FUTURE VISION GLOBAL GRANT 25753

Implementation of Phase 2 and Project Conclusion

Support Safe Surgery in Timor-Leste

Safe Surgery Averts Disability & Death

Executive Summary

This Project has been an honour and an unexpected thrill. It is almost 5 years since it was initiated by Morris Robertson of the Wellington North Rotary Club yet because of the unwavering commitment of the Governance Committee it still feels fresh and vital as it draws to a close. The warmth and clear vision of the Committee during this time was as energizing and motivating for the implementation team, as was the availability of funding. When Dr Glenn Guest accepted the offer of a partnership to support safe surgery he said: "All of us who have worked in the operating theatres in the Guido Valadares National Hospital know that sterility and organisation are a very important part of providing a quality surgical service and efforts such as this will make surgery safer and better for the people of Timor Leste." Surgery is safer now at HNGV and because safe surgery averts disability and death a contribution has been made to improving population health. The Project respectfully acknowledges the grace with which Timorese people, -hospital staff and others-, accepted and welcomed yet another 'good will' group in their home land. The art of happiness, tolerance, friendship and joy are the gifts we were given.

Sustainability

The core purpose of the second phase of the Project was to secure sustainability. Do the perioperative nurses and sterilising technicians at HNGV have the tools, equipment, knowledge and skills they need to maintain an environment of safety? Are they supported by operational systems which enable implementation of the Standards on which safe process and practice are founded? When concentration on safety is sustained, other dimensions such as efficiency, efficacy and empathy take effect, adding value to the Service and satisfaction for its Users. The improved layout of the Sterilising Department promotes sustained effort and with allocated teaching time and space, so will the staff structure. The appointment of an Inventory Manager and CSD Manager (both at Section Head level) would help seal it!

Capacity

There is ample evidence of ability and professional desire. The scrub, gown, glove tutorial prepared and delivered by the nurses to junior doctors, just one example. Dr Katherine noted "*It is apparent that the importance of hand washing, gowning and gloving technique is now understood"*. The overt drive by individuals to achieve and be seen to achieve competency, another. An example of professionalism was set by the Sico who came to the hospital to assist with Project activity at weekends, after attending University. Perioperative nursing capacity can continue to grow with the supervisory processes that are now in place. This would apply also to new staff in theatre if there was an orientation programme in Tetum available. Some presentations translated and uploaded onto the Laptop can be used until then.

Strengths
One of the outstanding strengths of the Project was the daily involvement of Afonso, our Interpreter. Not only linguistically expert, but because of his gentle demeanour, welcomed by the theatre staff. It is thanks to the members of the Wellington Governance Committee who recognised the advantage of accurate communication in the clinical setting, that generous remuneration ensured his services were retained for the duration of the Project.
Another strength was the ability for the Project to have sufficient flexibility to be responsive. See Goal 2, a, b, c. See Opportunities.

Weakness
Professional isolation means the nurses have little or no exposure to knowledge currency and emerging data nor to the strength that comes from collegial support. The Project offered to the Department 2 Lifetime Memberships to AORN worth $2000, which were not taken up perhaps because the monthly journals and weekly e-newsletters are in English. The intention to translate Standards into Tetum is not yet accomplished, awaiting confirmation of budget allowance. Senior nurses, especially the Nurse Educator and Infection Control Nurse would be able to to apply the Standards to teaching and supervision from within their own cultural perspective and with cognisance of their resource situation, if they could access and study them in their own language.

Opportunities
The Project opened up some opportunities for closing safety and quality gaps.

Reducing poor resource management: One day a lack of surgical gowns forced cancellation of surgery. It appeared that the use of gowns as bed sheets was a contributing factor. The project purchased 150 bed sheets from a local tailor and guided staff communication to notify the principle of correct item for correct purpose. Use of bed sheets on the operating table and on transport trollies will also spare surgical drapes for their proper purpose, protecting the supply.

Mitigating the authority gradient: Inclusive, effective communication boosts teamwork. Evidence reported shows that better team-focused care results in a decrease in surgery-related complications. Language used in the operating room that excludes any member of the interdisciplinary team weakens the likelihood of a better patient outcome. Communications employed in operational management that disadvantage anyone by limiting language choice, (booking acute surgical cases by landline phone an example), constitutes a system inadequacy and a safety risk. See Goal 3, 2.

Threat
It seems that there may be a person who is not a nurse, managing patients in the Recovery Room? This would undermine Perioperative Nursing Practice, minimise improvement efforts and deny patients within the perioperative environment, their right to receive care from qualified practitioners.

Improvement		Outcome
Process /Practice	**Local Engagement**	
Goal 1: Follow up to the Education Seminar 'Reprocessing Reusable Medical Items' Competency Workbooks, prepared, printed and bound in New Zealand were distributed to everyone who had attended the Seminar. Tetum translation by Afonso de Jesus, Māori headings by Ngahiwi Apanui. (Attendees also received a Scrub Suit courtesy Bowen Hospital Wellington). It was evident that the layout of the newly reconfigured Central Sterilising Department supports Standards compliance well with only a few exceptions. Some acceptable modifications to enable compliance with processes and practices taught at the Seminar, were recommended on site. Also provided for CSD: 3 drawer metal filing cabinet with suspension files for Contents Lists; white board for notices and communications; stand for easy management of Kimguard bought in from outside; instrument catalogue; wall clock. The practice of wrapping surgical drapes and gowns for sterilizing was introduced and use of the multiuse drums was discontinued. **Except for** gauze swabs and abdominal packs which are still packed in drums, have an unknown sterility status and compromise the integrity of the operating field. (And the surgical count.) **Recommendation: Swabs should now be purchased packeted, sterile, with Raytec strip.** (Without Raytec for anaesthetic use.)	**Carlos Quintao**, Infection Control Nurse and **Francisco Pinto**, Nurse Educator successfully launched their supervising roles and began marking off staff competency achievements using the Workbooks and Assessment sheets provided. CSD technicians **Palmira, Benvindo, Bendito, Virgilio, Carlito, Calisto and Mateus** demonstrated that were able to apply the knowledge gained at the Seminar to the skills involved in safe, effective reprocessing of surgical items. **St JOG** facilitated a generous supply of Kimguard surgical wrap enabling the abandonment of multi-use drums (an ICRC upright-autoclave legacy). **Belmerio Jeronimo** Clinical Manager and **Dr Sameer Dabral**, Ophthalmologist showed their support for the Seminar and their appreciation of the Quality Improvements to be gained, by their attendance at the Certificate presentation ceremony. **Kate Groves** and **Karen Myers** initiated the connection with the Fred Hollows (NZ) National Eye Centre and Country Director **Soetarmi Soerono** progressed the relationship with many benefits resulting.	All CSD technicians have demonstrated ability to apply knowledge to the skills involved in correctly processing, handling and storing surgical instruments and equipment so that long term (event related) sterility can be assured. All CSD technicians have demonstrated ability to apply knowledge to the skills involved in wrapping, processing, handling and storing surgical gown and drape packs so that surgical teams can have assurance about sterility status and by applying in an aseptic manner, can be assured of a sterile operative field for every patient. Nine perioperative nurses now have the knowledge and ability to supervise the processes and practices that contribute to assured surgical sterility. **Compliance challenges**. **1**. Because no nurse anaesthetists attended the Seminar, there may be knowledge gaps and possible compliance risks involved with reprocessing reusable anaesthetic items. **2.** Open access between the packing room and the decontamination room permits unrestricted person and equipment traffic movement between the clean and dirty areas, a compliance barrier. **3**. The deep sinks in the decontamination room invite bulk instrument accumulation and soaking, prompting infrequent change of water and cleaning agent. Risk of instrument damage. **4.** There is no cupboard, container or shelf for the storage of cleaning products and supplies. A safety and efficiency risk. **5**. The new minor theatre (4) is located outside the 'Clean Core' and has no direct connection with the dirty corridor for transport of used instruments and equipment to the decontamination area. An infection control gap.

Recommendations for managing the Goal 1 Challenges, in ways that will promote safety and enable an acceptable level of compliance:

1. If the Protocols for management of anaesthetic equipment developed by Dr Kym Osborn in 2006 are being implemented and if there is consistent application, reprocessing Standards will be being achieved. In any case, Nurse anaesthetists, and other nurses who didn't attend the Seminar, can be provided with sterility education when the Standards which promote surgical sterility are available in Tetum.

2. As recommended to RACS representatives on site, a plastic strip curtain (of the type at the entry to cold storage in the local supermarket) would provide a sufficient barrier to remind persons about to pass through, to use the PPE (Personal Protection Equipment) which should always be available at the doorway and checked each morning by the Infection Control Nurse or delegate. The barrier will also remind staff in the decontamination room to clean trollies before they are moved through the Packing room. An easy and economical closure of a quality gap.

3. This problem is being appropriately managed by sterilising technicians who are using basins to decontaminate and wash instruments and a sink only for the rinsing part of the process.

4. A secure cupboard must be provided as advised prior to reconfiguration. The keys held by HOD/Section Head/Nurse Coordinator/senior cleaner on duty.

5. Used instruments and equipment could be safely covered on the instrument trolley and kept in the theatre until there is an opportunity to take it to the decontamination room through an empty theatre. Blood and other body substances must be damp wiped off instruments before covering. Alternatively, the instruments and equipment could be placed in a closed plastic container and transported to the decontamination room via one of the theatres.

Improvement		Outcome
Process / Practice	**Local Engagement**	
Goal 2: Environmental Cleaning **The Project provided** a) **A Cleaning Schedule as a Standard Operating Procedure, translated;** b) **A Document of Agreement;** c) **A List of required Supplies plus Training requirements for Cleaning Personnel.** The Cleaning SOP details the processes and practices (what, when and how to) for • Daily cleaning of the theatre semi-restricted zones; • Cleaning of an operating room between patients – re-establishing a clean environment; • Daily terminal (final) cleaning of the operating rooms and restricted zones; • Linen management. Includes folding and stacking clean CSD linen after its return from the hospital Laundry (which is also managed by the Bobolait Company). Supervision and teaching will be required to maintain this process. **The Project also provided**: 1. An Audit Toolkit to use for evaluation of the cleanliness of the hospital. (At the Director's request.) 2. A Theatre Zoning map explaining unrestricted, semi-restricted and restricted Zones within the perioperative environment. (There are differing cleaning requirements, people admittance and attire directives for each Zone.)	**Dr Antony** (RACS Team Leader) facilitated meetings with hospital Executive Director Dr Zeto, upon our arrival. This early engagement proved profitable and ensured Project responsivity. He also introduced Dr Zeto's PA, **Teresa Belo** who became a vital link with the Director's office. **Dr Zeto** requested that the Cleaning Schedule for the operating theatre suite be prepared as an SOP. It was translated into Tetum by **Afonso** and accompanied by a letter of agreement between the Cleaning Contractor and the Hospital. Dr Zeto's intention was for the Ministry of Health to use the documents for the end of year Contract renewal/tender process. **Jacinto** (OT Section Head), endorsed the requirements of the Document and kept theatre staff informed. And successfully facilitated meetings and exchanges with Bobolait. **Mr Anacio,** Manager of Bobolait (the current Hospital Cleaning Contractor), agreed to the terms of the Documents by signature and accepted the 'To Do' List. **Dr Katherine** noted improved performance: *"Theatre cleaning between cases is now routine and well performed*".	By adherence to the SOP, it is possible to achieve a theatre environment which consistently and reliably promotes patient and worker safety by decreasing the cross infection risk thus protecting surgical patients and Team Members. **Sustainability** Ongoing compliance with the Standards which guide the Cleaning Schedule, depends upon: **1.** Adequate instruction and training by the Contracted Cleaning Company, of cleaning personnel as per the Agreement; **2.** Provision by the Contracted Cleaning Company, of adequate and appropriate cleaning products and supplies; **3.** Safe storage of cleaning products and supplies, - a hospital responsibility; **4.** Daily monitoring of the environment by the Infection Control Nurse or delegate, with immediate report of problems to the Cleaning Company; **5.** Regular, random assessment and documentation of Cleaning Personnel performance, for Report to the Head of Department & the Cleaning Company; **6.** Allocation of non-clinical time to Infection Control nurse or delegate, for supervision purposes; **7.** Communication of the SOP to Theatre Users. Their acknowledgement of the safety contribution of a clean environment and their acceptance of the possibility of occasional scheduling variations to enable monitoring and supervision, will endorse the value. **8.** Re-marking of the theatre Zones so that adherence to stipulated cleaning instructions for each zone can be effected.

Recommendations for sustainability of Goal 2: Processes and Practices to improve environmental cleaning:

1 & 2. As well as teaching the cleaning processes as detailed in the Schedule, instruction should include care of floor mops and buckets and cleaning cloths. A presentation authorized by a RACS Infectious Diseases Consultant, is available on request.

3. See Goal 1 Recommendation No 4.

4, 5, 6 & 7. The supervisory, teaching and monitoring roles of senior nurses especially the Nurse Educator and the Infection Control Nurse are vital to the maintenance of a Perioperative Environment of Safety. Because there is no theatre Users' Group the communication lines are unclear but the support of all medical staff who use the Theatre Service is vital to the presence of a strong, effective, professional Perioperative Nursing Team maintaining excellent patient care.

8. Careful planning of the restricted, semi restricted and unrestricted zones in a theatre suite is a critical element that ensures infection control, efficiency and safety. A zoning plan was provided which maintains infection control, adheres to all safety standards and promotes good traffic flow for patients, visitors and staff. The patient reception area currently zoned 'restricted', should be a semi restricted area. This will provide privacy and facilitate accuracy, during nurse to nurse handover of patients as they arrive in theatre in the presence of support persons/parents/caregivers. It will enable the receiving nurse to utilise the nursing process, for which Jonnie Dos Santos Silva advocates and which is not possible in the present zone plan. Additional note: We share Jonnie's concern about the gender bias in theatre.

Improvement		Outcome
Process / Practice	**Local engagement**	
Goal 3: Operational Management **1. Product supply and management** A template with product Codes and accurate product descriptions was provided to replace the exercise book currently being used for ordering. Inaccurate ordering resulted in Chlorhexidine instead of Chlorine, being used to clean instruments causing corrosion and disintegration. **2. Operational Processes Required:** **a)** Scheduling to allow for rotational teaching; **b)** An SOP for arranging acute cases; **c)** Posting of the daily role identification list; **d)** Shift coverage review especially regarding new nurses orientating to the Service; **e)** An SOP for surgeon review of Instrument Tray Contents and procedure preferences. **3. Session management:** a) An RN Circulator must manage allocated theatre sessions, as per the daily posted list; b) The language of communications in theatre must be inclusive for all team members; c) The RN Circulator must provide handover to the Recovery nurse & sign the Register. **4. Supporting Capability** **a)** To enable compliance with the Scrub Standard which requires a **timed** wash, clocks were provided and installed in all scrub bays; **b)** To enable compliance with the Count Standard which requires documentation to be visible to the scrub team, a white board was provided and installed in the new theatre 3.	**1. Dr Katherine** had notified good Supplies management as a priority need and it was clear that product insufficiencies & inaccuracies, compromised safety and economy. **Dr Eric** endorsed the recommendation to advertise for an Inventory Manager and a proposal was submitted to Head Of Department, **Dr Edy**. **2.** a) **Dr Angel** offered a Fractured Neck of Femur tutorial for nurses and suggested each surgeon could follow suit in their Specialty. **2. b) Dr Alexi** notified a Serious Incident relating to unavailability of a nursing team for an emergency caesarian section procedure. The Root Cause, an inadequate system for booking acute surgery. **3. Dr Katherine** expressed appreciation for the stipulation that there must be an RN Circulator for every surgical patient. **4.** Support from **Dr Katherine**: "*The recent changes /improvements are outstanding. Finally an organised system of storing and accessing surgical instruments & consumables in the OT, training of CSD personnel re the sterilisation process and putting together operative packs for different types of surgery. Because of these changes the OT seems to run much more smoothly and efficiently. Everyone knows their roles and are happy to be part of developments.*"	**2 & 3.** Discussions held, improvements yet to be effected Change will require interdisciplinary consultation. **4 a)** A Scrub Standard presentation in Tetum is available on the nurses' Laptop. With theatre scheduling allowing for teaching, nurses can continue to provide tutorials for junior doctors and inexperienced nurses. **4 b)** The Count Standard should be translated so it can be included in the teaching. (The Surgical Count is a responsibility shared by the whole Team.)

Thanks.

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