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NEW ZEALAND STERILE SCIENCES ASSOCIATION
Te Tōpūtanga Pūtaiao Whakaparakore o Aotearoa

SUPPLYLINE

46th NZSSA ANNUAL CONFERENCE

7–9 September 2022
Christchurch Town Hall

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Editor's Note

Hello and welcome to the July edition of Supplyline. This is my first edition as Editor of Supplyline. Included in this edition is the information about our annual conference which is happening in September. I'm looking forward to attending, it has been a while since our last conference.

The article from Campbell Macgregor and Alison Stewart from Toi Ohomai is an interesting overview of where sterilising units are at in NZ. The information is interesting and is unique in that it is specific to our units within our health system.

Our own President Shelagh Thomas, has written an article around the cleaning of Lumens. This has always been a huge challenge particularly if the lumen is long and you can't see all the surfaces within the lumen.

Some time ago, sterilising units reprocessed copious amounts of red rubber and clear silastic tubing's of differing lengths. I still have memories (from when I was a Technician) of folding a wad of cotton wool, wetting it and then using the air gun to blow it through. The idea was that the cotton wool would clean the internal sides of the tubing. If you weren't careful where you held the end of the tube, the wet cotton wool could end up anywhere, including the ceiling. Trust me when I say, that it was not easy to remove particularly if the cotton wool had dried out while still stuck to the ceiling. Thank goodness we have moved away from reprocessing tubing and these types of cleaning processes. However, the challenge still exists with the cleaning of lumens and RMDs that do not dismantle but have movable parts. This will be a challenge for some time to come.

MANAAKITANGA - Respect
We care for each other, showing kindness and empathy in all that we do.

AUAHA - Innovation
We are committed to finding future focused solutions and take personal responsibility to be better every day.

KOTAHITANGA - Relationships
Our diversity is our strength, we back each other and work together in partnership.

EKE TAUMATA - Equity
We are committed to doing the right thing by ensuring equity and hauora are at the heart of everything we do.

The third article in this edition is from Daniel Suckling (Director, Hallmark Surgical). Daniel's article looks at the comparison between single use and reusable Bipolar Forceps. What to look for and the advantages and disadvantages for each type.

There are a couple of new NZSSA Executive members so the Executive Members contact list is included so if you have any issues, thoughts or ideas that you would like to share, then you are able to contact someone.

I would love to hear from you if there is anything that you would like to see included in Supplyline, feel free to contact me.

Ngā mihi

Aileen Derby

President's Message

Hello Everyone

Welcome to our winter edition 2022 of Supplyline.

Yes it is winter, however I am looking on the bright side and consider that we are now past midwinter so we are now heading straight on to summer. I can't wait.

Last month June Isted resigned from her position on the NZSSA executive. June for some time had been the secretary for the association and when it came to our conferences June was on to it organising the satchels and gifts inside. We will miss her greatly and wish her well.

I am pleased to welcome onto your executive two new members who I know are going to be an asset to the team. They are Anthony Valvoi, CSSD Manager for Taranaki Base Hospital and Kelly Swale, Sterile Services Manager, Faculty of Dentistry, Otago University.

It is a hard time for us all in our respective workplaces. First we dealt with Covid and all it entailed. Now we have Covid and Flu and staff shortages, leading to shortages of beds and surgical cancellations. It is frustrating for everyone, however we need to support each other and remain focused. If you have the opportunity to take any leave, my advice is to do so and just focus on your wellbeing.

For those of you who are PSA members it was wonderful to see the DHB's offer a remuneration package that was acceptable to members. Kudos goes to Steve grant from

Northland DHB who put a lot of time and effort into the bargaining on your behalf.

The executive are holding more regular meetings in order to move actions along more quickly. We meet via Teams meetings every 6-7 weeks. It is working out well now and I no longer mind seeing myself on the screen. Going forward we shall be posting the minutes of our meetings on the website for members to view if they are interested.

It is not long until the conference. It is so exciting. I am looking forward to seeing as many of you as possible after such a long time. All our trades have come on board and we have a full programme of speakers to encourage and enthral you with their knowledge and wisdom. Also we can look forward to the opening evening event and the conference dinner. This year the theme is "Pimp my Scrubs" I cannot wait to see what you all come up with.

It is not too late to enrol, and as a reminder to those employed by Te Whatu Ora-Health New Zealand, your executive directors and directors of Allied Health Scientific and Technical are supportive of the conference and your attendance. So if you have not applied to come do so.

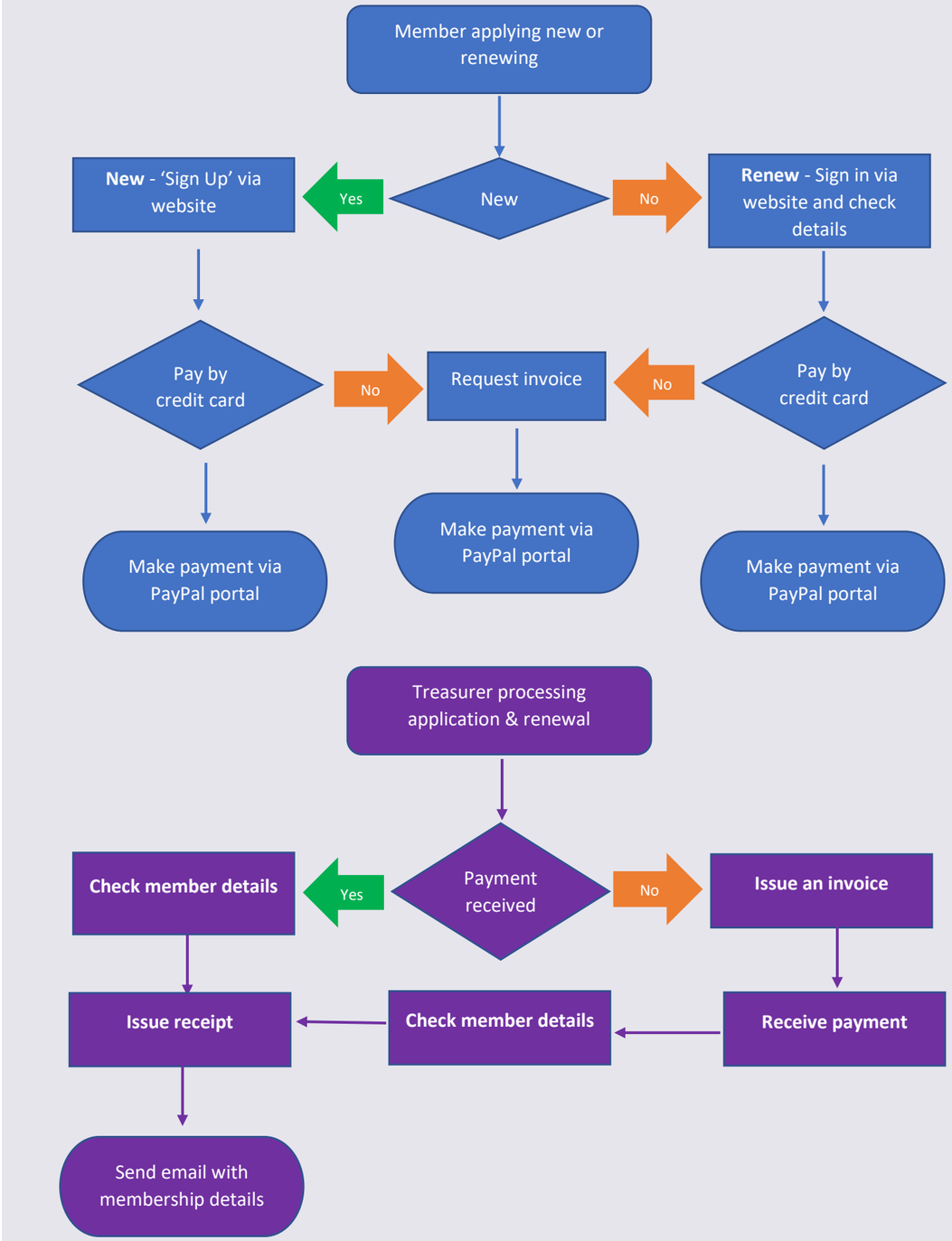
Take Care

Shelagh Thomas

NZSSA Membership Processing

The management of memberships has been reviewed and the following process is what will be followed going forward.

Membership cards will no longer be issued. Instead an email will provide the membership number. The membership number will also be in your individual sign in in the website.



A National Snapshot of Sterilisation Technology:

Preparing students for professional practice

Campbell Macgregor, Alison Stewart, Mary Cooper, and Pavitra Dhamija

INTRODUCTION

Sterilising technicians clean, inspect, package and high-level disinfect or sterilise surgical instruments and other hospital equipment, along with linen, in a reprocessing unit. These units are commonly known as a central sterile services department (CSSD), the term used in this paper, but may also be called a sterile services department (SSD) or central supply department (CSD). The CSSD comprises a vital service within the hospital in which medical/surgical supplies and equipment are cleaned, prepared, processed, stored, and issued for patient care. While sterilisation technology is not a regulated health profession, it requires a highly skilled workforce, and nationally recognised competency-based courses exist in New Zealand and Australia. A recent mandated review of the sterilising technology qualifications resulted in a suite of three qualifications, each addressing a need in the industry that aligns with the requirements of the relevant industry-standard (AS/NZS 4187 - Reprocessing of reusable medical devices in health service organisations) that individuals responsible for the reprocessing of reusable medical and surgical instruments and equipment must hold relevant qualifications.

Toi Ohomai Institute of Technology (Toi Ohomai) is the educational provider of the Level 4 New Zealand Certificate in Sterilisation Technology to technicians and the Level 5 New Zealand Diploma in Sterilisation Technology to managers of CSSDs. These programmes of study also incorporate elements of the Level 7 Graduate Diploma in Infection Risk Management offered through the Institute to promote a wider understanding of infection prevention and control in healthcare. The reprocessing programmes were conceived based on a commitment towards ensuring graduates are well-prepared and work-ready, which included listening to, and communicating with voices from professional practice to address industry needs. This paper describes research undertaken to gain an overview of how New Zealand's more than 40 CSSDs are operating to create a broad base of understanding of students, sterilisation practitioners and training requirements that are responsive to the sector.

BACKGROUND: THE HISTORICAL ANTECEDENTS

Until the 1940s, medical/surgical supplies were processed and maintained in the wards and patient care areas in which they were to be used. Staff were not trained for this role, with reprocessing often undertaken by junior nurses. Under this system, there was considerable duplication of effort and equipment, and it was difficult to maintain consistently exacting standards for sterilisation technique and product quality throughout the healthcare facility. Yet despite this growing concern, sterilisation technology continued to be undertaken mainly by nurses within the hospital and formed part of their work practices until the early 1980s (Simpson, 1984). Some smaller hospitals and/or ones with limited surgery functions still follow this practice.

However, the development of specialised equipment and the detailed manufacturers' guidelines for the use of this equipment has led to the development of specific industry-based training (Rutala & Weber, 2015). Loveday and colleagues (2014) in their study that investigated the reduction of infectious diseases across hospitals in England found that evidenced-based practice, along with specialist roles and training, led to the biggest reduction in preventable transmission of infectious diseases of any other intervention. With the sterilisation technologist role being developed in New Zealand from 1974, a nationwide course was developed to support the training and development of technicians over the following few years (Davies, 2017).

The next significant event for the profession in New Zealand occurred during 2004–2005, with the recognition that increased demand meant the New Zealand Sterile Sciences Association (NZSSA) could not continue to run the then 'Sterilising Technology Course' in-house. Letters were sent to various training establishments throughout the country, inviting them to put forward a proposal for administering the course. It was an important goal for the NZSSA Executive Body that whoever administered the course did so with the input and guidance from the NZSSA. In 2005, the Open Polytechnic in Wellington was appointed as the training establishment that would administer the course. A joint partnership was agreed, with input and guidance for all course material being provided by the NZSSA. The courses that were developed at this time also became competency-based including assessments but no exams (NZSSA, n.d.). This has increased the authenticity of assessments along with increased in variety of assessment methods, including video presentations and report writing. Since then, Toi Ohomai has also been appointed as the registered provider of the current qualifications at levels 4, 5 and 7, as described earlier. The programmes offered by both polytechnics are linked from the NZSSA website.

Alongside the development of professional credentialing programmes, hospitals too have changed their operationalisation of sterilisation technology. As the number and variety of surgical procedures have grown, along with demand, and the types of reusable medical devices, processing equipment, and supplies proliferated, it became apparent that a centralised processing unit was needed for efficiency, economy, and patient safety. There are now over 40 CSSDs across New Zealand, each responsible to ensure effective decontamination and infection prevention along with the appropriate handling of specialised equipment to ensure no physical damage is done. Specific and detailed training, whether part-time and work-based, or through full-time attendance in a campus-based programme, is critical to the function of a CSSD.

Sterile Processing Departments, or CSSDs are typically divided into four major areas to accomplish the functions of cleaning/decontamination, assembly and sterile processing, sterile storage, and distribution. In the decontamination area, reusable medical devices, and supplies are cleaned and decontaminated by means of manual or mechanical cleaning processes and thermal or chemical disinfection. Clean items are received in the assembly and packaging area from the decontamination area and are then assembled and prepared for issue, storage, or further processing (like sterilisation).

CSSDs are therefore becoming increasingly complex workplaces reflecting the demands of contemporary and emerging surgical practice with intricate surgical procedures often relying on the use of specialised, highly evolved instruments. The CSSD must accommodate and be responsive to the reprocessing of advanced surgical equipment often with exacting product specifications. Consistent with developments around reprocessing of medical instruments in sterilisation in recent years, the amount of research conducted in sterilisation sciences has increased, including an article on the history of sterilisation (Davies, 2017) through to investigating the practice of just-in-time delivery of sterilised surgical instruments (Guédon et al., 2016). Furthermore, there has been significant interest in ensuring sterilisation processes are both efficient and safe (Basu et al., 2018; Shettigar, 2019). While in 2008 there was a small investigation into the CSSDs in Australia as part of a larger national stakeholder review of Australian infection control programmes (Tropea et al., 2008), currently no recent data is available about the Australian or New Zealand CSSD reprocessing equipment or level of training undertaken. While these examples of research activity within the sterilisation service exist, there has been limited work exploring the sterilisation landscape within human and animal healthcare in New Zealand.

This study was undertaken to gain an insight into the current practice and operations of CSSDs within a New Zealand context. This study sought to understand areas of CSSD operations that included hours of operation, staffing levels, education levels of the staff employed there and reprocessing equipment used within a range of CSSD facilities in New Zealand, to provide a snapshot of the industry throughout the country. It is intended that this snapshot will inform a broad educational agenda for the service to meet the training and development needs of staff working in the area, stakeholders including trainers, education providers and the professional body (NZSSA) to support quality and best practice within the industry. This preliminary investigation will support the development teaching practice by identifying strengths and gaps in sterilisation technology equipment, operational aspects of CSSDs including staffing levels and plant utilisation currently within New Zealand. This snapshot will act a springboard to stimulate further research inquiry in this area of healthcare, using a New Zealand lens to advance the industry in the local context.

METHODOLOGY

A mixed method, cross-sectional online questionnaire was used to gain information about reprocessing equipment, operations, and staff, within CSSDs across New Zealand. Participants, identified from the NZSSA members' database, answered a total of 63 questions around the reprocessing equipment, operations, and staff in their own CSSD. The wording of the questions was developed through a pilot study, again with the assistance of the NZSSA executive, who undertook to pilot the instrument, time themselves and give feedback on the content, size, scope, and complexity of the questionnaire. On average, the questionnaire took between 15-20 minutes to complete. Ethical approval was obtained from the Toi Ohomai Research and Ethics Committee.

The survey link was delivered by email to 61 registered CSSD managers by the NZSSA and a link to the online questionnaire was placed on the NZSSA website to allow easy access, in case some managers and their associated CSSD were for any reason, not within the NZSSA database. The accompanying email explained the purpose of the research, with a more detailed Participant Information Sheet attached outlining the usual ethical protocols around anonymity, confidentiality, secure storage of the data and intended use of the findings.

Informed consent was given initially by the managers starting the survey, as indicated by a statement on the first page indicating that completing the questionnaire items implied consent for the responses to be used, and also that they had the authority to supply this data. Finally, before they submitted their survey, participants were once more reminded that by submitting the information they were giving consent for this information to be grouped and reported.

Twenty-two responded to the survey, representing a 36% response rate. While this is less than 50% of the possible respondents 20 of the 22 (90%) represent hospital CSSDs. These respondents represent the spectrum of CSSDs and include participants from small hospitals through to large tertiary hospitals within both the public and private sector. This small sample could be considered representative of the medical reprocessing industry as 92% of the remaining possible respondents (39 non-responders) represent CSSDs providing services to surgical environments.

Data was analysed initially using Survey Monkey and its associated data reporting and analysis tool. Once this was completed, descriptive data was further analysed using Microsoft Excel to allow averages, means, and other statistical information to be extracted. Requesting the name of each location, although not the names of the participants, meant that where some sites had numerous managers, the research team was able to edit out duplicate data entry. Ultimately the research team were satisfied that the questionnaire tool had provided an appropriate mechanism to provide a demographic/ pictorial representation of what the sterilisation technology landscape looks like in New Zealand.

RESULTS

Staffing

A 36% response rate was obtained from 22 respondents (n=22) from 61 requests. Figure 1 shows the primary area of service delivery for each of the CSSD responses. Over 90% of our respondents managed a CSSD within a hospital, with approximately 5% responses coming from veterinary services (n=1) and with another 5% from GP practices (n=1)

The CSSD managers reported that full-time staff turnover was very low with only 22% of staff being new or inducted into the workplace within the last 12 months (Figure 2). A similar trend was seen with part-time staff, with 33% of the part-staff newly employed within the last 12 months (Figure 3). This staff movement, new recruits and departures from the service may not provide a true picture of staff turnover. As new recruits present a training and development need and opportunity, this number is the focus on attention in the study.

Figure 1. Participants' primary areas of service delivery

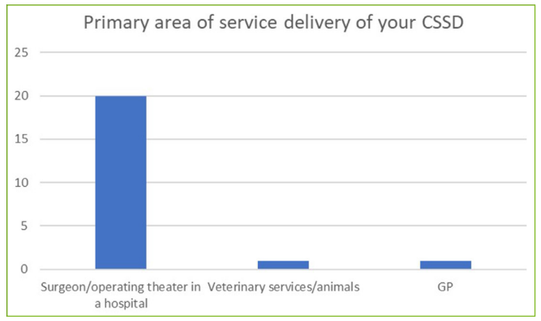


Figure 2. Full-time staff turnover in CSSDs in the past 12 months.

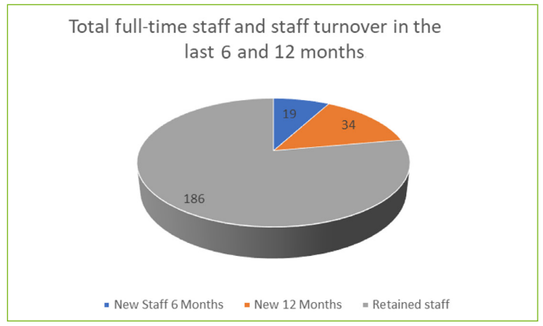
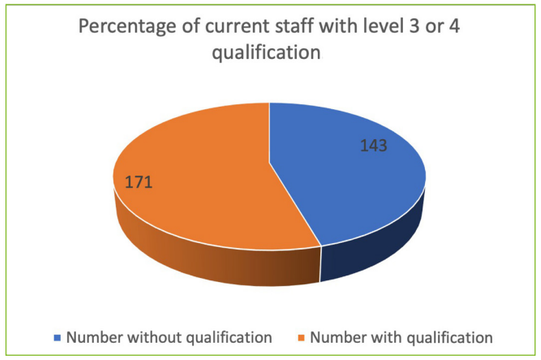


Figure 3. Part-time staff turnover in CSSDs in the past 12 months.

Figure 4. Percentage of staff holding the required qualification.



As part of the collective agreement with hospitals that have a CSSD, CSSD technicians need to have a Level 3 (the pre-2018 qualification) or a Level 4 (qualification post 2018) certificate/diploma within two years of starting work within a CSSD department. Our results indicated that 54% of current CSSD staff hold one of these qualifications (Figure 4).

A final question related to staffing asked CSSD managers about the level of training uptake for the leadership qualification (Level 5 Diploma in Sterilisation Technology). While this was a new qualification, over 63% of the CSSDs that responded have or are gaining staff members with this industry-specific leadership qualification (Figure 5).

Service Operation

Figure 6 provides an analysis of plant utilisation among the participating CSSDs with a breakdown of the number of the average operating hours each day, per week. Further analysis of the daily operations shows CSSDs were functioning for 12.7 hours per weekday on average and 6.3 hours per each weekend day halved. While the majority of CSSDs operate five days a week, the results reflect that 2 larger CSSDs reprocess instruments 24 hours per day, seven days per week (Figure 7).

All CSSD departments that responded to the questionnaire were using autoclaves (sterilisers employing dry steam under pressure) for high pressure and high temperature sterilisation. However, of the 73% of CSSDs using low temperature sterilisation, a quarter of respondents were now using ethylene oxide (5%) and the rest have switched to hydrogen peroxide (95%) (Figure 8). To note is that six (27%) of managers that responded identified that they did not have low temperature sterilisation option within their CSSD.

No CSSD in New Zealand has Ozone sterilisation. Ozone sterilisation is a technology that has been available as an antimicrobial agent since the early 2000s after being developed into a sterilising agent for heat sensitive medical devices (Dufresne et al., 2004). Ozone is an oxidising agent generated through application of electrical energy to a combination of water (H2O) and medical grade oxygen (O). This splits some of the oxygen molecules in half into singlets of O. These single O atoms attach to O2 for short periods of time before reverting to oxygen. While the atoms are attached, sterilisation is achieved through oxidisation of micro-organism carbon bonds. The residues are non-toxic oxygen (Tuttnauer, 2017, April 24). As this technology has been around for a while, managers were asked if they had heard of this: around 60% of the respondents said they had no knowledge of this development (Figure 9). Awareness of emerging technologies, such as ozone sterilisation, has been included in this research as an indicator of whether new knowledge of industry trends is being acquired and maintained.

Figure 5. Percentage of CSSDs with staff who hold level 5 qualifications.

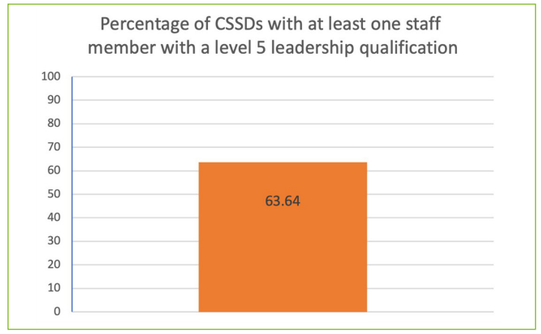


Figure 6. Days of operation per week per CSSD.

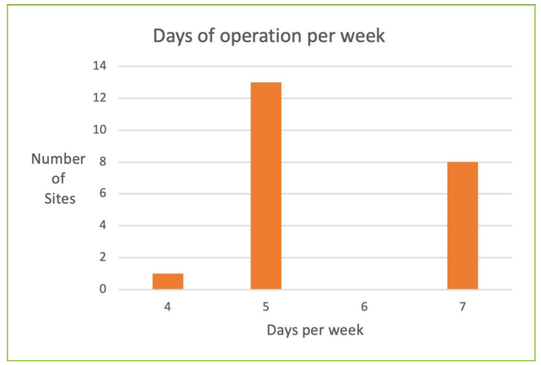


Figure 7. Hours of operation Monday-Friday (blue) and weekends (orange).

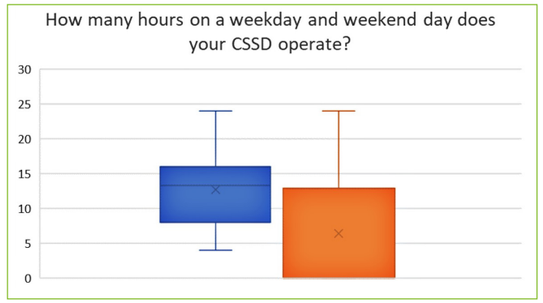
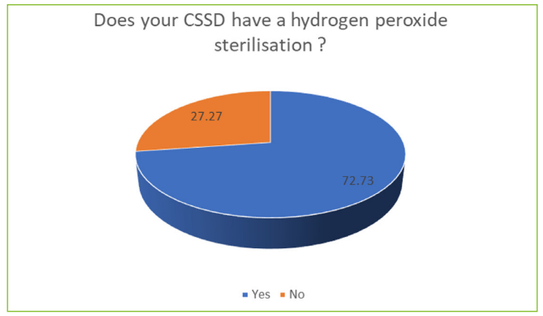


Figure 8. CSSDs using hydrogen peroxide sterilisation.



Finally, to complete the picture of CSSD setups, managers were asked if they used liquid chemical sterilisation, to which around 73% answered yes (Figure 10). Next, they were asked if they use high level disinfectant as well: 63% did (Figure 11). Questioning around these technologies is significant as CSSD was not naturally involved in the use of these sterilising and high-level disinfection options before the turn of the century. High level disinfection was primarily the domain of endoscopy services. The data demonstrates an increasing specialisation for some CSSDs is endoscopy reprocessing. Some hospitals and CSSD departments have set up specialist endoscopy suites, but over 71% undertake endoscopy sterilisation within the CSSD department (Figure 12). This indicates a significant shift in service operation. If staff are being provided to specialist endoscopy suites this has an impact on how resources are used but is not necessarily an indicator of whether one option is better than the other (resourcing specialised endoscopy suites or centralised in CSSD).

DISCUSSION

The current snapshot of sterilisation technology services across New Zealand appears to indicate an overall stability of staff within the industry with 22% of full-time staff newly employed within the previous 12-month period. The current annual employment rate across the processing sector suggests staff movement within this highly demanding area of healthcare remains at a lower level and at least equal to the New Zealand healthcare industry average of 18.8% for voluntary and involuntary staff turnover rate of 18.8% (Lawson Williams, 2019). The turnover of staff was not a focus of this study and may only be indicative of the trend as recruitment of new staff may not only be a replacement strategy but it may arise in response to increased demand, development, or expansion within a CSSD.

The study revealed high levels of training within the sterilisation industry with over 50% of employed members holding an industry specific qualification. This is a significant achievement for a non-regulated health workforce that does not have a long history of a range of higher qualifications for staff compared with the regulated health professions in New Zealand. Addressing the training and development needs of new recruits and existing experienced staff focuses attention on the importance of industry specific and correct training and qualifications to ensure high levels of quality within a service dealing with reprocessing of technically advanced specialised equipment dedicated towards preventing the risk of infection. Inadequate training for those working in this demanding environment has been shown to have a flow-on effect within this sector of the industry and in healthcare in general, for example, among nursing and medical teams (Han et al., 2014). With NZSSA making

Figure 9. Awareness of ozone technology.

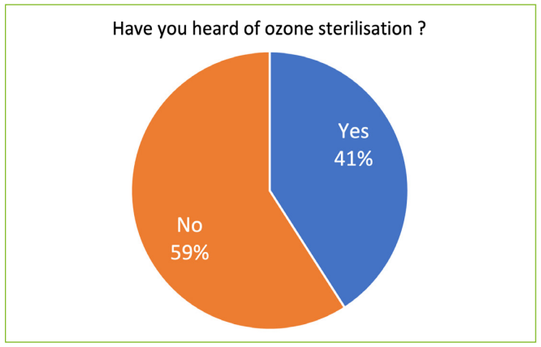


Figure 10. Use of liquid chemical sterilisation.

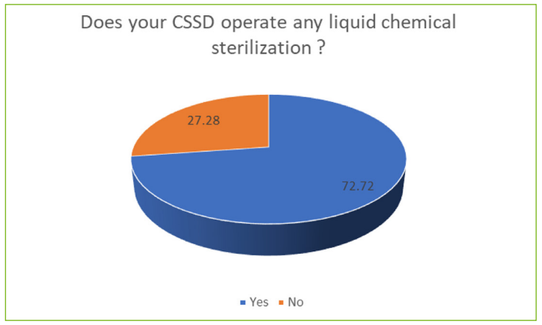


Figure 11. Use of additional high level disinfection.

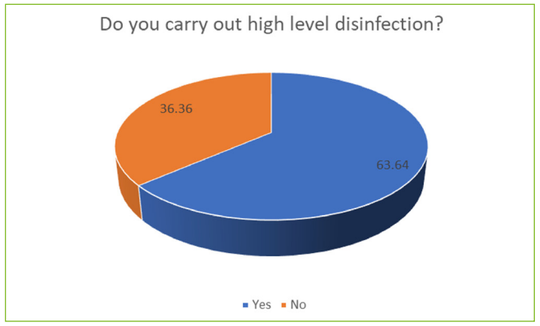
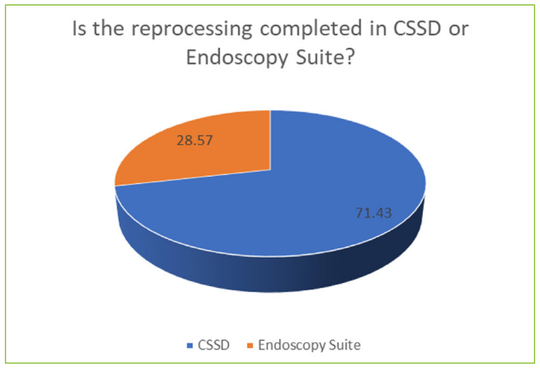


Figure 12. Where reprocessing is conducted in the hospital.



the qualifications mandatory within the first two years of employment in a CSSD unit, this highlights the need for industry-wide use of up-to-date, evidence-based practice and the importance of work-focused and work- based learning to be in line with industry requirements (Campbell et al., 2015). Newly graduated sterilisation technicians have a critical role, especially in a post-COVID-19 climate where they are recognised as essential workers. Understanding equipment, protocols and how to follow manufacturers' recommendations is hugely important (Alfred et al., 2021) to ensure safe and effective sterilisation while protecting instrument integrity and equipment longevity.

The snapshot using the online survey showed that there is capability within the New Zealand health sector for increased CSSD utilisation, according to the amount of reprocessing needed, as only a few represented in the survey were operating 24 hours a day, 7 days a week. While healthcare is recognised as an around-the-clock, on-demand service, sterilisation still follows more traditional business hours in most cases. While increased shift work might become more of an option as pressure on the healthcare sector in general continues to increase, stress levels and mental and physical health of staff may be affected. This is an important consideration for educators in this area to be mindful of, and in the future the impact of undertaking shift work may need to be included within training and development of staff in this sector (Melnyk et al., 2020).

While ozone technology is not currently in use in New Zealand, the response to the questions around its use and knowledge offers insight into the need to provide education to all managers to increase knowledge of current trends in sterilisation practices and the benefits and limitations of the use of technologies that are in use elsewhere throughout the world. Steels et al. (2020) in their connected cities study, found that understanding the global context and technologies allows for individuals within the health sector to make better and informed decisions related to practice. Training therefore needs to not just focus on what is being undertaken within the current CSSD that the technician works in, but should also consider the equipment available within a global context. This observation is supported by Bunn and colleagues' (2020) research on diabetes technicians and the importance of understanding worldwide techniques to improve their ability to meet the needs of their patients.

As technology has developed, a recent trend worldwide has been to move away from ethylene oxide replacing it with hydrogen peroxide treatment (McEvoy & Eveland, 2020). The same trend away from this method of sterilisation was apparent in this study as only a small percentage (4.5%) of CSSDs within New Zealand still use ethylene oxide. With the change to hydrogen peroxide, recent manufacturers' guidelines contradict each other on the risks to technicians and how the units need to be installed and operated safety (Kümin et al., 2021); all of which provides an opportunity for ongoing research. Work in this area is timely and especially important given the prominent level of uptake of this new technique for low temperature sterilisation revealed in this study with ethylene oxide usage decreasing and hydrogen peroxide being the preferred method of low temperature sterilisation in NZ.

LIMITATIONS

While this study is a first of its kind and offers important insights in the staff and operations of CSSDs in New Zealand, the study itself has some initiations. Data was gathered using an online service so bias is inherent in the self-selection of this method used for this online survey. The target sample of 61 CSSD managers registered on the NZSSA database invited to participate in the survey may not include all CSSD managers across healthcare facilities that reprocess medical equipment. Other sectors involved in reprocessing of medical equipment and those associated with non-human sterilisation may not be members of the association and as a result would not be captured in this survey. The 36% response rate is low for a nationwide industry with 90% of the responses gained from those associated with hospital-based sterilisation facilities.

There is significant diversity around the sterilisation of equipment used in human and animal healthcare. Despite its limitations, this study provides useful initial understanding of the sterilisation landscape to inform training and development and ongoing research activity within the industry.

CONCLUSION

This investigation into the CSSD environment in New Zealand has identified that there is some variation between CSSDs, related to staffing and operating processes and environments. This is exciting for students, who are often drawn to healthcare technology fields through an interest in systems and quality improvement. Sterilisation technology is an essential aspect of a hospital-based healthcare provider's delivery, and the qualified specialist staff who run the CSSD units are well-respected as skilled and essential employees in their role of supporting surgical teams and preventing the risk of infection. Tertiary education must provide students with the best possible platform to enter and engage in professional practice, which is achieved by listening to the voices of our industry partners. Working together to provide educational opportunities that enhance knowledge and skill plays a significant role in standards of practice and quality outcomes within the sector. The snapshot results of this research are useful for educators,

and the sterilisation sector's guiding body, the NZSSA, who support this research project. Other healthcare specialties might also find this study useful as a starting point for their own national surveys. Finally, this research highlights opportunities for further pathways that may include the experience of staff working in the dynamic area of healthcare, health and safety within this technically driven environment and the introduction of new reprocessing technologies including the way in which hydrogen peroxide is phased into use, and the standardisation of implementation with CSSDs.

This snapshot provides a gateway for understanding a sector of the healthcare industry that is often hidden from the public gaze but is plays a pivotal role in the delivery of cornerstone and high-profile areas of healthcare delivery of human and non-human health related services.

Campbell Macgregor ko Tākitimu, ko Hananui kā mauka, ko Kāi Tahu kā iwi and is a principal lecturer and academic lead–health at Toi Ohomai Institute of Technology with an interest in incorporating Mātauranga Māori and cultural responsiveness. Campbell is active in research in the sterilisation sciences, bone health of older athletes and indigenous solutions.

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Alison Stewart has leadership roles in the sterile sciences community as a member on the Australian standards committee and Treasurer for the New Zealand Sterile Sciences Association. Alison also is a Lecturer and teaches on the New Zealand sterilising technology qualifications at Toi Ohomai Institute of Technology.

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(Toi Ohomai ethics approval for the research reported in the paper: TRC 2020.018)

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Toi Ohomai Institute in Technology Ltd

NZ Certificate in Sterilising Technology (Level 4)

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NZ Diploma in Sterilising Technology (Level 5)

Trimester 3 2021

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Trimester 1 2022

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Amanda Lee
Charanjeet Sidhu
Kelly Swale

46th NZSSA ANNUAL CONFERENCE

7–9 September 2022
Christchurch Town Hall

Strengthening for the Future Together

Early bird registration is open until 31 July 2022

Key Note Speaker: Dr Michelle Dickinson

Registration costs	Up to 31 July 2022	From 1 August 2022
Full Registration – includes Welcome Function, 2 days of conference:		
Member	450.00	550.00
Non-Member	610.00	680.00
Executive	225.00	225.00
One Day Registration – Includes the day of registration only (no welcome function)		
Member	240.00	275.00
Non-Member	320.00	355.00
Welcome Function only	50.00	50.00
Conference Dinner	80.00	80.00

All registration fees exclusive of GST

Conference Programme

Christchurch Town Hall, Christchurch

7 – 9 September 2022

Wednesday 7 September

0900 - 1530	NZSSA Executive Meeting	
1800 – 2100	Registration & Trades Exhibition Opening & Welcome Function	

Thursday 8 September

0815 – 0900	Registration	
0900 – 0915	NZSSA Presidents Welcome **Shelagh Thomas, CSSD Manager, Lower Hutt DHB**	
0915 - 1000	Key Note Speaker **Dr Michelle Dickinson**	
1000 – 1100	Sustainability theme **Annie Watt - Device Technologies Ltd**	
1100 - 1130	**Morning Tea in the Trades Exhibition Hall**	
1130-1200	Decontamination and Sterilisation in a post pandemic world **Julianne Schipelliti, Proline Pty**	
1200- 1230	**Nicole Lapanaitis, 3M Australia**	
1230 – 1330	**Lunch in the Trades Exhibition Hall**	
1330-1500	**Quick Fire Workshops / Q & A Sessions** - **Specialist Panel** - Accreditation and Auditing, details to follow - **Trades visit –** small groups – 10 -15 minutes per stand. Numbers depend upon trades participating - **Open forum discussion –** Q & A general	
1500 – 1530	**Afternoon Tea in the Trades Exhibition Hall**	
1530 - 1630	Tikanga Hutt Valley District Health Board **Rawiri Hirini Pou**	
1630 - 1645	**End of day announcements**	
1800 – 2400	**Conference Buffet Dinner & Dance** Christchurch Transitional Cathedral, 234 Hereford Street, Christchurch Central City	

Conference Programme

Christchurch Town Hall, Christchurch

7 – 9 September 2022

Friday 9 September

0800 - 0900	Registration	
0900 - 0905	**Welcome & Housekeeping**	
0905 - 0950	Sustainability in the medical environment **Oliver Hunt, Medsalv**	
0950 - 1030	Sterilisation of Traditional RMD – A Case Study **Campbell Macgregor**	
1030 - 1100	**Morning Tea in the Trades Exhibition Hall**	
1100 – 1230	**Quick Fire Workshops / Q & A Sessions:** - **Specialist Panel** - Accreditation and Auditing, details to follow - **Trades visit –** small groups – 10 -15 minutes per stand. Numbers depend upon trades participating - **Open forum discussion –** Q & A general	
1230 - 1330	**Lunch in the Trades Exhibition Hall**	
1330 - 1400	Managing the unexpected **Marie Lory, Theatre Manager, Christchurch Public Hospital**	
1400 - 1430	Maintaining service in exceptional circumstances **Fiona Stewart-Wester, Team Leader & Christine Cox, Quality Facilitator, Christchurch Public Hospital**	
1430 - 1515	Reprocessing on the seas **Sharon Walls, Mercy Ships**	
1515 - 1600	UV Light Cabinets **Annette Moffatt**	
1600 - 1615	Conference Closing **Shelagh Thomas, CSSD Manager, Lower Hutt DHB**	

This programme will be updated regularly as it develops and speakers are confirmed. Some changes in order of speakers may also occur.

The Hidden Problem with our Instruments with Lumens

Shelagh Thomas, RN, BN, Diploma In Sterilising Technology, Manager SSD, Hutt Hospital

Have you ever been packing a set and looked at an instrument with a lumen and asked yourself the question **"IS THIS REALLY CLEAN"?**

You have then considered that it has been brushed and manually pre-cleaned and put through the washer disinfector and therefore it must be clean. So what do you do next? You cannot see inside it therefore you wrap it and sterilise it and not give it a second thought.

What does the standard say about instruments with lumens?

AS/NZS4187: A6.4.2 (a) states that ***"the surfaces, lumens and grooves of the RMD shall be visibly free from soil, rust or lint"***

As we all know lumens are notoriously difficult to see into with the human eye alone. Fortunately after undertaking some research as part of advanced study I was able to obtain a video inspection scope for the purpose of looking into lumens and it has proved its worth.

Very recently after inspecting some attachments for a Midas Rex hand-piece my staff noticed that our hospital owned attachments were looking worse for wear. This was discovered, as there is a requirement within our department that these are inspected with the video scope.

After discussion with the company who supplies this brand it was decided to purchase some refurbished attachments. This works by the company offering a discounted price if the hospital returns their old or damaged equipment. The attachments are not refurbished in New Zealand, they are sent off to Australia.

A short time later the refurbished equipment arrived just in time to be processed for an elective list the following day.

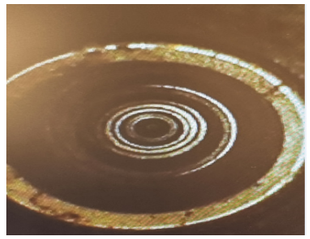
The attachments came in sealed bubble wrapped pouches with MIFU and these were sealed in boxes.

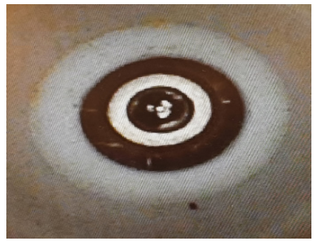
The boxes were duly opened and it was decided to inspect the attachments with the video scope prior to them being sent for cleaning and thermal disinfection. This was purely in order to ascertain the baseline condition of refurbished instruments.

The staff member undertaking the inspection was absolutely shocked and called both the coordinator and myself to take a look.

Inside those refurbished attachments there was clear evidence of rust, lint or hair and old dried up blood or body tissue. These were classed as refurbished items, but appeared in a worse condition than the ones we were replacing. Photographs of their condition were taken as evidence.

I informed the coordinator for ENT surgery as to what we had found. She came to take a look as this could affect the following days' elective lists.





I immediately rang the company and stated the problem. I believe that they thought it could not be the case, as within the hour a local rep for the company was there to see for himself. He was astounded by what he saw and reported this back to the company.

The company decided that 3 further refurbished attachments would be flown down to Wellington later that day, at their expense.

That evening I received a call from my shift coordinator at nine pm. The additional attachments had arrived, however upon inspection they too were disgustingly filthy inside. There was little that could be done until the following day.

When I arrived at work the next day I inspected the attachments for myself and photographs were taken of the interior condition. I then contacted the ENT coordinator and lists were cancelled due to the equipment not being available. Both she and I completed event reports relating to this matter.

The company were contacted again and they asked that we return all six attachments. They suggested that we purchase brand new attachments.

My next step was to do a little bit of research into what exactly was a refurbished RMD. I had been questioning my knowledge of what was considered as refurbishment.

There was access to plenty of resources on line from the FDA.

The definition of refurbishment of RMD from the FDA states that: *"it is the processing, conditioning, renovating, repackaging and restoring of a medical device"*

From a regulatory compliance perspective the European Union, MDR, *states "Fully refurbishing", for the purposes of the definition of the manufacturer, means the complete rebuilding of a device already placed on the market or put into service, or the making of a new device from used devices."*

Additional a UK based company defines a refurbished RMD as being supplied in "as new" condition.

Once I had clarified the definition of a refurbished RMD it was quite evident that what we had received did not in any way meet the definition.

The next step was to make a formal complaint to Medsafe NZ. I supplied them with all the relevant information and photographs. Medsafe have responded to say they are investigating the matter with the company involved.

The supplier of the equipment have not yet come to see me to discuss the matter further. Rather I received a telephone message that they were sorry but had no control over the refurbishment of the RMD's and did not have the means to inspect them when they landed in New Zealand.

As for the brand new replacements that I ordered, these have still not arrived.

I write this to make all members aware of their responsibility to inspect instruments with lumens, you just do not know what is lurking down there.

As for the Medsafe review I am still awaiting their formal response.

Watch this space.

References:

1. https://www.fda.gov/medical-devices/quality-and-compliance-medical-devices/remanufacturing-and-servicing-medical-devices
2. European commission, KETS Observatory Phase 11-Refurbishment of Medical Equipment: 2017 :Authors: Naveen Srivatsav (PwC), Dr. Kristina Dervojeda (PwC), Mark Lengton (PwC), Anton Koonstra (PwC) Coordination: EUROPEAN COMMISSION

Standards Update

Title and Number	Special Comments	Current Status	Proposed Publication Date
AS 5369 – Reprocessing of reusable medical devices and other devices in health and non-health related facilities	Combining AS/NZS 4187 & AS/NZS 4815 standards	Committee currently reviewing public comments	**To be confirmed** – Until AS 5369 is published continue to refer to AS/NZS 4187 and AS/NZS 4815 as they are the current best practice standards.

A comparison between reusable and disposable Bipolar Forceps

Daniel Suckling

Bipolar Forceps are used very frequently for procedures ranging from minor skin lesions to major theatre surgery.

The ideal solution must be cost-effective, reliable, compatible with your generators, and importantly, provide an effective clinical outcome, and keep your surgeons happy!

There are several key points to consider when reviewing the question "*what is the best solution for our requirements - reusable or single-use Bipolar Forceps?*"

COST

Reusable Bipolar Forceps are approximately 20-40 times more expensive than disposable forceps. (20 times more for a standard Forcep, typically used for minor procedures, general, breast, hand, abdominal surgery etc; 40 times more for specialised forceps used in neuro, spinal or ophthalmic procedures.)

Reusable Forceps are mainly used because of the range of tip sizes, lengths, special designs, and materials available - titanium etc - where cost is somewhat secondary to ensuring you have the best Forcep for the application.

LIFE SPAN

Many reusable Forceps are damaged, lost or discarded well before they reach the end of their intended life span. This is mainly due to insulation failure, tip alignment damage, and loss that many departments and hospitals experience. Two common examples are 1/ Hi-Pot testing is carried out on Forceps and a high failure rate occurs, and 2/ reusable Forceps are used with a single use cable and the Forcep is erroneously disposed of with the cable after the procedure. Your reusable Forcep stocks can be significantly depleted very quickly.

If you are experiencing this, one helpful method that can be implemented is the use of Instrument Cassettes. These provide a transportation solution that protects the tips and insulation, and itemised storage - a missing forcep is easily identified after the procedure and accounted for.

DISPOSABLE BIPOLAR FORCEPS

Many Hospitals have transferred their usage to disposable Bipolar Forceps for three key reasons:

1/ You have a new forcep and cable for every procedure - uncompromised tip alignment and perfect insulation. Also, no more intermittent cables! This guarantees consistent clinical outcomes, ensures patient safety and surgeon satisfaction.

2/ You have a known cost for every procedure. The true cost per procedure is known exactly with disposable forceps, whereas it is quite unknown with reusable, as the life span fluctuates so widely. This means you can budget your costs accurately, and sudden or unexpected capital expenditure to replace reusable forces is eliminated.

3/ You have them when you need them. How much time is lost with your team having to follow up and locate reusable forceps because they are needed urgently for a procedure? This is eliminated. Disposable Forceps mean you can always have stock on hand, ready to use.

CABLES

As with Forceps, both reusable and single use cables are available. The standard cable in NZ is 3 metres long. Options and differences include:

Reusable:

- External sheath is Silicone or PVC. Silicone is preferred as it is more durable, more flexible and has a non-slip surface, which prevents them sliding off the drapes when being used.
- Plug types for generator connection are either "flying leads" or "fixed pin molded plug". Both are compatible with all modern generators, and the fixed pin version is more common.
- The price of a reusable cable differs but on average are 60-70 times more expensive than a single use cable.
- The life span of a reusable cable is very good, especially silicone, in perfect conditions. However, they are vulnerable to damage by trolleys, or they way plugs are removed from the generator etc, resulting in internal cable breakage and failure before the cable has worn out.

Single Use:

- External sheath is PVC, low cost but more "slippery' when being used.
- Both flying lead and fixed pin molded plug types are available

- Very low cost, normally in the $3.50 - $6.00 range
- They are supplied sterile and ready to use
- Single use Bipolar Forceps are normally supplied complete with a cable. This provides efficiency in purchasing, storage, and procedure preparation as it only one item to manage, rather than two.
- Single use cables are compatible with reusable forceps, but the disposal of reusable forceps with a single use cable is a common and very expensive problem.

NON-STICK OR STANDARD TIPS

Most Bipolar Forceps are available with either non-stick or standard stainless-steel tips, whether single use or reusable. The non-stick property is achieved using Silver in the tip construction.

Non-stick tips are specialised and designed for delicate surgeries. They keep tips cleaner, reduce charring on surrounding tissue, and reduce smoke which improves visibility. Forceps with non-stick tips command a premium price, compared to standard tips.

Stainless steel tips are the most common, and ideal for everyday general surgeries and short duration procedures. The main reason for this is cost saving. For example, the price of a reusable non-stick forcep is anywhere from 25% - 80% more than the equivalent stainless-steel tipped forcep. In disposable, the price difference can be as much as 100% between the two options.

So, if you are using and purchasing non-stick forceps, it's a good idea to check they are being using for the appropriate surgeries, and if not, you can make substantial savings.

Registration

Are you a registered technician yet?

Did you know that you can register anytime throughout the year?

Get registered now! This is your link to everything:

https://nzssa.org/application-for-nzssa-registration/

Steps:

- Fill in the application form
- Update your CV
- Gather your evidence for education
- Write your exemplar (story of how you resolved an issue)

Save it all to a folder and then email to the assessor – too easy ☺

NZSSA Executive 2021-2024

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