APPSA
Association for Peri-operative Practitioners in South Africa

Journal

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GENERAL INFORMATION

- The Journal is the official publication of APPSA (Association for Peri-operative Practitioners in South Africa). It provides personnel in the operating room and related services with original, practical information, based on scientific fact and principle

- APPSA is a non-profit organisation which exists for the benefit of its members. This is accomplished by way of congresses, local meetings and travel grants, with the express goal of raising the standard of peri-operative practice in South Africa

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From The PRESIDENT

The harshness of COVID-19 bites deeper every day. On 14 July 2020, South Africa has recorded 287 796 positive Covid-19 cases, 4 172 deaths and a miraculous 138 241 patient recoveries. These figures - although daunting - must offer us a modicum of hope. Our death toll is relatively low, despite the climbing numbers. I do not believe there is a single family who has not had personal knowledge of someone who has been directly affected by COVID-19: it has touched our lives in so many ways. I am sure many of us have either been exposed to COVID-19, has had a family member who has been exposed, or has had to go for a test. The fear of waiting for results can be mind numbing. All kinds of scenarios go through your mind: what will I do if the test is positive and I really get ill? What will I do if one of my family members tests positive? The relief is overwhelming when the test result comes back negative.

Because of the increasing number of healthcare workers who have been exposed to this virus, I would like to make a personal appeal to you: please, stay safe. Follow all your workflow processes and protocols, wear your PPE, **but wear it correctly.** On behalf of the APPSA National Executive Board, I would like to thank all the peri-operative practitioners who are working under extremely difficult circumstances. Thank you for your effort. We salute you! In fact, we salute all healthcare workers and ancillary staff for the sacrifices and commitment you make every day in the face of this growing pandemic. You are all examples of excellence and serve as role models to others.

We must also acknowledge the tragic passing of our KwaZulu-Natal Chapter President, Rita Williams. Rita was always smiling, and her bubbly personality made working with her such a pleasure. She was an incredibly loyal SATS and APPSA member of more than 20 years' standing. Rita had so much passion for her Operating Diploma students and only delivered the best. They, in return, delivered their best to her. Thankfully Rita's suffering was brief. In the face of adversity, and despite a dreadful cancer diagnosis, she always believed she would 'beat this thing'. We salute you dearest Rita - our friend and colleague. Rest in Peace. You will be sorely missed.

Like the rest of South Africa, APPSA is currently in lock down. We cannot hold our usual study days or meetings because of the limitations on the numbers of people allowed to come to a meeting. Because of our inability to meet, we are not able to ensure that those who want to renew their APPSA membership have easy access to do so. Please, make contact with our office in Bloemfontein and ensure that your membership is up to date. We all need to work together to ensure the continued success of our association - and be well prepared for the up-coming APPSA Congress 2021. Join hands with us as we face this pandemic head on. You are not alone. We are on the end of a telephone should you experience a problem that needs assistance or back up. Please don't hesitate to reach out if you are in need.

God Bless South Africa.
Marilyn de Meyer

From The EDITOR'S DESK

2020 will go down as life-defining date in history in much the same way as 1914 and 1939 did. World War I started on 28 July 1914. World War II started on 01 September 1939. COVID-19 was first discovered in Wuhan, China in December 2019, but the World Health Organisation only declared the outbreak of a `Public Health Emergency of International Concern` on 30 January 2020. Since then, nothing has been at the centre of a conversation as much as COVID-19 and its ramifications have been.

Much has been made of the physical impact the pandemic has had on the global population. Life, as we know it, has changed irrevocably and I doubt whether things will ever go back to normal - whatever normal was. The new normal is an alien world. Nothing is as it was. Nothing will ever be the same again. And it is terrifying.

My work over the last three months has been almost exclusively centred around working with people who are being challenged in both the physical and the emotional sense of the word. Physically, people have been stranded overseas and have had to fight to be repatriated - often at tremendous financial cost. Emotionally, the toll has been much higher. On their return to South Africa, people are placed into quarantine and some are moved into isolation if they test positive. Irrespective, the journey has been a very rocky one: a roller coaster of emotions, frustration and anxiety. Tears - of frustration, pain, worry and joy - have punctuated my days and nights as I try and comfort the bereaved; calm the nerves of those who are at breaking point - from the isolation of quarantine or look down, or the loss of a loved one - or rejoice with those whose tears are tears of joy at seeing a loved one they haven't seen for months. The best tears are the 'happy tears'. Regrettably they are in the minority.

The journey has had many highlights and I celebrate the wins even harder than the losses. The most important lesson I have learnt, though, is that our mental health is as important as our physical health. Not enough emphasis has been placed on ensuring the mental well-being of the healthcare professionals and support staff who are at the coalface of this pandemic: doctors, nurses, physiotherapists, porters, kitchen staff, ward hostesses and cleaning staff, to name a few. You are ALL my heroes.

Not all heroes wear capes. Thank you for what you have done - and continue to do - in the face of incredible adversity.

Madeleine Hicklin

Honouring Rita Williams

It is with profound sadness that we learned of the passing of one of our most respected colleagues, Rita Williams.

For almost 25 years, Rita was the leader, Chapter President and guiding force of the then SATS, and now APPSA KwaZulu-Natal Chapter. Under her leadership the KZN Chapter excelled, and was consistently the winning SATS and APPSA Chapter with the most new members for two consecutive years in a row.

She was an educator par excellance, and never stopped teaching and setting high standards for herself and her students. She was the author of the APPSA Basic Anaesthetic Nursing Procedures Guideline and - together with others in APPSA - was the overseeing editor of all the other APPSA Nursing Procedure Guidelines. Rita was also the recipient of the APPSA Gold Medal for her outstanding achievements in, and commitment to, the practice of peri-operative medicine.

Our most profound and sincere condolences with her mother, siblings, family and friends - as well as to the many colleagues that were touched by her professional and commited service to her profession and to humanity.

Rita Williams we salute you! You will be greatly missed!

On behalf of,
Marilyn De Meyer, *APPSA National Executive President,*
Villi Pieterse *(Honorary Life President)* and all the APPSA members.


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PERI-OPERATIVE COVID-19 DEFENSE:

An Evidence-based Approach For The Optimisation Of Infection Control And OR Management

By Franklin Dexter, MD, PhD, FASA; Michelle C Parra, MD; Jeremiah R Brown, PhD; Randy W Loftus, MD

INTRODUCTION

Anaesthesia professionals are poised to address the coronavirus disease 2019 (COVID-19) pandemic as they lead the global dissemination of an evidence-based, peri-operative infection control programme that can generate substantial reductions in peri-operative pathogen transmission and associated infection development. Our programmatic recommendations stand on a substantial body of empirical evidence characterising the epidemiology of peri-operative transmission and infection development made possible by grant support from the Anaesthesia Patient Safety Foundation (APSF) for studies conducted at Iowa, Dartmouth, and UMass Memorial Medical Center. Our speciality has acquired extensive expertise that yields preparedness for this pandemic. Prevention of pathogen transmission events is of paramount importance, especially considering limitations in availability of personal protective equipment (PPE) that we are currently facing.

Through on-going collaboration with Dr Jeremiah Brown (Professor of Epidemiology at Dartmouth) and Randy Loftus (Associate Professor of Anaesthesia at Iowa), we recommend and are prepared to assist with rapid adaption of a planned approach to attenuate peri-operative transmission (section 'Evidence-Based Peri-operative Infection Control'). Through widespread adoption of these evidence-based approaches,[1] we can better protect our patients and our healthcare coworkers. A simultaneous and related concern is operating room (OR) management considerations for patients without confirmation of COVID-19. In most US hospitals, routine COVID-19 testing is impractical, so that many if not all patients could be at high risk of viral carriage community spread. This could lead to environmental contamination and subsequent patient and provider workspace exposure. Dr Franklin Dexter outlines an evidence-based approach for peri-operative management of such patients in section 'OR Management Strategies in the COVID-19 Era'. With the help of the Anaesthesia Patient Safety Foundation (APSF) and American Society of Anesthesiologists (ASA), are committed to bringing all clinicians the tools to improve peri-operative infection control.

Our goal is to prepare the peri-operative arena (pre-operative, intra-operative, and post-operative) for optimised care of patients and provider protection (section 'Evidence-Based Perioperative Infection Control') and for strategic OR management of patients who remain asymptomatic and are unaware of known exposures (section 'OR Management Strategies in the COVID-19 Era').

While our recommendations can be applied to operative care of patients suspected or known to be infected with COVID-19, these patients represent only the tip of the iceberg. Testing every patient for COVID-19 has economic and logistic considerations that are likely to be unachievable in the short term, and unsustainable for the long term. Even after establishing effective control of viral transmission over the next few months, we will need to be prepared for on-going infections and resurgence as we resume normal operations involving the care of a wide variety of patients undergoing elective surgery.

EVIDENCE-BASED PERI-OPERATIVE INFECTION CONTROL

Confirmed modes of viral transmission (for example, influenza A and severe acute respiratory syndrome - SARS) are primarily but not exclusively contact with contaminated environmental surfaces (fomites) and aerosolisation[2 - 4]. Viral pathogen survival on environmental surfaces extends for several days; COVID-19 can survive for at least three days on a variety of materials commonly encountered in ORs (including, stainless steel, plastic)[5]. Usual OR and recovery cleaning practices, especially for non-critical items such as near bedside equipment, are often inadequate[6 - 8]. This is a significant issue for both patients and providers because of current cleaning failures and/or lapses in practice that increase the risk of cross-contamination during patient care[5 - 8].

Evidence-based improvement strategies for attenuation of residual environmental contamination involve a combination of deep cleaning with surface disinfectants and ultraviolet light (UV-C)[9 - 11]. UV-C is proven to reduce bacterial and viral contamination across a variety of healthcare settings by addressing both surface and air column disinfection[9, 10], and this technology has been shown to reduce the incidence of both bacterial and viral healthcare-associated infections (HAIs)[10]. Consensus, however, is that improved cleaning should include both surface disinfection and UV-C approaches because UV-C alone may be limited by shadowing (areas of the room that the UV-C light does not reach)[11]. Similarly, surface disinfection procedures such as deep terminal cleaning should also be supplemented with UV-C or equivalent technology because of human factors resulting in cleaning failure[12].

While environmental cleaning is an important infection control consideration, our evidence-based approach for peri-operative COVID-19 control should leverage a comprehensive understanding of the epidemiology of transmission for our healthcare arena. The epidemiology of intra-operative pathogen transmission is well characterised[6 - 8]. The incidence of *Staphylococcus aureus* transmission - a common cause of surgical site infections (SSI) - is reported to be as high as 39% for the general peri-operative arena[13, 16]. Peri-operative *S. aureus* transmission events are tightly associated with SSI development with 50% of *S. aureus* SSIs linked by whole-cell genome analysis to one of more intra-operative reservoirs[14]. Similarly, isolation of one or more *Klebsiella, Acinetobacter, Pseudomonas,* or *Enterobacter* (KAPE) pathogens from one more intra-operative reservoirs are associated with increased risk of a Gram-negative HAI development[17]. Intra-operative bacterial transmission relates to nadirs in hand hygiene compliance that occur during induction and emergence of anaesthesia and correlate with peaks in environmental contamination[18]. As such, single modality improvement strategies (such as hand hygiene alone) have been associated with a trend toward increased risk of infection[19]. **Hand hygiene, while an important preventive measure, should not stand alone for control of peri-operative spread of COVID-19. It is insufficient.**

The solid foundation of published evidence generated during the past 12 years indicates that a multi-modal approach is indicated to maximally attenuate high-risk intra-operative pathogen transmission events. Improved hand hygiene, environmental cleaning, vascular care, patient decolonisation, and surveillance optimisation should be used in parallel during the process of patient care as a multi-faceted approach to improved peri-operative infection control for both bacterial and viral pathogens[7, 8, 13, 17]. The approach should involve improved provider hand hygiene leveraging proximity to the provider, improved frequency and quality of environmental cleaning, targeting of high-risk environments with UV-C, improved vascular care, improved patient decolonisation, and surveillance optimisation.

ROADMAP TO EVIDENCE-BASED PERI-OPERATIVE INFECTION CONTROL

Note: Recommendations for positioning of equipment are evidence-based and should be utilised[1].

Step 1: Hand Hygiene

a. Leverage proximity to the provider: Place alcohol-based hand rubs on the intravenous (IV) pole to the left of the provider[20]. If alcohol-based hand gel or foam is not available, use chlorhexidine wipes and/or a dilute ethanol solution. There are over 350 hand decontamination opportunities during routine, intra-operative patient care[18]. Peri-operative care has a high task-density that threatens hand hygiene compliance, especially during induction and emergence of anaesthesia[18]. These are critical periods for viral and bacterial transmission to the surrounding patient environment. Using this approach will increase hand decontamination events 20-fold[20].

b. Double glove during induction: Intubation is associated with transmission of particles in a simulated environment[21]. Double gloving can reduce transmission in a simulated environment[21]. Place dirty equipment in the zip lock bag in the wire basket (see below) and seal.

Step 2: Environmental cleaning:

Improve organisation and increase frequency and quality of cleaning[22]. This approach will substantially reduce the overall contamination of the work area.

Organisation: Place a wire basket lined with a zip closure plastic bag on the IV pole to the right of the provider. Place all contaminated instruments in the bag (including laryngoscope blades and handles) and close. Designate and maintain clean and dirty areas.

Frequency: After induction of anaesthesia, wipe down all equipment and surfaces with disinfection wipes that contain a quaternary ammonium compound and alcohol. Confirm your hospital's selected wipes have anti-viral activity.

Quality: For improved routine and terminal cleaning, using a top-down approach, spray all surfaces and the anaesthesia and circulating nurse work space - including but not limited to keyboards and mice - with a quaternary ammonium compound and wait the required time per agent utilised (typically one to three minutes). Then wipe with a dry microfibre cloth. This cloth should then be laundered. Wipe all surfaces and equipment again with the designated quaternary ammonium and alcohol surface disinfection wipes used above. This cleaning sequence is critical for achieving adequate bioburden reduction.

UV-C: Treat at-risk rooms defined by your hospital's surveillance. These treatments are typically 20 to 30 minutes and can be focused on the high-risk anaesthesia work area and should also include the circulating nurse desk area that is likely to be contaminated and often excluded

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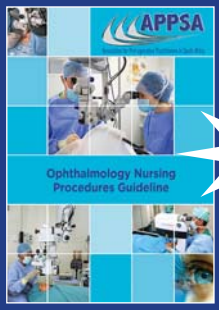

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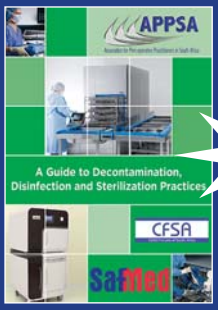

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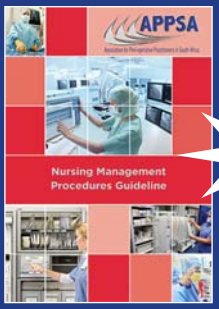

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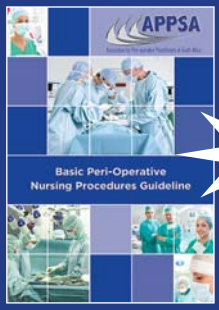

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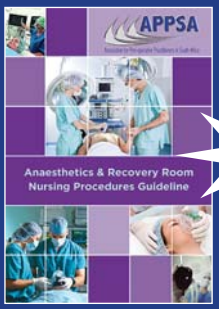

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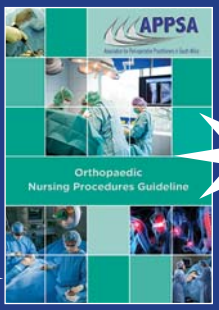

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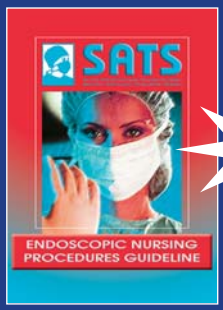

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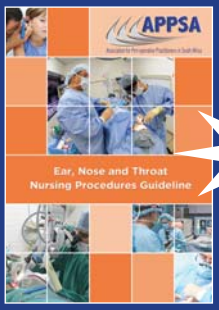

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from cleaning procedures. If UV-C is not available, use the above cleaning process for a more extensive cleaning approach to at-risk environments (enhanced terminal cleaning). If your hospital does not have a surveillance process in place, use surveillance described below to guide strategic targeting.

Step 3: Patient decolonisation:

Patients are a proven reservoir of transmission, an obvious concern in the setting of COVID-19[13 - 16]. Respiratory secretions and droplets, resulting in direct (aerosolisation during intubation) or indirect (contamination of surfaces followed by contact and transmission to eyes, nose, and/or mouth) modes of transmission, can lead to infection[2 - 4]. Microbes, viruses and bacteria, colonise our skin[2 - 4]. Apply standard PPE during procedures (N95 mask, gown, gloves, eye protection) for known cases. For known patients and/or patients with risk of exposure (presumptive positive, see surveillance below), use pre-procedural chlorhexidine wipes, two doses of nasal povidone-iodine within one hour of incision, and chlorhexidine mouth rinse. Both agents have broad activity against bacteria and viruses that will serve to protect patients and providers from subsequent transmission. This approach (chlorhexidine wipes, nasal povidone-iodine, and chlorhexidine oral rinse) can be applied after patient induction/stabilisation for emergent procedures.

Step 4: Vascular care:

Intra-vascular catheters are in direct contact with the patient's intra-vascular space with contamination repeatedly associated with increased mortality and directly linked to infection[7, 8]. Create a closed lumen IV system [23, 24]. Open lumens should be outfitted with needleless, disinfectable devices, as open lumens are associated with increased risk of transmission compared to properly disinfected ports[23]. Improved hub disinfection reduces transmission to the patient and reduces infections[24]. Leverage proximity to the provider: place evidence-based disinfection caps for syringe and hub disinfection on the IV pole to the left of the provider[24]. Keep syringes free of the contaminated environment, disinfected, and ready for use. Scrub all ports before injection and keep covered with disinfecting caps during and after the procedure.

• Steps 1 to 4 above are for hospitals in this moment to improve peri-operative infection control. The additional step below is for on-going support of peri-operative transmission control.

Step 5: Surveillance:

All the above interventions are behavioural with variable compliance, prone to failure, and therefore require data feedback for maintenance of fidelity. This requires the use of evidence-based surveillance for system optimisation and sustainability[14 - 17]. We currently use *Enterococcus, S. aureus, Klebsiella, Acinetobacter, Pseudomonas,* and *Enterobacter spp.* (ESKAPE) transmission as a fidelity marker for basic measures. This could be rapidly extended to COVID-19 with government and industrial participation.

Summary:

Every anaesthesia provider can start with Steps 1 to 4. These are simple, evidence-based interventions designed and proven to protect patients and providers. This is especially critical given PPE deficits, community-associated spread of current pathogens, and likely on-going transmission events. We should target Steps 1 to 4 and then proceed to a robust programme of on-going diligence and surveillance - Step 5.

OR MANAGEMENT STRATEGIES DURING THE COVID-19 CRISIS

In the setting of a viral pandemic, operative procedures are limited to essential interventions such as urgent and emergent procedures. Essential operations include a patient needing a biopsy to initiate medical or radiation treatments. Restriction of procedures has substantial clinical and management implications.

Previous OR management reports have not defined the best strategy for assigning personnel and cases to ORs under these unique circumstances. Factors to consider are limited resources balanced with the simultaneous goal to minimise both patient and provider exposure to high-risk pathogen transmission and probable infection. We consider the likelihood of pathogen transmission during routine patient care to the surrounding environment as the most potent transmission vehicle in the OR[8]. Moreover, we now recognise the extended environmental survival of such transmitted pathogens (for example, at least three days for COVID-19)[5]. Given these circumstances, how should one schedule essential cases to minimise short-term and long-term risk of transmission to patients and their providers? In the analysis below, we describe the proper approach for management of patients in the COVID-19 era.

OR MANAGEMENT PROBLEM FORMULATION

Our primary objective is to minimise the spread of infection and to achieve the lowest risk for patients and staff while caring for patients with unknown COVID-19 status at the time of anaesthesia. Consider the assignment of anaesthetic cases and staff (for example, anesthesiologists and certified registered nurse anaesthetists) to ORs or non-OR locations under several conditions:

- The patient is not known to have COVID-19 (for example undergoing Caesarean delivery). Ideally a single OR would be set aside for all COVID-19 patients, in a corner of the surgical suite, with separate access, and revised to be negative pressure[25]
- Shortages of PPE such as surgical masks and gowns are the principal constraint to elective surgery being performed. In addition, all posted cases are considered essential
- There are insufficient test reagents/supplies (for example viral transfer media) to screen all patients pre-operatively for COVID-19, the false-negative rate is substantively large (for example >1%), or the time to obtain results is beyond the point of proceeding for urgent procedures

A consequence of the second condition noted above (shortage of PPE) is that there are enough ORs, surgeons (proceduralists), anaesthesiologists, certified registered nurse anaesthetists, and OR nurses to perform all cases promptly. This is unlike the normal situation wherein constraints on the care of such patients are most commonly surgeons (proceduralists) and/or rooms busy with other elective cases[26]. To complete our infection-control strategy, we relied on the on-line bibliography of OR management articles and recent review articles[27 - 30]. None of the articles considered the performance objective of reducing spread of infection[28 - 32]. Articles include the longer turnover times associated with cleaning when a patient has known infection, but reducing infections is nonetheless not the mathematical objective in these studies[31, 32].Readers will also note that the articles cited here are primarily from the fields of mathematics and engineering, and thus will not be found in PubMed[28 - 32]. Therefore, we included the on-line bibliography used by specialists in OR management[27]. Fortunately, complex mathematics is not required to solve the situation where the daily number of cases is less than the number of rooms available.

While there may be restrictions on some procedures in some rooms, for convenience we will consider the important conceptual construct that cases could be completed while performing one case in each room.

THE FOLLOWING FOUR STEPS OPTIMISE STAFF AND CASE ASSIGNMENTS IN THIS UNIQUE SCENARIO:

First, to reduce the use of surgical masks and to reduce potential COVID-19 exposure to the greatest extent possible, use relatively long (for example, 12 hour) shifts. In other words, aim for as few different people as possible working daily in the surgical suite or procedural locations. For instance, if there are eight ORs sharing one master ventilatory system and eight essential cases to be done (each lasting one to two hours), the ideal solution is to have two teams complete the eight cases in the available rooms. This contrasts sharply with the traditional eight first case starts in eight rooms with eight8 teams of providers! The benefit to staff and the organisation with the 'infection-control' approach is that if a patient were found to have COVID-19 after surgery, fewer personnel were exposed.

Second, personnel doing terminal cleaning between each case[12] with the addition of UV-C (see section 'Evidence-Based Peri-operative Infection Control') can take one to two hours, depending on whether there are one or two housekeepers and whether the UV-C machine needs to be moved within the room[12]. Therefore, the optimal strategy is to do one case in each OR, followed by terminal cleaning. Note that this does not mean literally that a room can be used just once a day. Rather, let anaesthesia and nursing teams (and surgeons/proceduralists if they have >1 case) work in more than one room so that each room receives deep cleaning between cases.

Third, do not have patients go into a large, pooled phase I post-anaesthesia care unit because of the risk of contaminating facility at large along with many staff. Putting a surgical mask onto each patient would result in depletion of the supply of the protective equipment, an action that is inconsistent with the second condition above. Instead, have most patients recover in the room where they had surgery. This is done routinely in Japan - with the anaesthesiologist recovering their patient - because few hospitals have a phase I post-anaesthesia care unit[33]. When the time of patient recovery was compared between a Japanese hospital where anaesthesiologist recovery was routine practice versus the University of Iowa where there is a phase I post-anaesthesia care unit and nurses, the longest recovery time in Japan was briefer than the shortest recovery time in the United States[34]. Clinicians should consider selecting anaesthetic drugs to minimise recovery times and possibly accomplish phase 1 recovery within the OR itself[35, 36]. Consider, when appropriate, using peripheral nerve block instead of general anaesthesia[37, 38].

Fourth, if the surgeon (proceduralist) will be operating later in the day and is scheduled for only one procedure, provide notification when there is the start of closure of the preceding case being done by the anaesthesia and nursing team[39]. This communication reduces their total exposure time in the OR and should not limit workflow if the preceding patient will be recovered in the OR by the anaesthesiologist or certified registered nurse anaesthetist.

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DISCLOSURES:

Franklin Dexter, MD, PhD, FASA - This author helped with methodology, investigation, writing of the original draft, and reviewing and editing. He has no conflict of interests.

Michelle C. Parra, MD - This author helped review and edit the manuscript. Dr MC Parra is affiliated with RDB Bioinformatics, LLC, as Dr Loftus' spouse.

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PROCEDURAL SEDATION
And The Risk Of Hypoxaemia

By Bram Thiel[1]*, Roos A Kraima[1], Siem Klok[1], Rutger M Schrier[2] and Marc B Godfried[1]

BACKGROUND

In the last decade, procedural sedation and analgesia (PSA) has increased exponentially with the introduction of complex therapeutic and diagnostic procedures performed outside the operating room (OR). This development also exposes patients to significant co-morbidity risks. As the procedures are increasingly complex, invasive and last longer, they require extensive doses of hypnotics and sedatives.

The PSA in our hospital is being performed by specifically trained anaesthesia nurses and physician assistants (PA), under the indirect supervision of an anaesthesiologist. Since 2008, we have been required to respond to a growing demand for PSA. As a result, to date, we have performed approximately 1 500 PSAs per year for a very wide variety of procedures - mostly invasive and applied to rather vulnerable patient categories. While there are several reasons for the growing demand, the main one stems from the introduction of new legislation in 2012, whereby the Dutch governmental Department of Health mandates that PSA is performed by specially trained medical personnel. The onus on value-based healthcare is the second reason, which has resulted in the growing number of procedures being performed in out-patient settings, rather than in the OR. The first reason probably makes the procedures safer, while the second can increase the adverse events during PSA.

Systematic reviews and large cohort studies that have been conducted to date yielded findings suggesting that PSA in the out-patient setting is safe, as very few complications occur[1 - 13]. However, a review of PSA procedures revealed that adverse effects and complications were more frequent and more severe in patients treated in an out-patient setting. One of the most commonly reported complications was hypoxaemia with SpO_2 below 90% for more than 30 seconds[14, 15]. An extensive retrospective review encompassing 143 000 cases indicated that adverse events are associated with adult moderate PSA, whereby hypoxaemia was found to be the most common complication[16]. Empirical evidence also suggested two general factors for the cause of hypoxaemia during PSA, Body Mass Index (BMI) and the American Society of Anaesthesiologists classification (ASA) were the most important and is deemed independent from those pertinent to the field of general anaesthesia. However, many practitioners argue that they nonetheless contribute to the overall PSA risk. In contrast, the wide spectrum of innovative diagnostic and therapeutic interventions in the out-patient setting has not been assessed for these patient risks.

One of the invasive procedures frequently performed in our hospital is endobronchial ultrasound (EBUS). In our clinical observation, EBUS was associated with longer periods of hypoxaemia than

procedures in the supraglottic airway and those not involving the airway, independently from the ASA classification and patient's BMI. We thus hypothesised that, in addition to obesity and ASA classification, the site of intervention is an important predictor of hypoxaemia during PSA. The goal of this retrospective database study was to identify specific PSA procedures associated with hypoxaemia.

METHODS

Study design

In this retrospective database study, we compared hypoxaemia, defined as SpO_2 below 90% and below 85% for at least one minute, and SpO_2 below 90% over two minutes among three groups requiring PSA performed in the out-patient setting. The three types of diagnostic procedures consisted of Endobronchial procedures (EB), which included endobronchial ultrasound and bronchoscopy; In Airway (IA) procedures, comprising gastroscopy, endo-ultrasound and endoscopic retrograde cholangiopancreatography (ERCP); and Not In Airway procedures (NIA), namely colonoscopy, urological, orthopaedic and gynaecological procedures.

After approval from the local medical ethics committee, we identified the records of patients that had been referred for PSA for diagnostic procedures in the outpatient setting of the OLVG hospital, a 550-bed general hospital. Data has been collected from 01 January 2011 to 31 December 2013. These records were assessed against the inclusion criteria, which required all patients to be adults (>18 years) and receiving PSA. Records of patient with initial SpO_2 below 90% were excluded from further analysis. The collected patient data included vital parameters, and patient characteristics such as ASA classification and procedure type. In the cases where parameters were registered incorrectly, records were inspected manually and excluded from the study if necessary. For the patients undergoing two procedures during the same session, the most invasive procedure was used in the analysis.

PSA was conducted in accordance with the prevailing protocols. Briefly, the physical condition, including ASA classification and BMI, were assessed before the start of the procedure. Patients received a 22 gauge intravenous catheter, pulse-oximeter, non-invasive intermittent blood pressure measurement, and a three-channel ECG. All patients received oxygen support (100%, 3L/min). Accuracy of measurements are confirmed by regularly checking the plethysmography. PSA was performed using propofol (Diprivan®) and alfentanil (Rapifen®). The total amounts administered were registered in the database via automated syringe pumps connected to a data monitoring programme, while boluses and other supporting medication were entered manually. The duration of the procedure was defined as the time between starting and ending the measurements. PSA was provided by anaesthetic nurses and physician assistants with at least five years' working experience in the OR. In the case of an adverse event, the anaesthesiologist was consulted.

Primary and secondary outcomes

Hypoxaemia was defined as a SpO_2 <90% for at least one minute. In addition, we also assessed patients in whom hypoxaemia lasted more than two minutes, as well as those with severe hypoxaemia (SpO_2 <85%) for one minute or longer. The following variables were compared across the PSA groups (for example EB, IA and NIA groups): age, sex, ASA classification, procedure duration, BMI and the total amount of propofol in mg/kg/min.

Statistical analyses

Patients were divided into three groups according to the type of diagnostic procedure for which procedural sedation was initiated. Categorical data were presented in numbers, and percentages and continuous data with mean and standard deviation or median and inter-quartile range, where applicable. To explore differences in patient characteristics among the three groups, the Kruskal-Wallis test was used to compare continuous variables depending on the distribution. Differences in the distribution of nominal variables among the three groups were explored using the Chi-squared test. To analyse desaturation in relation to the diagnostic procedure, the absolute risk differences (ARD) among the three groups were calculated with 95% confidence interval using Wilson's procedure. To explore for confounding in the relation between desaturation and the type of diagnostic procedure, logistic regression analysis was preformed. The statistical analysis was performed via SPSS software package, version 18.0. In all analyses, p-values less than 0.05 were considered statistically significant.

RESULTS

Patient characteristics are presented in Table I. As previously noted, the cohort comprised of 2 328 patients and was divided into three groups, based on intervention type. Analyses revealed that 165 (7.1%) of patients underwent an endobronchial procedure (EB), 1 382 (59.4%) underwent an in-airway (IA) procedure and the remaining 781 (33.5%) patients underwent a not in-airway (NIA) procedure. The distribution of median BMI and the proportion of patients classified ASA II did not show statistically significant differences among the three groups.

TABLE I

Patient characteristics	Total cohort, 2328	Endobronchial 165 (7.1%)	In-airway 1382 (59.4%)	Not-in airway 781 (33.5%)	P-value
Age years (median, IQR)	59 (48-69)	62 (51-70)	61 (50-71)	54 (43-65)	<0.001
Male (N%)	1106 (47.5)	92 (55.8)	698 (50.5)	316 (40.5)	<0.001
Length cm (median, IQR)	172 (165-178)	171 (164-178)	171 (165-178)	172 (165-180)	0.067
Weight kg (median, IQR)	74 (63-84)	74 (62-83)	73 (64-83)	75 (63-85)	0.26
BMI (median, IQR)	24.0 (22-27.8)	24.0 (21.5-27.9)	24.0 (22.0-27.9)	24.5 (22.1-27.7)	0.9
ASA 1 (n%)	651 (28)	38 (23.0)	335 (24.2)	278 (35.6)	<0.001
ASA 2 (n%)	1258 (54)	82 (49.7	750 (54.3)	426 (54.5)	0.51
ASA 3 (n%)	387 (16.6)	44 (26.7)	271 (19.6)	72 (9.2)	<0.001
ASA 4 (n%)	32 (1.4)	1 (0.6)	26 (1.9)	5 (0.6)	0.04
Time procedure min. (median, IQR)	43 (30-61)	63 (52-78)	45 (32-61)	36 (26-51)	<0.001
Propofol mg/Kg/min (mean, SD)	0.08 (0.06-0.10)	0.08 (0.003)	0.09 (0.005)	0.09 (0.002)	<0.023

Table I: Patient characteristics, differences are compared with Kruskall-Wallis test or Chi-square test depending on the variable and distribution. P value less than 0.05 is considered statistically significant.

All other patient characteristics showed statistically significant differences among the three groups. For example, patients in the NIA group were younger, where their median age was eight and seven years lower than that of the EB and the IA group, respectively (p = 0.001). The proportion of male patients in the EB group was higher by 5% and 15%, compared to the IA and the NIA group, respectively (p = 0.001).

In addition, significantly more patients in the EB group were classified as having higher ASA risk (7.1% vs. 17.5%, p = 0.001), whereas those classified as lower ASA risk were asymmetrically distributed in the NIA group (11.4% vs. 12.6%, p = 0.001). The proportion of patients classified as ASA IV in the IA group was higher by 1.3%, compared to the EB and the NI group (p = 0.04). The median duration of the EB procedure was 18 minutes and 27 minutes longer, compared to the IA and the NIA group, respectively (p = 0.001). Finally, the total amount of propofol in mg/Kg/min was lower in the EB, compared with the IA and NIA groups (p = 0.023).

The primary and secondary outcomes are displayed in Table II. As can be seen from the results, hypoxaemia and severe hypoxaemia occurred more frequently in the EB group compared to the other two intervention groups. The calculated absolute risk differences show that these results are statistically significant.

TABLE II

Outcome	Total cohort 2328	Endobronchial 165 (7.1%)	In-airway 1382 (59.4%)	Not-in airway 781 (33.5%)	Δ% (95%CI) EB vs IA	Δ% (95%CI) EB vs NIA	Δ% (95%CI) IA vs NIA
SpO_2<90% ≥ 1 min.**	373 (16.0)	58 (35.2)	207 (15.0)	108 (13.8)	20.2 (13.0 to 27.9)	21.3 (14.0 to 29.2)	1.2 (-2.0 to 4.1)
SpO_2<90% ≥ 2 min.**	194 (8.3)	35 (21.2)	112 (8.1)	47 (6.0)	13.1 (7.4 to 20.1)	15.2 (9.3 to 22.2)	2.0 (-0.2 to 4.2)
SpO_2<85% ≥ 1 min. **	145 (6.2)	24 (14.5)	82 (5.9)	39 (5.0)	8.6 (3.8 to 14.9)	9.6 (4.7 to 15.9)	0.9 (-1.1 to 2.8)

Table II: Delta percentages for hypoxaemia (SpO_2<90%) and severe hypoxaemia (SpO_2 <85%), calculation of 95% confidence interval for the difference between two independent proportions using the Wilson procedure without a correction for continuity.

Age and ASA class IV were detected as independent predictors of desaturation with odds ratios of respectively 1.008 (95% CI 1.001 to 1.015) and 2.24 (95% CI 1.137 to 5.154). Other characteristics - such as BMI and procedure duration - are not statistically significantly associated with hypoxaemia in our data. Univariate logistic regression with hypoxaemia with SpO_2 <90% for at least one minute as dependent variable and the type of procedure as independent variable showed that the odds ratio of hypoxaemia for patients undergoing EB was 3.378 (95% CI 2.313 to 4.933).

Compared to patients undergoing NIA procedures as the reference group, there were no statistically significant differences in hypoxaemia between the IA and the NIA group. Adjusted for age and ASA classification, the odds ratios of hypoxaemia between patients undergoing IA and NIA procedures were 0.320 (95% CI) and 0.307 (95% CI) when compared to those in the EB group, as shown in Table III.

Table III

Multivariate	Wald	Sig.	Exp (B)	95%CI for Exp (B)
Endobronchial	43.719	0	-	-
In-airway	40.062	0	0.32	0.224 to 0.455
Not-in-airway	36.61	0	0.307	0.210 to 0.450
Age	2.517	0.113	1.006	0.999 to 1.014
ASA 4	5.1	0.024	2.42	1.124 to 5.210

Table III: Multi-variate logistic regression analysis with hypoxaemia SpO_2 <90%> one minute as dependent variable and endobronchial procedures as reference category, R^2 = 0.020 (Cox & Snell R Square), 0.035 (Nagelkerke R Square) the amount of variation in the outcome variable that is accounted for by the model, model Chi Square 47.564[4] p> 0.001.

DISCUSSION

In this retrospective database study, we have revealed that the EB type of diagnostic procedure acts as a predictor for hypoxaemia and severe hypoxaemia during procedural sedation. These findings are independent from the established patient-related risk factors, such as ASA classification and BMI. In this study, age was also an independent predictor. This finding can be explained by the high percentage of young people undergoing mostly colonoscopy procedures in the NIA group. Such procedures are frequently performed on young adults with inflammatory bowel disease as well as in gynaecological procedures on young women.

There can be several reasons behind the patients in the EB group being more prone to desaturation during the procedure. For example, it is well known that EB procedures compromise the airway patency by mechanic obstruction of the airway. Although IA procedures result in compromised access of the airway too, they are not accompanied by the extensive stimulation of the subglottic airway. EB procedures also tend to cause a very strong cough reflex that can result in less effective breathing. The other contributing factor could be the underlying pulmonic neoplasm in many of these patients. Although we excluded patients with an initial SpO_2 below 90%, patients with a lower FRC or a bronchus blocking tumour are prone to desaturation during PSA. Initially, we expected that the coughing reflex would be inhibited, as well as breathing frequency to be depressed, due to a higher dose of sedatives and analgesia.

The results, though, showed that the patient in the EB group received statistically significantly fewer sedatives compared to the other two groups (p = 0.023). There can be several reasons for these findings. For example, the anaesthetic nurse or PA administering sedation is maybe more inclined to use high doses of propofol with this vulnerable group of patients. Propofol reduces the respiratory rate and can cause apnoea, especially in combination with opioids. In this light, we recently started to give the ASA III/IV patients small doses of ketamine alongside propofol and alfentanil. However, further studies are needed in order to ascertain whether this protocol has any effect on hypoxaemia prevalence during the EB procedures.

The findings yielded by our study prompt the question of whether the EB procedure should be performed under general anaesthesia while the patient is intubated. We have discussed this with the performing pulmonologist and reached the conclusion that this procedure does pose a risk, as there is a chance of tube dislocation. Moreover, the likelihood of damaging the trachea is increased by the use of a breathing tube and the EB scope at the same time. This implies that the relatively new EB procedures should be treated separately from the more conventional IA and NIA procedures. Alternative sedatives such as ketamine maybe an appropriate approach to circumvent hypoxaemia[17].

CONCLUSION

In this retrospective cohort study exploring the predictors of hypoxaemia during procedural sedation, EB procedures were found to be an independent predictor of hypoxaemia with a SpO_2 <90% and a duration of more than one minute.

Conflicts of Interest

This study was supported by departmental funding. No other funding was received. The authors declare no conflicts of interest.

Author's Contributions

Bram Thiel designed and conducted the study, analysed the data, and wrote the manuscript. **R. Kraima** helped design and conduct the study, analyse the data, and write the manuscript. **S. Klok** has collected and verified the original study data. **R. Schrier** helped design and conduct the study. **M. Godfried** helped design and conduct the study, analyse the data, and write the manuscript, reviewed the analysis of the data and approved the final manuscript. All authors read and approved the final manuscript.

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EN13795 - Do your surgical drapes and gowns comply to the right quality standards?

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How do we ensure this?

EN 13795 is the European standards relating to general requirements, testing methods and specific performance levels for single-use and multiple-use surgical drapes, gowns and clean air suits. The standard is designed to ensure that a basic level of performance has been achieved in order for a surgical gown or drape to be classed as fit to use for a surgery.

EN 13795 consists of three parts:
Part 1: General requirements for manufacturers, processors and products
- The scope includes testing requirements as follows:

CHARACTERISTICS TO BE TESTED	GOWNS	DRAPES
Resistance to microbial penetration - Dry	✓	✓
Resistance to microbial penetration - Wet	✓	✓
Cleanliness - Microbial	✓	✓
Cleanliness - Particulate matter	✓	✓
Linting	✓	✓
Resistance to liquid penetration	✓	✓
Adhesion for fixation for the purpose of wound isolation		✓
Busting strength - Dry and wet	✓	✓
Tensile strength - Dry and wet	✓	✓

Part 2: Test methods
- This section stipulates the test methods that manufacturers or processors will have to complete in order to ensure that the device will comply with the requirements in parts 1 and 3 of the standard.

Part 3: Performance requirements and performance levels
- The levels of performance are selected as **'standard'** or **'high performance'** and are differentiated by critical and less critical areas on drapes or gowns.
- Standard Performance addresses the minimum performance requirements of medical devices, while High Performance addresses elevated performance requirements. These differ according to levels of mechanical stress, fluid levels and durations of surgical procedures.

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ONETOGETHER

Galvanising Efforts To Reduce SSI

By Kate Woodhead, RGN, DMS

INTRODUCTION

Surgical Site Infection (SSI) continues to be a major source of concern to patients and the multi-disciplinary team involved in surgery. SSIs are a largely preventable infection and therefore the many efforts that are made to provide evidence for aspects of practice to reduce SSI, but which are slow to be implemented into practice, often make a low impact. SSIs account for around 16% of all healthcare-associated infections which cause considerable mortality and morbidity and huge increases in the costs of care. The impact on patients can continue for months, may require re-hospitalisation and re-operation - with all the consequent costs for hospitals. Many hospitals and surgical teams do not have access to their own infection rates. If they did, it is highly likely to have a pro-active impact on practice to mitigate and reduce SSIs.

One of the complications of peri-operative care is that it is team based, multi-site and multi-disciplinary. Patients are admitted to an area or day-care ward, transported to theatre, operated on, recovered by, and finally may even be sent to a different ward for post-operative care. Each speciality area and leader has its own way of doing things, which may or may not be based on evidence and protocol. Their practice is often different to that practised in the theatre or ward next door. Practice may be led by the surgeon or team leader, but time pressures and the lack of recognition means that staff do not sit together to devise evidence-based practice standards on shared issues such as patient warming. Ward staff are rarely included in the team-based discussions (if they do occur) and it is an uncommon event to see ward and theatre staff communicating about quality and practice development. Feedback to theatre teams on the impact on patients of their practice is infrequent, if at all. There are so many variables that it is easy for the team not to 'own the problem'. There is also an issue, about the value of the surveillance as it relies on patients self reporting or out-patient observations within the 30-day definition.

ONETOGETHER - TACKLING THE ISSUE TOGETHER

OneTogether is a partnership formed in 2013 by leading professional organisations that have an interest in reducing SSIs. The group has recently welcomed a new partner, the Central Sterilising Club, which it is recognised has expertise on an area of practice that has a huge influence on the quality management of surgical instrumentation and, consequently, on safe patient care in the operating room (OR) The founding members of One Together are the Royal College of Nursing, Infection Prevention Society, Association of Peri-operative Practice and the College of Operating Department Practitioners and 3M. By using the expertise of different specialists, the group formed from the above organisations identifies core actions that can be taken to educate, empower and provide evidence-based tools and resources for surgical teams to use.

OneTogether began when a group of infection prevention specialists and peri-operative practitioners from around the UK - and representing 75 hospitals - met to discuss how newly-emerging evidence could influence practice to reduce SSI[1]. The outcome of the workshop was the formation of the OneTogether Expert Group. With its establishment came a number of challenges, notably to increase the collaborative efforts to support and spread best practice. Since 2013, the group has published a number of quality improvement resources which are widely available on partners' websites. In addition, they meet to develop the resources, once a quarter.

In short, OneTogether aims to:

- Raise the profile of infection prevention and the scientific data supporting practice
- Engage healthcare professionals and institutions to make a difference at every level to reduce SSI and improve patient outcomes
- Share best practice across all specialities
- Leverage the strength and reach of professional associations, industry partners and on-line platforms to educate and engage

The initial workshop in 2013 sought to focus the attention on different areas of peri-operative practice. Resources developed since its formation have focused on these key areas:

- Skin preparation
- Instrument management
- Management of patient temperature
- Surgical environment
- Prophylactic antibiotics
- Wound management
- Surveillance of SSI

A number of focus areas are still to be developed. Different aspects of peri-operative practice were put under the spotlight during the initial workshop which focused on compliance with existing guidance including NICE guidelines for both SSI and normothermia. Barriers to compliance with NICE guidelines were identified across a range of different criteria as shown in Table 1[2]. Sadly, in my opinion, despite the passage of six years, the majority of these barriers may well still be current and active, to a greater or lesser degree.

The difficulties of translating evidence-based guidelines into policy and thence into practice is shown, and was identified clearly at the workshop. Infection prevention policies in hospitals are comprehensive for many areas and hospital environments, but are often scant in detail for peri-operative practice. This has reduced the likelihood of practitioners looking at them on intranets. Specialist organisations provide guidelines for best practice, but these are not always accepted by hospitals as guidance for practice. OneTogether understands the barriers to compliance. It has sought to make the Quality Improvement Resources document clear, straightforward, and based on the very best evidence. In addition OneTogether is looking to incorporate an audit tool so that ORs may benchmark their practice against others who undergo an audit. This may be other theatres in the same hospital Trust, or local hospitals who have collaborative arrangements among themselves. It may even stretch further afield, where benchmarks can be evaluated against other hospitals in the area - or even abroad.

TABLE I - BARRIERS TO COMPLIANCE WITH BEST PRACTICE GUIDELINES

BARRIER	SPECIFIC ISSUES
Finance	The procurement process Lack of resources for necessary equipment
Culture	Lack of leadership, ownership and defined responsibilities for the policy and procedures. Difficult to standardise practice
Equipment	Theatre environment is cold Lack of thermometers Faulty/inaccurate equipment
Knowledge	Staff do not perceive importance Other colleagues not supportive Lack of knowledge, information and training for the multi-disciplinary team No time allocated to training Lack of standards to support best practice No patient survey to capture feedback
Time	Lack of time

In addition to those factors listed above, barriers to implementation of best practice standards have included:

- A lack of leadership to drive the process
- A lack of ownership of policy development such that responsibility to ensure compliance is not defined
- A lack of knowledge, information and training for the multi-disciplinary team

This latter factor has been reiterated by the findings of the first *Getting it Right First Time Cross-Cutting Surgical Site Infection Outcomes.* Unfortunately, some participants in the outcomes document were unaware until the audit of the criteria for diagnosing SSI. Training on this aspect of care was lacking and generally unavailable. As a result, the concept of *OneTogether: The Power of Small Actions* is founded upon the idea that powerful results can be achieved through persistent action. Every year since 2013, the group has met and devised new resources to use in practice. There is now a veritable library on different aspects of evidence-based infection prevention peri-operative practice that practitioners can use to measure and benchmark their practices. All partners in OneTogether hope that these resources will be widely used to benefit patients and peri-operative care, globally.

The Improvement Resources document summarise the evidence underpinning recommended practice and also provides a competency assessment checklist. Following assessment by a peri-operative practitioner and an infection prevention practitioner working together, using the

OneTogether Assessment Toolkit, the team will be able to identify areas of practice where there is low compliance and develop an action plan for improvement.

OneTogether in 2019

At an Expert Conference held in Birmingham in 2019, a number of experts reviewed aspects of the Quality Improvement resources launched at the conference and those updated in line with new NICE guidance. Each delegate was provided with the new and updated resources, and they are all still available and free to download online at https://www.onetogether.org.uk/resources/ as well as on all the partner websites. The conference attracted over 300 delegates who were able to hear from a wide range of different speakers talking on topics as broad as the NICE Updates to Guidance, to action being taken to reduce SSIs at Western Sussex Hospitals NHS Foundation Trust. Other topics included Instrument management, the challenges and where are we now? Practising Asepsis and Improving and sustaining Infection Prevention Practice. In addition we heard a presentation on the practical aspects of change management and behavioural change at a hospital in Malta, which resonated with many in the audience.

Awards were also given to the three different winners of the Small Steps Award. Nur-in Mohammad and the team from Gloucestershire Hospitals NHS Foundation Trust were awarded a Small Steps Award for their work on increasing compliance with NICE guidance on normothermia in adult patients undergoing surgery. They undertook a risk assessment for all patients undergoing elective surgery and implemented the NICE guidelines according to their patient's risk. Compliance was successfully improved from 12.5% to 58% in three months. Education of all staff on the importance of warming surgical patients and equally on monitoring and documentation were essential elements of their project.

The next Small Steps Award was made to Beverley Al-Azzawi and her team from Northampton General Hospital, who devised and ran staff education days when their SSI rates were recognised as outliers. A local survey showed that staff felt they lacked confidence in the prevention of SSI and also the management of wounds. The effect of the educational days was able to be measured and through the interactive and fun days which were held for staff, SSI rates decreased to 1% in Total Knee Replacements and 0% in other specialities. Staff reported that they felt far more comfortable to select appropriate dressings and to plan care effectively which improved patient outcomes.

The final 2019 Small Steps Award was made to Dr Jane Halliday, a neurosurgeon from the John Radcliffe Hospital in Oxford. They reviewed their practice and formed a specific infection policy based on the evidence and developed a standardised SSI checklist for use in the OR. They established a related audit tool and an educational programme. They involved a multi-disciplinary team - all involved in the patient's care pathway in some way. Since June 2019 they have achieved a significant reduction in returns to theatre for SSI from 4.3% before the project to 0.72% today. Dissemination of results to all staff was also part of the project and is known to assist in changing behaviour.

Further details on all three programmes described above will be provided in due course, as each has applicable findings that will be of benefit across the board. There is considerable interest in other countries in Europe to hear about and to develop their own expert group based on the same principles as the UK and US Groups. Team members have recently spoken in Romania, Portugal,

South Africa and India - all of whom have expressed an interest. The challenge remains as to whether this develops into a global movement.

Poor Compliance

We know that there is generally a very slow process of change when it is required and Leaper *et al* described how poor we are at compliance with guidelines and care bundles for SSI[3]. They cite that despite the weight of Level One evidence in the NICE Guidelines, SSI rates have not fallen. However, we also know that some Trusts are making headway by undertaking the Small Steps as described above and making a significant difference to patients with minimal effort. The development of the OneTogether group, their Quality Improvement Resources document and the activities taking place across the country to ensure that the audit tools are used effectively to measure and monitor surgical site infections, must be having a small effect. That being said, however, there is a great deal more to do, and it is up to us to ensure in our hospitals that we download the tools to make effective changes and make a difference to our surgical patients.

This article first appeared in an Infection Prevention Supplement in December 2019. It appears here, courtesy of the author. Kate Woodhead qualified in 1978. She has worked in peri-operative care since then and runs her own business as an Operating Theatre Consultant. Kate was Chairman of NATN from 1998 to 2001. She is the former President of the IFPN (2002 to 2006) and now works as an Advisor to WHO on the Safe Surgery Saves Lives Campaign. She is the Chairman of Trustees at Friends of African Nursing. For more information on FoAN please go to www.foan.org.uk

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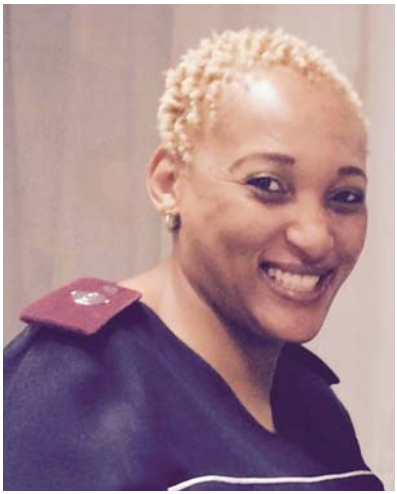
IN CONVERSATION WITH FRANCES MOTEKA
A Covid-19 Angel



As the rate of the COVID-19 infection continues to rise in South Africa, healthcare workers continue to face multiple challenges. Sister Frances Moteka shares her personal experiences working in Johannesburg COVID-19 quarantine sites, and the importance of complying with the national lockdown regulations.

How did you feel when you were hired to work within a quarantine site, considering the current challenges and fears surrounding the virus ?
I was excited to venture into something different! As you know, I am always up for a challenge and as a versatile nurse who has worked in different nursing disciplines - theatre, ICU, aviation medicine, education and management - I was certainly up for the adventure. I had to do infection prevention and control research in order to pass third year in my nursing studies, so I was excited to be able to put my IPC research into practice, and be able to assist in fighting the COVID-19 pandemic.

What would you say is the most challenging thing about working in a quarantine site?
Difficult, impossible, rude and abusive patients. Before patients arrive on site, they are well aware of the fact that they have to stay in quarantine for a period of 14 days. It's in their repatriation contract, but many expect us to amend the rules and regulations to suit them. When they don't receive the treatment they expect, they slander us with verbal abuse and call us all sorts of unmentionable names you could never say in front of your children!

How has your hospital work experience helped you in working in quarantine? Would you say it is more challenging?
Having worked in a hospital, you know that the most important person is your patient. One has to carry out the key practices of being a good listener, being selfless and compassionate. These are the very attributes I had to apply when working in a quarantine facility. The only difference would be that in this quarantine scenario, you have patients who are not bed-ridden. This becomes difficult at times, as you have 'patients' who forget that they are supposed to follow protocol stipulated by the government. They feel entitled, are often disrespectful and can become very argumentative. With hospital patients, in the main, people are more respectful and humble.

As a healthcare worker, what are some of the challenges that you have experienced working in these quaramtine sites? How do you overcome them?

A quarantine job is difficult. It requires a person who is strong, firm, courageous and fearless. And most importantly, it requires someone who stands their ground, yet at the same time is able to be loving and sympathetic. In this scenario, you need to be willing to go beyond the call of duty. As a person in charge of a quarantine facility you have to learn to sleep with one eye open as you never know when you will get a call from a patient at 02:00 because they are ill; or if there is an ambulance coming back at 04:00 returning a patient to site from the hospital. Basically you are on call 24 x 7 and that is very, very emotionally and physically taxing.

How did you handle leaving your family at home and potentially putting them at risk when you came back?
Well, it was difficult knowing I'll be away from home. However, I must say we are a strong and resilient family. My family is understanding and know that I am the breadwinner and I have to do what I have to do to ensure we are cared for. What makes it bearable is us communicating on a daily basis. As for putting them at risk, we know that I am responsible for protecting myself as they should too, at home. I inform them when I do a test right before the 14 days of quarantine are over, and inform them of my results which gives them the green light to be able to pick me up. So yes, it is difficult to be apart and alone, however we are all in this together.

As a healthcare worker, what is something you wish you could tell the citizens of South Africa about COVID-19 and the national lockdown?
This pandemic is not a joke. We NEED to take this seriously and people should comply with the government regulations regarding the COVID-19 pandemic. Let us decrease the exponential curve together. Government cannot do it on its own. Citizens of South Africa, stay home, wear your mask, wash your hands, practice cough etiquette, and keep social distancing. Monitor yourself for signs and symptoms of COVID-19, and if there's a need, isolate yourself and contact your healthcare professional. Prevention is better than cure!

Frances Moteka was born on the 16 July 1973. After completing her matric, this mother of three went to WITS University to sit for a BA in sociology and psychology. However, the allure of world travel beckoned and, in 1994, Frances joined South African Airways. She excelled at her job and worked as a senior flight attendant for 15 years.

Needing a challenge, Francess enrolled to become a nurse through the Netcare Training Academy and qualified as an RN in 2014. Ever seeking something new, she moved into the peri-operative space and worked in the OR before moving into the ICU environment. 2017 saw her rejoin SAA as an aviation medicine facilitator, training new cabin crew in aviation medicine. She became a designated examiner for the South African Civil Aviation Authority and is a facilitator, assessor and moderator for courses recognised by SAQA and ETQA.

In November 2018 the travel bug bite again, and Frances decided to join a cruise ship and see the world from a different point of view. She was just ready to embark on her next adventure late last year when COVID-19 reared its ugly head. Aurum Innova was hiring the crême de la crême to work as medical facility co-ordinators.

Frances jumped at the chance ... The rest (as they say) is history. This article appeared in the Aurum Innova News Newsletter, and appears in the APPSA Journal, courtesy of the author.

Association for Peri-operative Practitioners in South Africa

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