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World Health Organization Surgical Safety Checklist: Proposed New Safety Checklist to Address and Reposition New Checklists

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ABSTRACT

The aim of this review is to reposition some key question(s) into the appropriate column(s), neatly introduce new column(s) without increasing anxiety on the part of the patient(s) and avoid reopening of the sutured abdominal wall due to incomplete instrument count. The new added stems were 'clinic visit prior to proposed surgery 'and 'Before closing the rectus sheath'. Team members will be better equipped when they know the clinical and psychological status of their patients before entering the operative theatre. It is extremely important to note the workable status of key surgical instruments prior to surgery and adequate arrangement made to ensure they are in good working condition. Medical errors like Gossypiboma can be avoided by asking the necessary question before rectus sheath closure where applicable. The new proposed safety checklist, therefore, carefully inserted new stems, columns and repositioned some key stems/ sub-stems/columns to achieve this purpose.

Keywords: Checklist; Morbidity; Mortality; Stem; Surgery; WHO

INTRODUCTION

The purpose of the 124 page World Health Organization (WHO) document published 3rd April 2009 was to facilitate patients' safety and practice.[1] The primary purpose of surgical interventions is to save lives, but unsafe surgical practice can cause significant harm. To this effect, international experts reached a consensus on four areas in which improvements could be made in surgical care safety: these are surgical site infection prevention, safe anaesthesia, safe surgical teams, and measurement of surgical services. The member state (s) initiated the global implementation of the WHO Surgical Safety Checklist, a 19-item tool created by WHO in association with the Harvard School of Public Health.[1]
An appraisal of the 2009 WHO surgical list was harnessed in such a manner as to reduce morbidity and ultimately mortality.[1] Systematic reviews that looked at the effectiveness of Surgical safety checklist have concluded that patients exposed to a surgical safety checklist experience better post-operative outcomes but may simply reflect wider quality of care in hospitals where surgical checklist use is routine.[2]

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The aim of this 'WHO checklist' was essentially to give teams a simple, efficient set of priority checks to improve effective teamwork, communication and encourage active consideration of patient safety for every surgical operation performed. WHO also wanted to ensure consistency in patient safety in surgery, and introduce (or maintain) a culture that values patient safety in all. [3]

Having critically looked at this checklist, we raised few queries that can only be addressed by carefully inserting new key stems and possibly adjust the position of some key stems or sub stems.

Figure 1 depicts the original WHO safety checklist while, figure 2 represents the proposed modified WHO safety checklist in other to avoid unnecessary patient anxiety while still on the surgical table and/or avoid re-opening the abdomen following unsure instrument count.

This checklist is not intended to be comprehensive. Addition and modifications to fit local practise are encouraged. Revised 1/2009.

We will discuss the 2009 WHO Surgical Safety Checklist and then make recommendations with respect to the proposed new WHO Surgical Safety Checklist. For convenience, we will number the key stem 1 to 5 and sub-stems in alphabets 'a to z' as applicable. The 'yes' , 'no' or 'not applicable' subset of the sub-stems remain same as in the original 2009 WHO Surgical Safety Checklist (Figure 1).

DISCUSSION

New Stem insertion

We believe that a major stem should be inserted prior to the original stem which read “Before the induction of anaesthesia”. We proposed a new stem tagged “Clinical visit prior to surgery”.

Clinical visit prior to surgery: This stem will contain some stems that were “wrongly placed” under prior major stems. It will contain critical questions that would have been answered and concluded during the clinics or upon patients' admission for the proposed surgery. See figure 2 . Example of the stem content are as follows:

1: Clinic visit prior to proposed surgery:

(This meeting should involve the patient, anaesthetist, surgeon, and the nurse)

Anticipated Critical Event:

To the Surgeon:

a) What are the critical or non-routine steps?
b) How long will this case take?
c) What is the anticipated blood loss?
d) Risk of > 500ml of blood loss

It may not be proper discussing the anticipated critical events while patient is already on the theatre table awaiting anaesthesia. Most patients are anxious a night before the surgery which may necessitate use of tranquilizers a times. Imagine such a patient listening to possible critical events during her surgery while on the table. Same for stems like 'duration of the procedure' may not be the best of question when a patient is there on the surgical table. Imagine answers like 10 hours in some neurosurgical cases. We therefore suggest that these questions be moved from its original position (Before Skin incision) in the 2009 surgical check list to a pre - surgical item which would have been earlier discussed during the clinic days and buttressed upon admission if necessary but not necessarily on the surgical table. See Figure 1.

E) We suggest that stem question 1(d) Risk of > 500ml of blood loss, be put immediately below question 1 (c) 'What is the anticipated blood loss?' In the original document, question 1(d) was under 'Before induction of anaesthesia stem' , while question 1(c) was placed under 'Before skin incision'. Rearranging the stems to follow a systematic order will make the stems to flow and represent a wholistic approach and not necessarily tautological. See figure 2.

2. To the Anaesthetist:

a) Are there any specific concerns?
b) Does the patient have any allergy?
c) Difficult airway or aspiration?

The stems 2 a,b,c should be moved from its original position to “Clinic visit prior to proposed surgery” stem. This information ought to have been earlier discussed between the surgeon, patient, nurses, and anaesthetist prior to patients' admission or worse off prior to moving the patient to the theatre for the

Figure 1: The WHO 2009 Surgical check list [4]

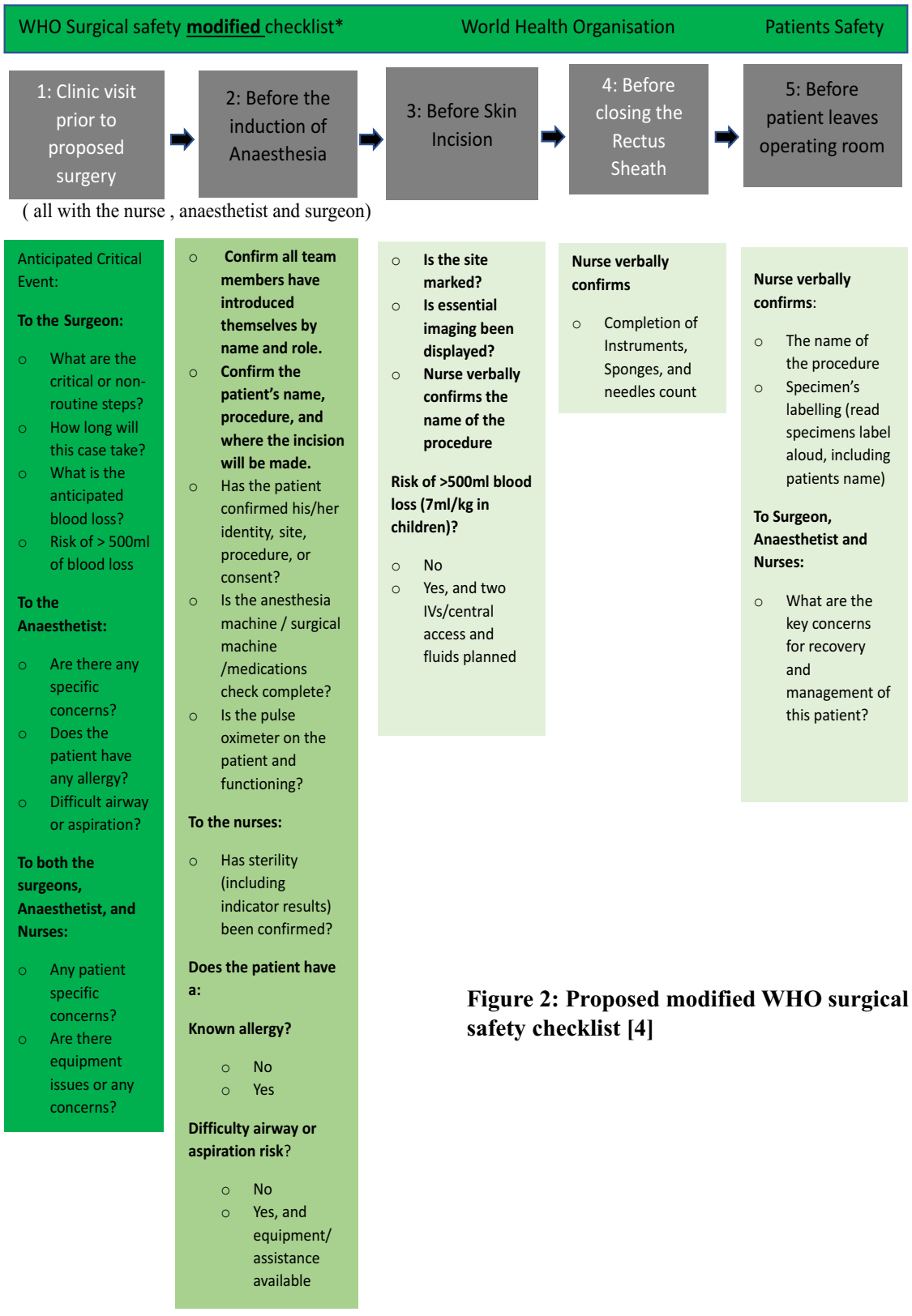

Figure 2: Proposed modified WHO surgical safety checklist [4]

procedure. This will enable the surgeon and anaesthetist prepare before the procedure day. See figure 2.

3. To both the surgeons, Anaesthetist, and Nurses:

a) Any patient specific concerns?

b) Are there equipment issues or any concerns?

We advocate that stem 3 a,b be moved to the "Clinic visit prior to proposed surgery" stem. See figure 2. Specific concerns ought to have been earlier discussed. It is imperative to ensure that all equipment are in good working condition before wheeling the patient to the operative room. The question "Are there equipment issues or any concerns?" ought to have been discussed and addressed before the surgery. See figure 1. It appeared as if it was being asked for the purpose of completion. The question should be ideally for the purpose of rectifying any identified fault. For instance, a faulty hysterolaparoscopy cart should be addressed prior to even booking for the procedure.

FIG 2

Figure 2: Proposed modified WHO surgical safety checklist [4]

Nurse verbally confirms: Completion of instrument, sponge, and needle counts. This is a very critical stem in surgery especially in abdominopelvic surgeries where instrument count must be done before closing the rectus sheath. See figure 1.

We therefore; advocate moving this stem "Completion of instruments, sponges, and needles count. "from its original stem to the new stem termed "Before closure of the rectus sheath". See figure 2. We are aware that this may not be applicable to some specialties, but it is extremely critical to avoid leaving sponges and instruments in the abdomen. This if not addressed may increase morbidity and mortality index among surgical patients or may warrant re-opening the abdomen if there are missing instruments or sponges. [5] Gossypiboma an intraoperative error discovered post operatively whereby surgical sponges , gauze pads, or other form of textile is left behind in the operative field after the patient is closed ; can led to medicolegal consequences , huge monetary compensation and possible imprisonment on the part of the surgeon.[6,7]

We therefore; further advocate that other stems that where not discussed remain in their original positions. There is room to add to this new safety checklist modification as it pleases the local surgical units.

CONCLUSION

We believe that the adjustments and repositioning of these critical stems in the 2009 WHO safety checklist will be helpful and further reduce morbidity and mortality in our surgical patients.

Acknowledgement

We recognize all surgeons worldwide that make use of WHO safety surgical checklist a veritable tool in operative theatres.

Author contributions

Emeka Philip Igbodike (EPI) - contributed to the conception of the study, design, literature search, manuscript writing and revision. George Uchenna Eleje (GUE) - contributed to, literature search, manuscript writing and revision. Igbodike Njideka Theresa (INT)- contributed to literature search, revision, and manuscript writing. Ikechebelu Ifeanyichukwu Joseph (IIJ) - contributed to literature search, revision, and manuscript writing. All authors contributed to, drafting or revising the article, gave final approval of the version to be published, and agree to be accountable for all aspects of the work.

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