices. (Waheed N., 2017)

The airway connects the nose, mouth, and lungs' alveoli, which spontaneously exchange oxygen (O2) and carbon dioxide (CO2) during breathing. To keep the airway, open and allow for typical physiological processes like a gas exchange, airway management is a technique, maneuver, or piece of equipment Insufficient O2 and CO2 exchange may necessitate manual ventilation. To control or enhance spontaneous air movements, however, simple airway opening techniques are frequently sufficient. The fundamental techniques continue to be the "cornerstones" of good emergency care since respiratory failures or airway problems are the main causes of death in the initial hours following an injury. As patients may die if these actions are not taken, airway and breathing management need to be attended to very away. Maintaining an airway without "endotracheal intubation" is one of the most crucial emergency airway management techniques for keeping patients alive. Basic airway and breathing management include opening the airway with manual techniques like head tilt-chin lift, jaw push, recovery positions, maintaining the airway with devices like oropharyngeal and nasopharyngeal airways, oxygen therapy, suctioning/removing secretion, and ventilation. Numerous procedures, including the Heimlich maneuver, chest thrusts, and back blows (slaps), can be employed to manage the primary airway in the case of a foreign body obstruction. The most frequent justifications for more oxygen are tissue hypoxia and arterial hypoxemia. Options for supplying oxygen include basic masks, partial rebreathing masks, high-flow delivery systems (venture masks), low-flow delivery systems (nasal prong/cannula), and bag-maskventilation. (Nigatu Mulachew et.al, 2022)

Even though maintaining normal bowel function for a critically sick patient is frequently considered a low priority in the highly sophisticated intensive care unit (ICU) environment, it is essential to do so in order to prevent issues that could postpone discharge. Patients who are critically sick are more likely to experience bowel dysfunction issues because of things like decreased mobility, an underlying disease process or illness, mechanical breathing, and the use of continuous or intermittent analgesics. Constipation, diarrhea, delays in weaning from artificial support, a longer hospital stay, dehydration, and intestinal obstruction or perforation are among the complications. By directing physicians in care delivery, ensuring that a prompt therapy or intervention is initiated, and reducing complications, protocols can improve bowel management in the ICU. With initial tests showing a decrease in constipation and diarrhea, bowel management protocols (BMPs) have been established specifically for use with ICU patients. (Knowles Serena, 2015)

The excretory system is a passive biological mechanism that eliminates extraneous substances from an organism's body fluids in order to preserve internal chemical balance and guard against physical harm. The removal of metabolic waste products and the draining out of the body's usedup and degraded components in a liquid and gaseous condition are the two functions of excretory systems. The majority of these compounds are eliminated from the body through urine in both humans and other amniotes (mammals, birds, and reptiles). Mammals also sweat off these molecules

to some extent. A catheter is inserted into the urinary bladder through the urethra during a sterile operation called urinary catheterization to drain the bladder. Urine catheterization is typically performed in patients who have spinal cord injury, Spina Bifida, urinary retention, urinary incontinence, genital surgery, prostate surgery, etc. intermittent urine catheterization, indwelling urinary catheterization, and suprapubic urinary catheterization are some of the many catheterization techniques. Intermittent urinary catheters are advised in the majority of situations.

A water-filled balloon keeps the catheter in the bladder and prevents it from escaping. These catheters are frequently referred to as Foley catheters. A catheter that is left in place is referred to as a suprapubic catheter. The catheter is placed into the bladder without going through the urethra; instead, it goes through a hole in the belly. Both general anesthesia and epidural anesthesia are acceptable for this surgery.
One of the major side effects of urinary catheterization is catheter-associated UTI. Many difficulties can be avoided with proper catheter care. Catheter care aids in determining the condition of the bladder catheter that has been inserted. With proper catheter care, fewer germs reach the bladder. Trauma or the introduction of bacteria into the urinary system reduces the risk of infection, which could lead to septicemia or even death.

The assessment of a person who is catheterized by a staff nurse is a crucial component of catheter care since the longer the catheter is left in place without the right treatment, the higher the frequency of infection becomes. By properly managing the catheter, it is possible to effectively avoid minimizing the potential introduction of bacteria into the bladder. The anatomy and physiology of the urinary tract and urinary system, as well as the ideas of infection prevention and sterility, as well as specific techniques used to care for patients with urinary catheters, must all be understood by the CNA in order to be competent in providing urinary catheter care. (Joshy Meenu et.al, 2018)

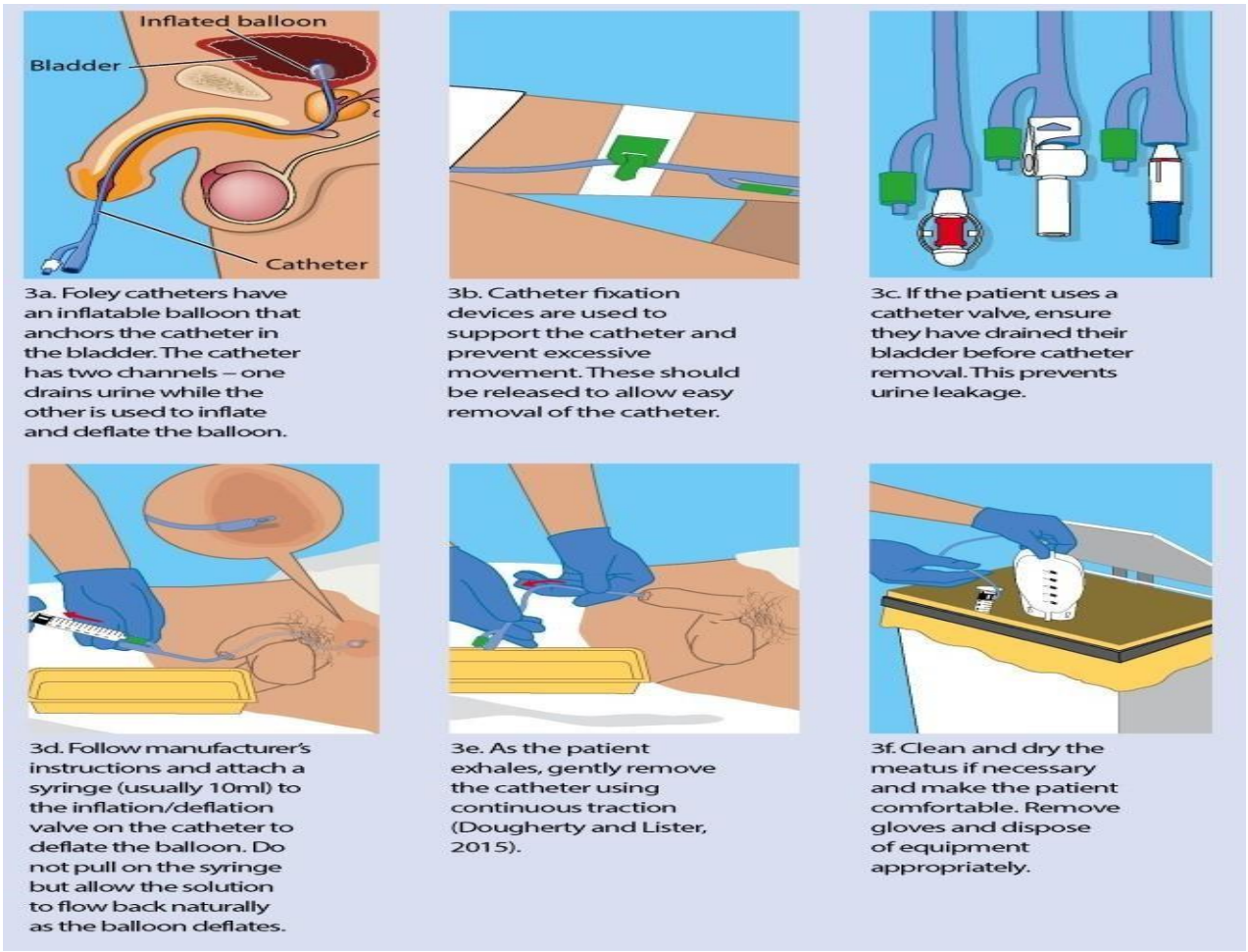

Figure 3: *Indwelling Urinary Catheter*
(Ref:https://cdn.ps.emap.com/wp-content/uploads/sites/3/2017/05/fig-3_660.jpg)

An infection that is occurring in a patient while they are receiving care in a hospital or other healthcare facility is known as a "healthcare-associated infection" (HCAI), also known as a "nosocomial" or "hospital" infection. This infection was not present or incubating at the time the patient was admitted. The main factor contributing to secondary healthcare-related bacteremia is catheter-associated urinary tract infections (CAUTI). A urinary tract infection is an infection that affects any of the kidneys, urethra, bladder, or ureter organs or urinary tract infection structure. Urinary catheters are to blame for over 75% of urinary tract infections that occur in hospitals. Indwelling urinary catheter use for an extended period of time increases the incidence of catheterassociated urinary tract infections. Numerous microorganisms can result in catheter-associated urinary tract infections. E. coli (21.4 percent), Candida (21 percent), enterococci (14.9 percent), pseudomonas aeruginosa (10 percent), and other infections are frequently linked.

Antibiotic resistance is a concern to the global health care system. Nurses are crucial in addressing this problem. Unquestionably, antibiotics rank among the greatest medical advances, but the threat posed by antibiotic resistance (AR) is already at its breaking point. The provision of life-saving care, such as chemotherapy and surgical treatments, handling of newborn abnormalities, and treatment of infections like tuberculosis and pneumonia have all been substantially hampered by AR (Hiltunen et al., 2017; Martinez, 2012). Prophylactic antibiotics are frequently given as part of surgery, organ transplantation, and cancer chemotherapy to prevent infections, which was cited as the cause of this illness (Bow, 2013; Bratzler et al., 2013). Rising AR reduces the effectiveness of these treatments and may have serious medical repercussions (such as high morbidity, amputation, or death) (Smith & Coast, 2013)

(Lalithaba Diana S., et.al, 2022)

RESEARCH PROBLEM

The present review was aimed to gain a comprehensive understanding of FAST HUGS BID and its components ranging from its knowledge and implementation in Intensive Care Unit. The narrative review had been divided into four sections. Each section examined seven, seven, eight, eight respectively related studies. These sections are:

1. First section deals with knowledge of FAST HUGS BID and its component (F- Feeding) among ICUs staff nurses and its implementation.
2. Second section will take into account investigations that studied the knowledge of FAST HUGS BID's component (A- Analgesics and S- Sedative) among ICUs staff nurses and its implementation.
3. Third section deals with studies dedicated towards gaining insight into the knowledge of FAST HUGS BID's component (T- Thromboembolic prophylaxis, H- Head of the bed elevation, U- Ulcer (stress) prophylaxis, G- Glycemic control) among ICUs staff nurses and its implementation.
4. Finally, the fourth section deals with the knowledge of FAST HUGS BID's component (S- Spontaneous breathing trial, B- Bowel regimen, I-Indwelling catheter removal, and D- Deescalation of antibiotics) among ICUs staff nurses and its implementation.

METHODS

A narrative review was designed. A systematic electronic search was used to identify relevant studies. The original research papers were only included in study. The electronic databases searched were: PubMed, EBSCO, Research Gate, Scopus and Allied Health Literature (CINHAL).

The existing literatures were very systematically opted to recruit into this narrative review.

Keywords: FAST HUGS BID**,** components of Fast Hugs Bid, Feeding, Analgesics, Sedative, Thromboembolic prophylaxis, Head of the bed elevation, Ulcer (stress) prophylaxis, Glycemic control, Spontaneous breathing trial, Bowel regimen, Indwelling catheter removal, De-escalation of antibiotics, Intensive care Unit.

Inclusion Criteria

1. The paper which is easily accessible online and full text available.
2. Original Research paper related to the topic.
3. The studies which are completed in English language.
4. Research articles published from the year 2017 onwards only one with 2015.

Exclusion Criteria

1. The research studies which are not available on journal database.
2. Poor quality journal publications.
3. The research study which is published in without ISSN number journals.
4. The studies which are published in local language.

RESULTS AND DISCUSSION

• FAST HUGS BID and its component Feeding: knowledge and practices among staff nurses in ICU.

Title of the article	Design	Sampling Technique	Sample	Findings
Effectiveness of structured teaching Program and information booklet on knowledge	Preexperimental	onprobability	40	The Structured Teaching Program was helpful in
regarding FAST HUGS BID.	(One group pretest posttest design)	purposive sampling		boosting awareness of FAST HUGS BID, improves patient care and safety for critically sick patients among ICU staff nurses.
Efficiency of a selfinstructional module on staff nurses' knowledge of FAST HUGS BID on critically ill patients in tertiary care hospital at Karad"	Preexperimental	Purposive sampling	33	33 (100%) had an adequate level of comprehension of FAST HUGS BID on the critically ill patient after administering the selfinstructional module.
The effectiveness of information booklet on knowledge regarding FAST HUG BID among critical care nurses at selected hospital in Mysuru.	Preexperimental	Purposive sampling	60	There was a substantial variation in knowledge scores before and after providing the information booklet.
Nurses´ Knowledge, Practice, and Associated Factors with Enteral Nutrition in Adult Intensive Care Units of Public Hospitals.	Crosssectional study design	Simple random sampling	192	Roughly two-thirds of the respondents (130, or 67.7%) had insufficient understanding, while 62, or 32.3 percent, had appropriate knowledge). More than half of the 103 (53.8%) respondents reported poor enteral feeding practices, whereas only 89 (46.4%) had good practices, one hundred
				fourteen (59.4%), 115 (59.9%), and 98 (51.0%) of the participants said they always confirm tube placement before delivering a feeding, flushing the tube before and after administration of a feeding, and documenting any nutritional support or complication about their patient, respectively. However, 117 (60.9%), 125 (65.1%), and 129 (67.2%) of them said they did not always check gastric residuals. Lack of resources accounted for 45.8% of the issues nurses experience in providing nutritional care in the ICU, followed by patients' inability to buy meals, which accounted for 22.4 percent.
The effectiveness of implementing an enteral feeding protocol on the nutritional delivery and outcomes of intensive care patient	An uncontrolled, observational before-andafter study		231 patients in the before group and 249 in the after group. the	The use of a nurse-driven feeding protocol improves the delivery of enteral nutrition in ICU patients without concomitant increases in
			Following (after) group had fewer mechanic ally ventilated patients (86.7 percent versus 93.1 percent in the before group,	gastrointestinal symptoms or intra-abdominal hypertension**.**

It was found that ICU nurses had insufficient knowledge regarding FAST HUGS BID and its component feeding which results to poor implementation. After administration of STP, Information booklet and self-instructional module the knowledge scores boosted which improves the patient care.

- **Analgesics and Sedation knowledge and practices in ICU: FAST HUGS BID Components**

Title of the article	Design	Sampling Technique	Sample	Findings
Nurses 'Knowledge, practice, and associated factors of pain assessment in critically sick adult patients at public hospitals in Addis Ababa, Ethiopia	cross-sectional study	Purposive sampling	111	Sixty percent of nurses had adequate knowledge, whereas 55.9% had good practice. Workload [OR =
				7.766, CI = 2.450, 24.617), sedation [OR = 7.628, CI = (2.348, 24.778)], and knowledge [OR = 5.219, CI =(1.673, 16.280)] were all associated to pain assessment practice.
Effect of comprehensive pain management training program on awareness and attitude of ICU nurses	Quasiexperimental single-group study	Convenience sampling	32	The mean score of the nurses' awareness was significantly different in pre- and post-intervention phases (P < 0.05). Despite an increase in the post-intervention mean score of the nurses' attitude(71.03),no Statistically significant change was observed. Additionally, among the
				Demographic variables, there was only a significant relationship between the nurses' job experience in ICUs and their attitudes.
Nurses' Attitudes and Practices Related to Sedation: A National Survey	Descriptive study	Convenience sampling	177	Respondents (N = 177) were mostly staff nurses (68%) with a bachelor's degree in nursing(63%). Nurses' attitudes toward the effectiveness of sedation in relieving patients 'distress during mechanical ventilation correlated positively with their intention to administer sedatives (rs = 0.65). Sixty-six percent of nurses agreed that
				Sedation was necessary for patients' comfort, and 34% agreed that limiting patients' recall was a desired outcome of sedation. Respondents with more experience or CCRN certification had a less positive evaluation of the effectiveness of sedation in minimizing distress.
Challenges and barriers to optimizing sedation in intensive care: a qualitative study in eight Scottish intensive care units	Qualitative exploratory design	Convenience sampling	90 participants: Eight Scottish ICUs.	The current implementation of guidelines does not support behavior change strategies to allow a patient-focused approach to sedation management, which obstructs optimum
				sedation– analgesia management. Recognition of the various challenges when mandating less sedation needs to be considered and novel sedation– analgesia strategies should allow a systemlevel approach to improve sedation–analgesia quality.
A prospective, observational, longitudinal cohort study of sedation practices in SGH intensive care units.	Single-center prospective, observation cohort study	Convenience sampling	58	Propofol and morphine were the most commonly prescribed sedatives. Different sedation practices between units may contribute to a reduction in delirium incidence.

Characterization of the sedation and analgesia in Intensive Care Unit: an observational study.	Crosssectional , observational study		30	Lack standardization of approaches in the management of sedation. It is recommended to develop protocols with multidisciplinary effort.
Analysis of trends in usage of analgesics and sedatives in intensive care units of South Korea	A nationwide, retrospective, observational study.		A total of 779 ,98 5 patients were admitted to an ICU between 2010 and 2014 in South Korea.	There was discordance between current usage of analgesics and sedatives and the recommended usage stipulated by ICU guidelines.

It was found that Pethidine usage had declined from 2010 to 2012, while remifentanil usage had increased among analgesics used in all categories of hospitals, according to an analysis of the trend linked with analgesic and sedative usage from 2013 to 2014, based on hospital type. The usage of diazepam, a sedative, was lowered in hospitals of all types. Other analgesics and sedatives were used differently in each facility. The usage of remifentanil grew dramatically in surgical departments, while the use of all benzodiazepines declined significantly in both surgical and medical departments.

• Components Thromboembolic prophylaxis, Head of the bed elevation, Ulcer prophylaxis, and Glycemic Control and Sedation knowledge and practices in ICU: FAST HUGSBID

Title of the article	Design	Sampling Technique	Sample	Findings
Nurses' Performance Regarding Venous Thromboembolism Prophylaxis at Intensive Care Unit	Descriptive exploratory design	Convenience sampling	91	None of the studied nurses had satisfactory total practice regarding venous thromboembolism prophylaxis. 56.0% of the studied nurses had satisfactory attitude regarding venous thromboembolism prophylaxis. Relation's analysis showed no statistically significant relation between studied nurses' knowledge, attitude and personal and job characteristics. There was statistically significant positive correlation between age and experience and significant negative correlation between total knowledge and experience.
Integrating the "best" evidence into nursing of venous thromboembolism in ICU patients using the i-PARIHS framework	Mixed methods design (Implement ation-study design)		47 nurses and 5 doctors	A new nursing process, a health education manual and a nursing quality checklist on VTE has been established and proved to be appropriate through the implementation. Compliance with evidence related to VTE nursing increased significantly in the two units, with better compliance in unit B than unit A. The knowledge, attitude and behavior scores for VTE nursing increased substantially in both nurses and patients.
Time of elevation of head of bed for patients receiving mechanical ventilation and its related factors	Observational, descriptive cross sectional study.	Non-probabilistic consecutive sampling	261 head elevation measure ments were collected.	The average daily hours that patients remained at ≥30◦ was 16h28′ (SD ± 5h38′), equivalent to 68.6% (SD ± 23.5%) of the day. Factors related to elevations ≥30◦ for longer were: enteral nutrition, levels of deep sedation, cardiac and neuro critical diagnostics. Factors that hindered the position
				were: sedation levels for agitation and abdominal pathologies. Sex, age and ventilation mode did not show a significant relationship with bed head elevation.

Can Intensive Care Nurses Accurately Estimate Head of Bed Angle?	Descriptive study	Volunteer sampling	36 three different ICUs (cardiova scular surgery, medical, and coronary)	When asked about the recommended HOB angle to prevent VAP, 55.6% of the nurses responded with 45°, 22.2% responded with 30°–45°, and 11.1% responded with 30°. While 91.7% of the nurses used the estimation method when setting the HOB angle, only 48.5% stated that they were confident of their estimate and often set the intended HOB angle incorrectly. There were no significant relationships between the nurses' length of nursing experience or intensive care experience and nurses' accuracy when estimating the HOB angle.
Nurses' knowledge to pressure ulcer	Descriptive multi center cross-	Simple random sampling	212	Analysis of the study displayed 91.5% had
prevention in public hospitals in Wollega: a cross-sectional study design	sectional study design			In adequate knowledge to pressure ulcer prevention.
Impact of the stress ulcer prophylactic protocol on reducing the unnecessary administration of stress ulcer medications and gastrointestinal bleeding: a single- center, retrospective pre-post study	Retrospective pre-post study at a single center		100	After the checklist and the criteria were introduced, the administration of stress ulcer prophylaxis medications decreased without an increase in upper gastrointestinal bleeding in critically ill adults. Prospective studies are necessary to evaluate the causal relationship between the introduction of them and gastrointestinal adverse events in critically ill adults.
Nurses' Knowledge of Blood Glucose Levels and the Management of Hypoglycemia and Hyperglycemia: A Descriptive Study	Descriptive study design	Convenience sampling technique	20	Demographic data were not correlated with higher knowledge scores or higher observation scores. However, a statistically significant, positive correlation was found between hospital accreditation for blood glucose monitoring and practices score.
Practice of Hyperglycemia Control in Intensive Care Units of the 2 Military Hospital, Sudan - Needs of a Protocol	Hospital based cross sectional study	Stratified, Random sampling technique, Quota sampling	83health care staff selected through Stratified 35 random sampling technique . In addition, 55 patients were enrolled, through quota sampling, fter 36 excluding those with diabetic ketoacido sis, hyperosm olarhypergly cemic state and	The poor knowledge and lack of awareness towards hyper- glycemia monitoring led to inappropriate implementation of glycaemia control methods across the Military Hospital ICUs**.**
			patients < 18 37 years**.**	

It was found that there was no statistically significant relationship between the investigated nurses' knowledge, attitude, and personal and professional characteristics, according to the related analysis. Age and experience had a statistically significant positive association, while overall knowledge and experience had a statistically significant negative correlation. A novel nursing approach, a health education guidebook, and a nursing quality checklist have all been created and put into practice in relation to VTE. In both units, compliance with evidence linked to VTE nursing increased dramatically. There was no significant association between bed head elevation and sex, age, or ventilation mode. Method of ventilation (volume control, pressure control, pressure regulated volume control). The nurses' accuracy in estimating the 30°, 45°, and 60° HOB angles did not significantly correlate with the length of their nursing experience (two =0.707,

p=0.40, two =0.00, p=1.00, and two =0.129, p=1.00, respectively). The nurses' accuracy in estimating the 30°, 45°, and 60° HOB angles did not correlate with their ICU experience (2 =0.043, p=1.00; 2 =0.044, p=1.00; and 2 =0.150, p=1.00, respectively). Lack of pressure-relieving equipment, a staffing shortage, and a lack of training were the three most often cited perceived barriers to the practice of pressure ulcer prevention. Sixty-six percent of the participants (156, or 73.6%) had never read about pressure ulcers, and 138 (65.1%) had never received PU training. Between the pre-and postintervention groups, the proportion of stress ulcer prevention medications prescribed reduced from 100% to 38%. The poor knowledge and lack of awareness of hyperglycemia monitoring led to the inappropriate implementation of glycemic control methods across the Military Hospital ICUs.

• Spontaneous breathing trial, Bowel regimen, indwelling catheter removal, and Deescalation of antibiotics knowledge and practices in ICU: FAST HUGS BID Components

Title of the article	Design	Sampling Technique	Sample	Findings
Assessment of Knowledge, Practice, and Associated Factors Towards Airway and BreathingManagement Among Nurses Working in the Emergency Departments of Selected Public Hospitals in Addis Ababa, Ethiopia: A Cross-Sectional Study	A crosssectional survey	Simple Random	102	The respondents in this study had insufficient knowledge of airway and breathing management. As a result, it is critical to give nursing training because it is strongly linked to the knowledge and practice of nurses.
Knowledge, attitudes, beliefs and behavior intentions for three bowel management practices in intensive care: effects of a targeted protocol implementation for nursing and medical staff.	A descriptive before and after survey		130 (nurses = 103, doctors = 27)	Participants had significantly higher knowledge scores postimplementation of our protocol (pre mean score 17.6; post mean score 19.3; p = 0.004). Postimplementation there was a significant increase in: self-reported past behavior (pre mean score 5.38; post mean score 7.11; p = 0.002) and subjective norms scores
				(pre mean score 3.62; post mean score 4.18; p = 0.016) for bowel assessment; and behavior intention (pre mean score 5.22; post mean score 5.65; p = 0.048) for administration of enema.
A study to a the ssess in knowledge on practice regarding urinary catheter management among staff nurses selected hospital at mangaluru.	Non experimental descriptive design	Non probability convenient sampling	100	The study result that the majority of the staff nurses (82%) had very good knowledge, 10% had good knowledge and 8% had excellent knowledge about catheter management. There was significant association between Knowledge and source of information (p value= 0.001 <0.05). There was no significant association between knowledge scores and other demographic variables.
Knowledge on Practice of Urinary Catheter Care and Compliance to Urinary Catheter	Descriptive survey design	Non probability Purposive sampling technique	108	Majority 89(82.4%) of the participants had average knowledge 18(16.7%) had good knowledge on prevention of catheter
Care Guidelines- A Hospital based Study				associated urinary tract infections. There was maximum noncompliance to the procedural steps while performing urine specimen collection, removal of urinary catheter and maintenance of urinary catheter.

Knowledge of Nurses toward Prevention for Catheter-Associated Urinary Tract Infection in Public Hospitals at Amran City, Yemen	Descriptive crosssectional study	Convenience sampling technique	93	The distribution of nurses' ware female 65.6%, be- longed to age group between (25 to <30 years) 43.0%. The Diploma degree was the most available qualification 88.2%, 81.7% between 1 - 5 years' experience as nurses. Knowledge regarding prevention of catheter-associated Urinary tract infection was fair 72%, while 18.3% had a good. There is a significant statistical difference between knowledge level regarding prevention of CAUTI, and sex (P-value
				= 0.042).
Knowledge, Attitude and Beliefs of Nurses Regarding Antibiotic use and Prevention of Antibiotic Resistance.	Crosssectional study	convenience sampling	350	The nurses surveyed showed moderate awareness of antibiotic resistance and a fair attitude towards its prevention. There was no significant correlation of demographic features with their overall knowledge and attitude (p > 0.05).
Knowledge, beliefs and practices on antibiotic use and resistance among a group of trainee nurses in Sri Lanka.	Descriptive crosssectional study	convenience sampling	199	Hundred and ninety-three students (97%) had heard about antibiotic resistance. Of them, 161 had defined it using their own terms. Their definitions could be categorized into several themes. The commonest them (n=65, 40.4%) of antibiotic resistance was "bacteria not being responsive or not answering to antibiotic treatment". Forty (24.8%) participants defined antibiotic resistance as "bacteria resisting the
				activity of antibiotics". Seventeen (10.6%) of the participants had defined antibiotic resistance as humans becoming resistant to antibiotics. The qualitative approaches into understanding are more effective in determining the level of awareness.
Knowledge, Attitude and Practice of Paramedical Staff Towards Antibiotic Usage and its Resistance.	Crosssectional survey based study.	Volunteer sampling	A total of 441 paramedical staffs (nurses, technicians, optometrist,audiologists, labassistants, harmacists, physiotherapists and clerks)	Good knowledge of Paramedical staffs with regards to antibiotic resistance and side effects, nonetheless them attitude and practices toward antibiotic usage are often contradictory and poor.

It was found that the significant correlation between prior airway and breathing management training and knowledge was 0.05. The majority of the staff nurses (82%) were found to have outstanding knowledge of catheter care, compared to 10% who had good knowledge and 8% who had very good knowledge. The average nursing knowledge score was 21.62. The mean percent for the knowledge score for catheter management was 72.06 percent when subject-specific knowledge was evaluated. Knowledge and the source of the information had a significant correlation (p-value = 0.001). Only 1 (0.9 percent) of the 108 participants had an inadequate understanding of the procedure for caring for urinary catheters, whereas 89 (82.4 percent) had average knowledge. The care of urinary catheters was observed covertly in order to gauge compliance. The majority of the participants, 89 (82.4%), had average knowledge, while 18 (16.7%) had a high understanding of how to prevent catheter-associated urinary tract infections. The collection of urine samples, the removal of a urinary catheter, and the upkeep of a urinary catheter all involved the greatest degree of procedural non-compliance. There was a statistically significant difference

between sex and knowledge of CAUTI prevention (P-value = 0.042). The nurses polled demonstrated fair attitudes toward its prevention and a modest level of awareness of antibiotic resistance. Demographic characteristics and total knowledge and attitude did not significantly correlate ($p > 0.05$).

CONCLUSION

Following an in-depth document search, ICU staff nurses were able to have a better grasp of the Fast Hugs Bid and its component (F-feeding, i.e., Enteral Feeding). It was found that ICU staff nurses had an inadequate or moderate level of knowledge prior to the exam/test, but that their knowledge improved to a moderate or adequate level following the intervention, such as STP, Selfinstructional module, information booklet, and nutritional feeding programs. This highlights the critical need of strengthening ICU staff nurses' knowledge of Fast Hugs Bid and its enteral feeding component in order to improve patient care and safety, as well as improving Fast Hugs Bid mnemonic practice in order to improve nurse quality care. Due to a lack of basic information and practiced enteral feeding, enteral nutritional intake was insufficient in ICU patients. A nurse-led feeding Programme improved enteral nutrition delivery in ICU patients while also lowering gastrointestinal symptoms and intra-abdominal hypertension.

Pain management and sedation in ICU patients are global issues of major importance. Almost half of the staff nurses had sufficient knowledge and experience with analgesics and sedation. The nurses' knowledge, attitude, and practice before and after the intervention showed that teaching a complete pain management program/training program, well as its practical and operational implementation, might be successful in improving the nurses' knowledge, attitude, and practice. Nurses' attitudes and experience, as well as the unit or organization's environment, must all be taken into account when influencing sedation methods in the ICU. There was no standardization in the service when it came to dosages and medicine types. However, staff understanding of protocol adherence is critical so that they may design tactics that allow this process to contribute to improved patient care and lower hospital expenses.

Thromboembolic prophylaxis, Head of bed elevation, Ulcer (stress) prophylaxis, and Glycemic control (Fast Hugs Bid component) in ICU patients are global issues of major importance. It can be stated that the nurses surveyed had insufficient overall knowledge and no satisfactory VTE prophylactic procedures. The EI Programme established feasibility, appropriateness, and effectiveness and may be used as a model because it utilized the i-PARIHS framework to incorporate the "best" data on VTE nursing into clinical practice. Despite the fact that raising the head of the bed is a simple, cost-effective, and measurable preventive treatment, compliance is limited due to particular circumstances unique to the patient's clinical condition. Continuous measurement of head position, for example, aids in the evaluation of clinical practice and enables the implementation of improvement activities that benefit the patient. The nurses are primarily responsible for patient placement and ensuring that the standard measures are met. When modifying the suggested HOB angle to prevent VAP, most ICU nurses employed the estimating approach, although the HOB angle estimates were largely wrong. When modifying the suggested HOB angle to prevent VAP, most ICU nurses employed the estimating approach, although the HOB angle estimates were largely wrong. The PU knowledge assessments of nurses who attended training and read publications revealed a significant difference. Lack of pressure-relieving devices, a staffing shortfall and a busy workload were obstacles that nurses had to overcome in order to practice PU prevention. Due to a lack of understanding and awareness of hyperglycemia management, glycemic control measures were implemented incorrectly.

It can be said that the management of the airway and breathing was inadequate. The idea of planned behavior has shed light on what motivates clinicians to utilize evidence-based bowel control techniques in critical care. Targeting implementation strategies can help to influence clinician behavior change by addressing elements including knowledge, attitudes, and beliefs. Although clinician knowledge ratings increased, the implementation method did not significantly alter physician behavior intentions for any of the three bowel management procedures. Despite the staff nurses' good knowledge of catheter-associated urinary tract infection prevention, there was a high rate of noncompliance with catheter management procedures. Only 18.3% of nurses had high awareness of CAUTI prevention, compared to two-thirds who had a fair understanding. Although nurses play a crucial role in the prevention of antibiotic resistance as frontline health professionals, the study revealed that nurses' own knowledge of the fundamentals of

antibiotics, antibiotic resistance, and the strategies to be used in its prevention is lacking.

SCOPE FOR FURTHER WORK

Future projected research on FAST HUGS BID will focus on the testing and creation of new teaching materials/modules and skill-enhancing programs in order to expand and improve the knowledge of staff nurses working in ICUs, as well as increase patient safety and minimize mortality. Ongoing health education and teaching programs can aid in the advancement of knowledge and practices. Ongoing health initiatives/ campaigns and public awareness programs to raise awareness about the usage of Fast Hug.

Nurses will benefit from video education to improve their knowledge and skills in pain management and sedation. Brief group talks on protocol and standards will be useful in raising the nurses' awareness of pain management and sedation. Implementing a pain management and sedation training program can help advance understanding and procedures. To raise awareness about the use of Fast Hug Bid, there are ongoing health initiatives/campaigns and public awareness programs.

Nurses need refresher training and educational programs on VTE on a regular basis to improve their knowledge and practice. More research is needed to determine the impact of a training Programme on nurses' knowledge and practice of VTE prevention. In intensive care nurse training programs, in order to change the HOB angle, it is crucial to use an objective angle indicator. PU education Programme as a strong tool for nurses to have a better grasp of PU stays up to date on current PU knowledge, and alleviates patient suffering." The study should be duplicated in other nursing units and healthcare organizations to see if the same outcomes can be obtained. The questionnaire might be expanded to cover more elements of diabetes care, allowing for a more accurate and clearer image to be generated to aid in the creation of educational programs for hospital nurses. Sustained hyperglycemia control training programs for ICU staff, as well as the availability of a glycemic control plan, are essential. To improve their knowledge and practice, providing training and educational programs for nurses who give bedside care to ICU patients.

The preparation of nurses for patient care is greatly aided by nursing education. Modern nursing practices demand nurses to have a broad knowledge base, which can be acquired through education. The significance of trials of spontaneous breathing, bowel regimen, removal of indwelling catheters, and de-escalation of antibiotics must be emphasized in the nursing curriculum (Fast Hugs Bid component). Clinical nurses must be knowledgeable about catheter management in order to educate staff nurses in both clinical and community settings. Based on the results of the study, the following can be recommended:

1) Provide documented, up-to-date instructions based on research that encourage urinary catheterization with sufficient expertise and high standards of safety in nursing care to guarantee a decrease in the rate of CAUTI.

2) Future studies should establish a set of evidence-based recommendations for nursesonly CAUTI prevention and catheter management.

3) To identify the key elements of these issues, general and private hospitals should do a study replication using a bigger probability sample collected from various geographic areas. According to the study, in order to stop the spread of antibiotic resistance, we should support initiatives that educate people about antibiotic use and establish creative policies to draw attention to campaigns that aim to prevent the emergence of antibiotic resistance.

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