Research

Nurses' Practices and Perceived Challenges of Meeting Nutrition Needs of Critically Ill Patients Through Enteral Feeding: A Qualitative Study at a Tertiary Hospital, Tanzania

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ABSTRACT

Background: Enteral feeding is used when hospital patients are unable to meet their nutritional needs orally. It is important to understand current practices and challenges from nurses' perceptions.

Aim: To explore nurses' practices and challenges for meeting the nutrition needs of critically ill patients.

Methods: An exploratory qualitative design was used involving 16 in-depth interviews of nurses working in Intensive Care Units. Twenty observations of nurses' enteral feeding practices were conducted to supplement the data. The interviews were analyzed using qualitative thematic analysis and observation data were analysed using simple statistics.

Results: Only five nurses assessed nutritional status, one nurse adhered to infection prevention control measures before feeding, and eight nurses assessed proper tube placement. Nurses perceived failure to provide optimal nutritional support in patients with critical illness is due to a lack of enough and appropriate food, lack of appropriate feeding equipment, nurses' incompetence in assessing and feeding patients, and inappropriate feeding practices by relatives.

Conclusion: Nurses' feeding practices were found to be inappropriate and accompanied with challenges that expose patients to complications and suboptimal nutritional care with enteral feeding. For optimal and safe practice in providing nutrition support, enforcement of quality improvement measures that foster nurses' commitment to the observance of safety protocols of enteral feeding, availability of appropriate feeding tubes, continuous training for nurses, and close supervision of relatives who feed their patients is required.

Keywords: Critically Ill patient, Enteral feeding, Qualitative

INTRODUCTION

Nutrition support in critically ill patients undoubtedly contributes to recovery at some point during critical illness. During critical illness, the body undergoes extreme physiological stress. In response to this, the basal metabolic rate rises leading to an increased demand for energy. The rising demand for energy during critical illness leads to the mobilization of glucose from body sources including the breaking down of protein, which increases patients' risk for developing malnutrition (Fletcher, 2015). While the body's demand for nutrition in a critical illness is high, feeding behaviours change (Griffiths and Bongers, 2005). In most cases, critically ill patients cannot swallow or are unable to ingest food and alternative approaches to oral intake should be used to meet the nutrition requirements of patients. However, the optimal timing, protein and energy dosing, and assessment of patients who may benefit from a nutrition strategy regimen remain lacking.

Nurses in many critical care settings have opted for enteral feeding to deliver feeds that meet the nutrition requirements of critically ill patients (O'Leary-Kelley and Bawel-Brinkley, 2017). This strategy makes feeding to be one of the key nursing interventions to support patients who are critically ill. Enteral feeding using nasogastric tubes (NGT) is a common feeding practice used by nurses (Emmons, 2014; Mula, 2014a). For the patient to benefit, it is important that they receive adequate nutrition delivered safely especially for critically ill patients whose conditions demands for mandatory proper feeding to meet their nutrition needs as well as therapeutic needs (Chowdhury and Lobaz, 2019). To ensure proper feeding, nurses are required to carry out this procedure appropriately and correctly. The nurse must be able to select an appropriate size of the tube, evaluate the right position for the tube, know different ways of securing the tube, place the patient in the right position for feeding, assess the patency of the tube, ensure that the tube remains in the right place before and after feeding, and ensure the right amount of feeds (Mohammed, Attia and Abdelrahman, 2020). However, there is a concern about whether such practices are correctly done by nurses in accordance with the best practice (Marshall *et al.*, 2012; Babapour and Esmaeili, 2016; Mohammed *et al.*, 2016). Inadequate training, unavailable protocols and lack of specialized clinical nutritionist were identified as major challenges for providing optimal nutrition support in underdeveloped critical care settings (Chowdhury and Lobaz, 2019). Similar challenges might exist in Tanzanian critical care settings**.**

Critical care services in Tanzania are mainly provided at national tertiary hospitals, national specialist hospitals, and zonal referral hospitals. To increase accessibility to larger population, the government envisions to strengthen specialized care services including critical care to regional and district hospitals (MoH, 2021). Despite the government effort, challenges such as ICU infrastructure, shortage of trained ICU staff, and equipment limit provision of essential critical care in Tanzania (MoH, 2022). Furthermore, there are limited empirical studies exploring quality of care provided including nutrition support and their implications to clinical outcomes of patients admitted in these settings. The purpose of this study was to understand the current practices and challenges encountered in meeting nutrition needs of critically ill patients. Nurses are frontline practitioners for meeting nutrition needs of critically ill patients. Their perception and current practices would provide insights on areas that require specific interventions for optimal provision of nutrition support in critical care settings. Therefore, this study aimed to explore nurses' practices and their perceptions of challenges for meeting nutrition needs of critically ill patients using enteral feeding.

METHODS

Study design

An exploratory qualitative research design was chosen using in-depth interviews and observation to understand nurses' feeding practices and perceptions of challenges for meeting the nutritional needs of patients in critical care settings.

Study setting and sample

This study was conducted at Muhimbili National Hospital (MNH), a tertiary teaching hospital located in the capital city, Dar es Salaam, Tanzania. The hospital receives patients referred from the country's regional and zonal referral hospitals and serves approximately 641 out-patients per week, admitting about 115 patients per week. Most patients who are referred to this hospital are very sick and are at the critical stage of their disease. There are two ICUs with eight beds each and four HDUs with five beds each. Patients admitted in ICU require invasive ventilatory support. An HDU is a critical care unit that admits patients that need less extensive care as the one provided in ICU but more extensive care than that in a normal ward. All patients admitted to these settings are dependent on nutritional support and other nursing care. The total number of nurses working in this hospital is 268 and those working in ICU, medical and surgical high dependency units are 32. The ICU and HDU are staffed by nurses with either a diploma or a degree. A purposive sample of 20 nurses who had worked for more than one year in ICU were recruited for the in-depth interviews and observations.

Data collection and tools

Observation of nurses' practices of feeding patients through a nasogastric tube

During April and May 2019, twenty observations were conducted by the second author to understand the existing practice concerning the feeding of a critically ill patient using nasogastric tubes. Ten observations were conducted in the ICU, and ten in the medical HDU. A checklist of 14 observable items was used outlining what nurses do before feeding, during feeding, and after feeding. Other practices related to infection prevention and the bedside method of confirming correct tube placement were also observed. Guidelines for NGT feeding were used by the authors to develop the checklist. During the introduction of the study, staff in the study units were informed about using observation and interviews for data collection. Observation for study participants was done conveniently and conducted during the study without them knowing that they were observed. The second author who conducted observations had prolonged time in the study settings. This is considered a strategy to minimize the observer effect, a common concern in the observation study (Oswald, Sherratt and Smith, 2014).

In-depth interviews

Using phone communications, appointments with nurses of the selected ICUs who agreed to participate in the interviews were made two days before the day of the interviews. On the day of interview, participants were visited at their unit, requested to choose a convenient time and place for interview. Most of the participants chose to have interview within their unit after their working shift. A semi-structured interview guide with open-ended questions on issues concerning; experience, nurses' practices, response to complications related to NGT feeding, and challenges of meeting nutritional needs for the critically ill was used. However, the study protocol allowed input regarding other emerging issues. The interviews were conducted by the second author using Swahili, a language conversant to

both participants and the researcher, and lasted between 60 and 90 minutes. All the interviews were recorded using audio digital recorders. A preliminary analysis of data was done upon completion of the first interview. This process was useful in generating insight and preliminary sub-themes, which later were used to employ emergent design and modification of the interview guide for subsequent interviews. Emerging issues were followed in subsequent interviews. One researcher assisted by taking notes during interviews. These combined with some non-verbal data and expanded field notes, were found helpful during data analysis. Data saturation was reached after the 16th interview and thus we did not interview the remaining four nurses.

Data analysis

Audio-recorded interviews were transcribed verbatim by the second author and translated from Swahili into English. The transcripts, together with the expanded field notes, were the main data used for analysis. To ensure familiarization with the data, multiple readings of the transcript and expanded notes were conducted and data were analyzed using the thematic analysis approach as suggested (Braun and Clarke, 2006). The data generated from interviews were reviewed daily to ensure accuracy and completeness. A thorough double-check of the translated transcripts against the original was done by the first and second author independently to ensure the quality of the translation. Thematic questions were preselected and the parts of the text that referred to those questions were marked and coded. Similar codes considered pertinent to the pre-set research question were grouped to form categories and similar categories formed a theme. The emerging themes were then discussed, and a consensus was reached about the various themes and how they fitted together. Data obtained from the observations were analyzed using simple statistics and presented using frequency distribution table. These data were triangulated with those from the interviews and were used as supporting information in clarifying the concepts that emerged during thematic analysis.

Measures to ensure rigor of the study

Several measures were taken into consideration to ensure qualitative study yield quality findings that are trustworthy (Johnson, Adkins and Chauvin, 2020). In this study four criteria for quality assurance were used namely credibility, transferability, dependability and confirmability (Graneheim and Lundman, 2004; Kakar *et al.*, 2023). Credibility in this study was ensured through purposeful recruitment of participants who had various experiences in caring for critically ill patients and prolonged engagement of the observer in critical care units to capture the reality of those being studied. The credibility and dependability were further enhanced by triangulating data collected from the interviews and observations. The authors conducted independent analyses of the transcripts and any differing options were examined until the consensus reached. Furthermore, peer debriefing by experienced colleagues with different backgrounds and degrees of familiarity with the setting was undertaken and their comments were considered in improving emerged themes. Confirmability was ensured through the use of quotes during presentation of study findings to confirm participants' views rather than authors' understanding of the problem. Transferability and dependability were enhanced by providing detailed description of the study context, process for data collection and analysis.

Ethical issues and ethical consideration

Before the commencement of the study, the researchers obtained ethical clearance from the Directorate

of Research and Publications, the Muhimbili University of Health and Allied Sciences (MUHAS) with ethical approval number of DA.287/298/01A. Permission to conduct the study was given by the MNH hospital administration. Furthermore, informed consent to participate in data collection was obtained from the participants after explaining the study's purpose; assurance of confidentiality of the collected information and their right to refuse participation in the study.

RESULTS

Results of observations

Nurses' feeding practices of a critically ill patient through enteral feedings

Twenty observations were conducted to observe how participants conducted bolus feeding using the syringe (Table 1). Only five nurses did a quick review to check if the patient was fed before and whether the feeding was recorded. Though hand hygiene is key for infection prevention, only one out of twenty nurses performed hand hygiene and wore gloves before feeding the patient. Despite its importance in minimizing risks associated with enteral tube feeding, very few nurses confirmed proper tube placement before feeding by using either auscultation or placing a tube in water to check for gas bubbling in case of a misplaced tube into the airways. None of the participants raised the head of the bed to the required position before feeding to avoid aspiration, checked vital signs or assessed for any adverse effects after feeding, documented the feeding, recorded the procedure or the patient's responses after feeding. Only seven nurses were observed securing the tube well after feeding.

Table 1: Feeding practices using nasogastric tube (Number of observations, n=20)

No	Practice	Yes	No
1	Assessing the patient's nutritional status including the presence or absence of malnutrition	5	15
2	Perform hand hygiene and wear gloves before feeding patient	1	19
3	Placing the tube in water to check for bubbling indicative of gases from the airway	6	14
4	Aspirate gastrointestinal contents and place a drop of aspirated fluid on pH indicator strips to confirm proper tube placement	0	20
5	Auscultation for proper tube placement	8	12
6	Checking the amount and type of food to be given as prescribed by the dietician/doctor	4	16
7	Take blood for FBG or RBG and document in patient's case note	3	17
8	Maintain patient head of bed (HOB) up at 45 degrees	0	20
9	Intermittent bolus feeding using syringe push of the feed	15	5
10	Other substances (water or medication) are added directly into the feed container.	16	4
11	Check vital signs and assess any adverse effects after feeding	0	20
12	Securing the tube properly	7	13
13	Hand washing after the procedure	17	3
14	Document the feeding, any complications and record the procedure and the patient's responses to feeding	0	20

Interview findings

Interview participants' characteristics

Ten participants were male and six were female, age ranged from 24 to 37 years, and 11 had completed a nursing degree. Only one participant had 10 years work experience in ICU. None of the participants attended any training about NGT feeding and nutrition support in a critically ill patient (Table 2).

Table 2: Interview participants' characteristics

Participants	Gender	Age	Unit	Level of education	Work experience
Nurse 1	M	33	HDU	Degree	3 years
Nurse 2	M	27	ICU	Diploma	3 years
Nurse 3	F	36	HDU	Degree	10 years
Nurse 4	M	28	HDU	Degree	4 years
Nurse 5	M	30	ICU	Degree	3 years
Nurse 6	F	29	ICU	Degree	3 years
Nurse 7	F	34	HDU	Degree	4 years
Nurse 8	M	26	ICU	Diploma	3 years
Nurse 9	F	37	ICU	Diploma	8 years
Nurse 10	M	35	HDU	Degree	5 years
Nurse 11	F	27	ICU	Degree	3 years
Nurse 12	M	33	ICU	Diploma	3 years
Nurse 13	M	27	ICU	Degree	3 years
Nurse 14	F	30	HDU	Degree	3 years
Nurse 15	M	24	ICU	Diploma	2 years
Nurse 16	M	27	ICU	Diploma	3 years

Thematic findings

Four themes were identified describing participants' perceptions of challenges they faced to achieve optimal nutritional support for patients with critical illness: 1) underfeeding due to limited food supply; 2) shortage of appropriate NGT feeding equipment; 3) nurses' incompetence in assessing and feeding patients; and 4) inappropriate feeding practices by relatives.

Theme 1: Underfeeding due to limited food supply

Participants reported that most patients who are admitted to the hospital got food from home and the relatives were the ones responsible for food supply. However, participants expressed their concerns that often the relatives bring food that is not enough for their patients. As a result, patients are underfed, interfering with the goals of meeting the nutritional needs of critically ill patients. Participants were concerned that underfeeding could make some medications not work properly and also predispose their patients to malnutrition. Other participants mentioned that food that was prepared by a relative is often not appropriate to meet the nutritional needs of critically ill patients and that, most of the time, relatives bring too little food or food which cannot pass through NGT.

> *"The big challenge here in our unit is the food which is brought by a relative. Relatives normally bring too little food or one kind of food such as porridge, and if they change to another food, they will bring mashed potatoes and sometimes they bring solid food which is difficult to pass through NGT" (Nurse 3).*

However, patients who do not have close relatives rely solely on the food provided by the hospital. Nurses are responsible to make such arrangements and patients can stay for a day without food waiting for approval from hospital management.

> *"Some relatives don't come to see their patient here. Other patients don't have relatives at all. In this case, no one is there to bring food for them. Nurses have to look for a social worker who arranges with the hospital management for such patients to get food from the hospital kitchen. Now, a patient can stay a day without being fed waiting for such an arrangement to be completed. And this is a challenge as the patient's nutrition status could deteriorate. This person is sick and still stays long without being fed" (Nurse 10).*

Additionally, participants reported keeping their patients on intravenous fluids unnecessarily because it can sometimes happen that the patients are supposed to be fed but there is no appropriate food to provide.

> *"It often happens food can be cold or already rotten. This happened mostly at night duty when we have to give patient IV fluid such as Dextrose Normal Saline instead of feeding patient food which is already rotten" (Nurse 4).*

Theme 2: Shortage of appropriate NGT feeding equipment

The availability of appropriate NGT was pointed out as another challenge that hinders nurses to meet the optimal nutritional needs of their patients. Several participants reported that they have been receiving only NGTs with large sizes or small sizes from the procurement unit. This hindered nurses to choose an appropriate tube size suitable for their patients.

> *"Sometimes you might find you have large tubes only that are difficult to insert because the patient's nose is small compared to the size of the tube. If it happens, you use it because you don't have any option, and you end up traumatizing the patient" (Nurse 7).*

Others reported getting NGTs that were not compatible with feeding syringes from the procurement unit. It was further noted that participants complained about this to the management, however, no remedial action was taken by management.

> *"Another challenge is the feeding tube which we receive from procurement is not compatible with the feeding syringe. The tube we receive has a very small diameter and is not compatible with a feeding syringe. As a result, we have to improvise. We normally take the catheter in giving set, cut it, and fix it as a connector to fit with our feeding syringes" (Nurse 5).*

Even though it helps nurses to improvise and manage to feed their patients, it does not help to feed the patients adequately. Participants further reported that feeding using improvised equipment requires them to give a very small amount of food per feed and takes a long time.

''We face the challenge of having inappropriate nasogastric feeding tubes. As a result, feeding using an improvised syringe takes time and you end up feeding with only two syringes instead of four. This, in turn, compromises the nutritional status of the patient" (Nurse 12).

Theme 3: Nurses' inadequate skill in assessing and feeding patients with nutritional needs

Some participants confessed to lacking adequate skills in how to assess nutritional needs and feed the critically ill patient. Other participants expressed the need for training on how to assess nutrition needs and feed critically ill patients appropriately. Participants reported training to improve their competence of feeding using NGTs is needed.

"Continuous ongoing training will be helpful as a reminder of some important NGT tips which needed to be followed to ensure we meet the nutritional needs of this critically ill patient adequately without causing any complication" (Nurse 15).

As it was noted from our observations (Table 1), very few nurses conducted a thorough nutritional assessment to determine the nutritional status of their patients. Nurses fed patients as a routine without using any guidelines on what to do before and after feeding or what type of food to give their patients.

"We don't have guidelines here for guiding us on how and what to feed such patients. It is very important to have that, otherwise, we end up doing a routine. You just collect the equipment and start feeding. If guidelines were available, it would be easy to know how to go about doing feeding but also what to give and why" (Nurse 11).

Theme 4: Inappropriate feeding practice among relatives

Feeding the critically ill, especially those in high dependency units (HDU), was also done by the patient's relatives after being instructed by nurses. Participants in this study expressed their concerns that when feeding was done by the relatives without supervision, which sometimes happens due to excessive workload, a complication such as aspiration and overfeeding occurs. Several participants mentioned that relatives often feed their patients too much because they think it will facilitate good patient progress. Participants reported experiencing several occasions, where patients aspirate immediately after being fed by their relatives. One participant mentioned that some relatives who had never been instructed on how to feed could just pay a visit and, without any consultation with nurses, start to feed their relatives, causing some complications such as aspiration.

"Sometimes relatives when they come, they just start feeding their patients without consultation. They don't know what should be done before feeding the patient, like confirming the tube is in and aspiration of gastric residual volume leading to overfeeding, which is the cause of most aspiration in our ward" (Nurse 11).

Participants reported that relatives have to be guided on how to feed their relatives and the whole procedure has to be supervised by nurses. Participants also suggested the need to provide relatives with instructions regarding food preparation as well as feeding to ensure safety.

"Relatives with patients admitted here require instruction on proper feeding. They also need instruction on how to prepare food appropriate for their patients. We need to involve nutritionists in this. Nurses are few and overwhelmed with other nursing care" (Nurse 1).

DISCUSSION

This study explored nurses' practices and perceived challenges for meeting the nutrition needs of critically ill patients in critical care settings in Tanzania. We found insufficient supply of appropriate food, shortage of proper NGT supplies and lack of proper feeding skills among nurses which affects the optimal provision of nutritional support required by critically ill patients in Tanzania. Similar findings were also reported from studies conducted in other low-and-middle-income countries including Jordan, Zambia and Ethiopia (Bunyani, Mtimuni and Kalimbira, 2016; Ahmed *et al.*, 2024). Studies done by Crossfire and her colleagues (2021) in Australia indicate a link between nurses' proper enteral nutrition feeding practice and optimal nutrition delivery to critically ill patients (Crossfield, Russo and Bucknall, 2021).

In our study, nurses' NGT feeding practices were found to be inappropriate, exposing patients to complications that could compromise their safety. As observed, some nurses did not confirm proper tube placement before feeding, a practice recommended to detect tube malposition. Malposition of feeding tubes has been found to cause complications such as aspiration and death (Akcay *et al.*, 2020). Also, poor hand hygiene, as observed in our study, increases risk for patients to develop hospital-acquired infections and hence exacerbate their critical illness. The critically ill patient population are already immune-compromised and can easily end up with bacteremia, septicemia, and deaths from contamination of the enteral feeds (Williams and Leslie, 2005; Best, 2008, 2017; Akcay *et al.*, 2020).

The semi-recumbent position is considered to be the best position to reduce the risk of airway aspiration (Williams and Leslie, 2005). However, in this study, none of the nurses raised the head of the bed during feeding. Elevation of the head of the bed is highly relevant to prevent airway aspiration during feeding of critically ill patients (Metheny and Frantz, 2013). Monitoring of vital signs after feeding is considered a best practice to detect deterioration and adverse events such as respiratory-related complications (Metheny and Frantz, 2013; Mok, Wang and Liaw, 2015; Anziliero and Beghetto, 2018). However, none of the nurses in this study checked vital signs nor documented the whole feeding procedure or immediate patient reaction. Nurses often overlook the significance of vital signs monitoring in detecting deterioration and adverse events that could occur following NGT feeding (Mok, Wang and Liaw, 2015). Vital signs monitoring and reporting should be an integral part of the NGT feeding protocol in critical care units to ensure patient safety.

The study revealed several challenges that, not only compromise patients' safety but also hinder patients from optimal nutritional support. Our study found that the critically ill patients were underfed due to limited food supply or supply of unbalanced diet by relatives, exposing them to malnutrition, similar to a finding in Iran (Osooli *et al.*, 2019). It is known that patients in critical conditions have energy expenditures of about 25 kcal/kg/day with 1.5 g protein/kg/ day target feed, which should be given to ensure adequate nutritional intake (Griffiths and Bongers, 2005; Curtis, 2013). However, this nutritional therapeutic goal is difficult to be achieved with food prepared at home. Optimal nutrition support needs

to be provided to ensure good clinical outcomes (Griffiths and Bongers, 2005; O'Leary-Kelley and Bawel-Brinkley, 2017; Arabi, Reintam Blaser and Preiser, 2019; Lambell *et al.*, 2020). This study recommends a change in feeding policy and advocates that critically ill patients should receive food prepared in the hospitals, and its preparation and administration should involve clinical nutritionists and dieticians. Involvement of ICU professionals including dietitians, and the use of the interdisciplinary team are recommended approaches for achieving nutrition care of critically ill patients (Jordan and Moore, 2020; Zaragoza-García *et al.*, 2023).

Shortage of appropriate feeding tubes was another challenge found in this study. Nurses in this study used tubing cut from a catheter type which are not suitable for enteral feeding. The lack of appropriate feeding tubes could lead to delays in feeding patients. To meet nutrition requirements, feeding tubes should be appropriately selected to ensure the safety and comfort of the patient (Curtis, 2013). Additionally, the study revealed a lack of adequate skills in performing nutritional assessment. Similar findings are reported in Malawi and Sweden respectively (Mula, 2014b; Persenius et al., 2006). However, skill inadequacy in nutrition assessment could be attributed to the lack of validated nutrition screening tools (Singer *et al.*, 2019). There is a need to improve nursing competency in enteral feeding, and special attention should be given to retraining nurses in the assessment of tube patency, proper tube insertion, and enteral feeding, as requested by nurses in this study.

The involvement of relatives in feeding patients using NGT after being instructed by nurses was found to be common in this study. Several studies done in Uganda, Bahrain and Egypt document the role of the family in care including feeding in critical care settings (Elcokany & Abdel Wareth, 2019; Fateel & O'Neill, 2015; Frank & Imanipour, 2020). Though family involvement in care is advocated, episodes of aspiration following feeding raised concern over the patient's safety and queries about family members' competence in feeding patients appropriately. Aspiration is a common complication of improper enteral nutrition procedures in critical care units (Abdullah et al., 2014; Babapour & Esmaeili, 2016; Mohammed et al., 2016; Mohammed et al., 2020; Rahimi et al., 2015). Nurses are accountable for a patient's safety and are responsible for ensuring that their patients are adequately fed. The engagement of relatives and other auxiliary staff to assist with nutritional support could be an option when the available few nurses are occupied with other nursing tasks. However, there should be prior training and adequate supervision to ensure patients' safety.

Study limitations

The study involved a small number of participants from one national referral hospital in Tanzania which limits the generalizability of findings. However, we explored multiple nurses' perspectives of the challenges and possible strategies, and along with the study context described in detail, this allows readers to facilitate judgement of the transferability of our findings. Our checklist contained practices that are not recommended in high-income country NGT guidelines, for instance, the use of auscultation to check for tube placement. However, in our low-resource setting, our checklist represents the best options available for assessment of the NGT placement.

CONCLUSION

Nurses' enteral feeding practices was found to be inappropriate and several challenges that expose

critically ill patients in Tanzania to suboptimal nutritional care were identified. Our findings inform hospital managers of the problems and suggest improvements including procuring appropriate feeding tubes and expanding hospital-provided nutrition provision for critically ill patients. Furthermore, in-service training for nurses in critical care units on evidence-informed best practice care before, during and after enteral feeding to avoids incidents and adverse events associated enteral feeding is needed. Multiple approaches should be in place to promote safe and best practice of enteral feeding for critically ill patients in Tanzania.

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