

Decontamination TP

DTP ACTIVITY REPORT

Dr Brian Kirk

IHEEM DTP Chair

The Decontamination Technical Platform (DTP), consisting of all IHEEM registered Authorising Engineers (Decontamination), has had a busy year, with several projects being undertaken and ongoing, with members of the DTP acting as project leaders. The DTP has also welcomed newly registered AE(D)s to the group. The group has had successful virtual and face-to-face meetings, the latest held at the Eastwood Park Training centre.

Members were also invited to, and several attended, a training seminar at a commercial facility near Derby, where a varied programme was organised covering various topics – including new steam battery technology offered by a commercial organisation specialising in steam, and some insights into testing water supplies by an expert microbiologist from a commercial laboratory offering testing services to the NHS.

Jim Tinsdeall identified a problem with the sterilisation of Phaco handpieces, used during ophthalmic surgery; these complex medical devices contain fine tubes surrounded by polymeric materials of low thermal conductivity. During his experimental studies he not only identified significant thermal lag into the fine tubes, but was also able to recover viable microorganisms, clearly indicating inadequate processing. As a result, he developed a guidance sheet for those who need to sterilise such items, which was further developed by DTP members, leading to an IHEEM 'branded' document being made available to members on the Institute's website.

John Prendergast has led a small team to identify shortcomings in the assessment of the competency of AP(D)s and CP(D)s.

As a result the team has developed a guidance document to help AE(D)s assessing estates staff for competency to be appointed as AP(D)s in their Trusts, and hopefully the wider community. An initial AP(D) assessment 'app' has been developed to further enhance and harmonise the acceptance process. This is of great importance since – as outlined by a speech at the IHEEM conference – moves are afoot by government to begin to develop a competency assessment process for AP(D)s, and ultimately CP(D)s, with the possibility of creating a professional register in the future.

A project has started to extend the training framework to cover pharmaceutical production. While the majority of AE(D)s are active in the healthcare sector, there are some practising in the pharma industry, and they are identifying issues with training of those who are testing contained fluids sterilisers in that sector. With this in mind a small sub-group has been formed to assess the AE(D) training framework to see if any additional content is needed to cover knowledge required to operate in a pharmaceutical setting, where contained fluids in various container types and volumes are sterilised by often complex moist heat sterilisation processes.

GUIDANCE DOCUMENT



The IHEEM Decontamination Technical Platform and Board presented at last October's Healthcare Estates 2023 conference.

IHEEM Technical Platforms



Dr Brian Kirk

BSc, MSc, PhD, MRPharmS,
FIHEEM, AE(D)
Managing Director, Brian
Kirk Sterilization
Consultancy Group Ltd

Dr Brian Kirk, Managing Director of Brian Kirk Sterilization Consultancy Group, is a qualified Pharmacist, with a Masters Degree in Pharmaceutical Analysis, and a PhD in Pharmaceutical Sterilisation Technology. His doctoral research involved investigations into the application of computer technology for modelling chemical reactions, and the inactivation of bacterial spores in steam sterilisation processes and monitoring and controlling steam sterilisers – for which he received the 1985 annual award for best submitted paper to the Parenteral Drug Associations Journal. He worked for over 10 years in the NHS as a quality control pharmacist for a hospital pharmaceutical sterile supply manufacturing department, gaining Qualified Person status.

He joined 3M Health Care in 1989 as a development scientist for sterilisation monitoring products, and, during his time there, developed and supported a number of new products, including the first electronic Bowie and Dick test device. His additional responsibilities included European Technical service for sterilisation, supporting customers and business teams, and later the same role within the UK region. Before leaving 3M in 2019 he was Scientific Affairs and Education manager for Western European. Throughout his career Brian has had special responsibilities for monitoring the development of national, European, and international standards on sterilisation. A member of BSI, CEN, and ISO committees responsible for developing standards for chemical and biological sterilisation indicators and steam, ethylene oxide, and vaporised hydrogen peroxide sterilisers and sterilisation processes, he is the convenor of ISO TC 198 working group 3, Moist heat sterilisation.

Brian has presented at national and international conferences, published a number of peer-reviewed articles, is a Fellow of IHEEM, and registered as a UK AE (Decontamination) by the same professional institute. He is also a visiting honorary lecturer at the University of Nottingham, and on the peer review panel for the Journal of Hospital Infection.

Learn more about the IHEEM Technical Platforms

The IHEEM Technical Platforms provide information and guidance for members, and advise on matters of special interest. They support members and the wider engineering and EFM systems with technical and specialist knowledge, providing a network where expertise, views and ideas can be shared in the following areas:

Decontamination
Electrical
Fire Safety
Mechanical

Medical Devices
MGPS
Ventilation
Water



For further information on our platforms, how to become a member and apply to join one of the Institute's TPs, please visit iheem.org.uk or contact IHEEM Head Office at office@iheem.org.uk

IHEEM Authorising Engineers

AE(D) REGISTRATION BOARD REPORT

Graham Stanton

IHEEM AE(D) Registration Board Chair

This is a basic report covering the latest activity of the AE(D) Registration Board to inform our members of the work being carried out. We held a meeting during 2023, plus a couple of sub-meetings on 'Teams' for direct discussions. Meetings are not held as often as we would like, due to availability of members and facilities. However, the Board has been very proactive, and – working very closely with DTP – many items cross the tables of both, depending on where the issues are raised in the first place.

Currently, 31 individuals are registered with the Board and on the AE(D) register, although this can vary depending on retirements and new members. The best way to find out more is to log on to the IHEEM website to review all the AEs in the various disciplines. In recent months we have interviewed two new engineers for registration, who had passed the two-year framework with Eastwood Park (EWP), and

then came before the Registration Board for an in-depth interview. Both were assessed as excellent new entrants, and we sincerely wish them well in their future development and careers.

Hopefully we will have three more entrants onto the framework scheme soon, who will be attending EWP for their induction days for the scheme – making a total of nine at various stages withing the framework. Since we entered the very detailed framework scheme with EWP, seven new AE(D)s have successfully passed through the scheme and entered onto the IHEEM register. All are proving to be good people, as well as understanding the role.

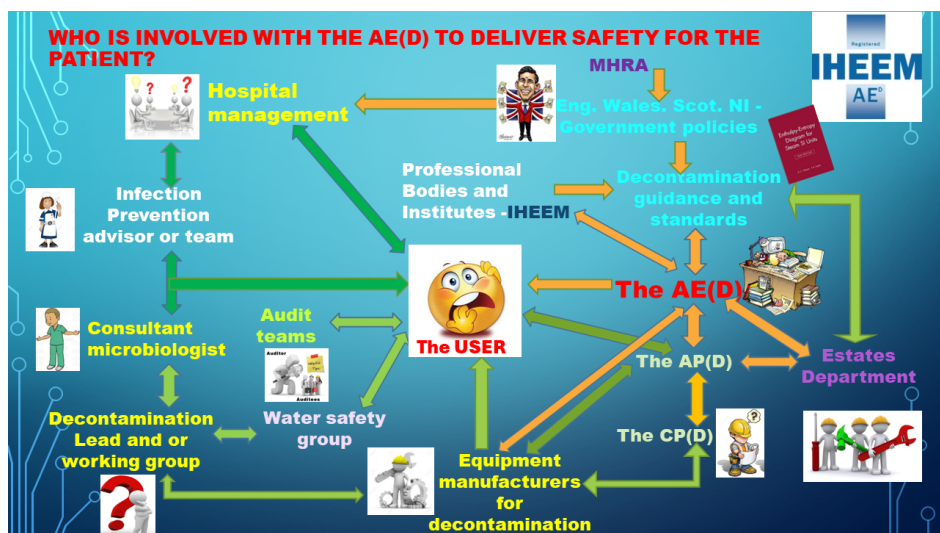
The Platform is a very good mixture of mechanical and electrical engineers, chemists, pharmacists, and microbiologists, and these roles are reflected in the make-up of the Registration Board itself, which also includes a few invited members from other institutes, and of course representatives of the Devolved Administrations. This enables me as Chairman to develop all-encompassing policies, and address the educational needs of our prospective AE(D)s, and the re-

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registration processes for the United Kingdom. It also allows me as the Chair to ensure that all aspects of the decontamination processes and systems are covered in our assessments of registered AE(D)s to the candidates framework on the EWP scheme. The processes will cover medical devices in hospital operating theatres, community healthcare, dental, and pharmaceutical settings, as well as the requirements in the complicated world of endoscopy – especially as regards flexible endoscopes.

We have AE(D)s on the Board, together with representatives of other professions – including the chair of the Decontamination Technical Platform. As a result, our work has a heavy cross-over between the two groups, with each having established smaller working teams to develop papers and research, some of which can be included within guidance notes, in our case for the use of AE(D)s. This includes the Phaco handpiece paper about to be published on the IHEEM website, which will add further guidance on the cleaning and handling of such much-used devices.

One area that has constantly been brought to our attention at the Board is the competence levels of staff or contractors working on highly complicated and complex equipment for the cleaning and sterilisation of medical devices. This year we have presented on this at a few conferences, including the Welsh IHEEM Regional



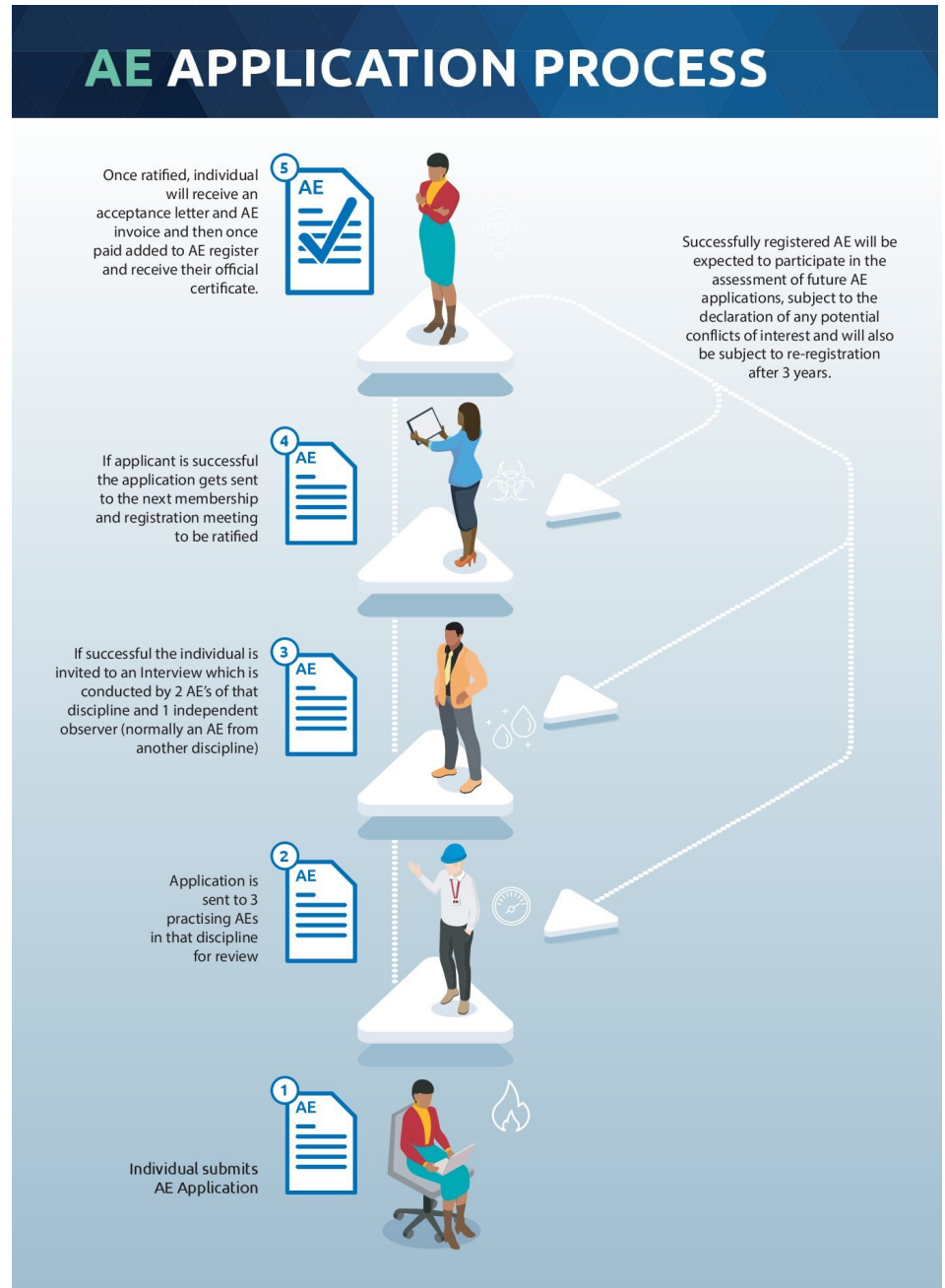
An infographic showing all those involved in delivering safe decontamination.

AE(D) Advancement

Conference in Cardiff, and the IHEEM AE Conference in Epsom. It was very clear that the feedback we receive on this topic is well supported by members in most of the Technical Platforms within IHEEM.

The Decontamination Board has taken a lead here, due to the lack of skills of many contractors, and the lack of staff in general across the service – a real problem for patient safety. We are running trials within the Welsh Health Service, and a seminar day was developed in the spring at EWP for engineers working in the Welsh NHS. This was organised and led by John Prendergast and NHS Wales Shared Services Partnership – Specialist Estates Services, supported by IHEEM. Setting out good guidance for AEs to understand, and striving to improve education and training for such professionals, are of prime importance. A paper has been written on the subject, and should be available for the AE(D)s to use – both when assessing reports and work carried out, and when staff appointments are being made in this very important area of work. This is only the first step in this work, and will need improvements and developments across the other Technical Platforms in IHEEM.

Another significant piece of work has been the AE(D) audit forms developed by the Board in conjunction with the JAG organisation over the last few years – an initiative I started and developed following real problems with audit work in my previous role within the Welsh Health Service many years ago. This process is now working very well, and has gained a strong reputation within the service as regards the audits undertaken in flexible endoscope decontamination departments.



The application route to becoming an IHEEM registered Authorising Engineer.

Find out more about Authorising Engineers

IHEEM supports members looking to become an AE(D), AE(E), AE(MGPS), AE(V), or AE(W). The Institute holds an Authorising Engineer Register, listing all IHEEM qualified AEs.

For further information, guidance, or support in an application, or to become a member, please visit iheem.org.uk, or contact IHEEM Head Office at office@iheem.org.uk

Digitising Systems

Confidential Reporting

IHEEM has been working very closely with QuiqSolutions to digitise papers and systems, as used within the Institute.

I led a team to review this work, and during 2023, we had the original AE(D) audit forms digitised and successfully trialled on a site. It must be emphasised that this tool is only for use by an AE(D) for confidential reporting. Along with this tool, a small group – including a trial set up in a South Wales hospital – has developed an evidence pre-audit tool for staff working in these units to collect and upload reports and results – for example of water tests. This should enable audits to be undertaken more smoothly, hopefully with less stress for all involved. It will also guide the users in understanding the reports and papers required for monitoring and electronically filing.

A third audit monitoring tool has also been developed by this group that any hospital or unit can use for evidence gathering; it enables users to collect reports and papers for the good management of the process. In combination, the three tools' use together will improve standards across the service as a whole, and assist greatly in the management of each individual hospital department of hospital.

QuiqSolutions launched the digitisation processes at IHEEM's 2023 Healthcare Estates conference in Manchester in October. It will probably require development, trials, and promotional seminars in the near future.

The system was developed in an easily modifiable and form so that it can be improved following use and feedback – hopefully with the knowledge of this Board and / or the DTP.

While the work of the AE(D) Registration Board requires a constant focus, since the COVID pandemic we have struggled to get the work and meetings back on line. We are, however, striving to achieve this, and in doing so are keenly looking forward to developments of the framework with EWP, as well as inviting new candidates to enter the scheme, and hopefully improving standards all round.

REMINDER

A summary of the guidance as issued for reference

The Policies and Principles section of Health Technical Memorandum 00, Best Practice Guidance for Healthcare Engineering, describes the structure and the core suite of nine subject areas for guidance, of which the HTM 01 suite refers to decontamination. Chapter 4 summarises the professional support and management structures required to implement the HTMs for the role of AE(D)s, with the roles and responsibilities of decontamination personnel set out in in HTM 01-01 Part A. (reference Guidance documents such as WHTMs in Wales and SHTMs in Scotland.)

Graham Stanton, who retired from the NHS in 2016 following 42 years' service, started his engineering career in 1967 on joining the Merchant Navy as an Engineer Officer Cadet. Initially attending an officer training facility at Warsash near Southampton, he went on to have a rewarding service at sea, which he says 'formed a very solid platform' for his engineering career.

He joined the NHS in 1974 in the mechanical design section of WHTSO (now NWSSP-SES), and transferred to the Special Services section, where he worked in the sterilisation and decontamination field in various capacities, representing the Welsh Health Service on the formation of national guidance – both for Wales and the England's Department of Health – until he retired. He also led audits for the Welsh Government, and was instrumental in setting up and chairing active decontamination groups in both Sterile Services and Endoscopy.

He was an Authorised Person (Sterilisers) from 1995 to July 2008, when he became an Authorising Engineer (Decontamination), and is still registered with IHEEM. Still invited to the All Wales Decontamination committee as an IHEEM advisor, he has represented the Wales IHEEM Branch on the Council, and currently chairs the IHEEM AE(D) Registration Board, having formerly chaired the IHEEM Decontamination Technology Platform. He also represents IHEEM on the Professional Bodies Group (DPECF) – a forum of representatives of the main decontamination institutes and bodies, and in 2021 become a committee member of the Central Sterilising Club.



Graham Stanton

IEng, FIHEEM, AE(D)
IHEEM AE(D) Registration Board
Chair

Knowledge Partner



Decontamination training is an evolving science, and we at Eastwood Park strive to ensure that training courses and content are continually reviewed in accordance with revised healthcare guidance, technical innovation, industry thinking, and legislation/regulatory requirements across the UK.

Within this article, we will explore the changing role of a Decontamination Lead, and how a change in our training practices to reflect this is needed to ensure that courses keep up with new technologies and industry standards. Topics covered will range from the decontamination of further devices, to ensuring that delegates are aware of other fields of decontamination, all with a full objective of improving the standards of patient safety within healthcare organisations.

In alignment with the commissioning of our new training centre, the organisation is currently reviewing and restructuring the training courses delivered within the Decontamination training portfolio. We are working in collaboration with industry experts, registered institutes, and stakeholder groups, to initially review and reinvigorate both the Decontamination Lead course and the training course used as the foundation for the Authorised Person (Decontamination) role.

The Decontamination Lead role has changed since original conception, and we need to account for the changing responsibilities required to ensure appropriate decontamination of devices used within Trusts, Health Boards, and delivery centres across the UK. Decontamination is more than just Sterile Services, and the Decontamination Lead training must make delegates aware of other fields of decontamination. The growth of endoscopes and diagnostic services has seen a significant change in commitments, assisting service-users, and the revised training encompasses new technologies. Radiology/Ultrasound diagnostic services is a significant area of uncertain practices, where the

Decontamination Lead needs to learn and gather information.

Outsourcing of services leads to greater assurance, and there is the need for the Decontamination Lead to understand the need to audit on behalf of the organisation they represent. This is highly important, and is emphasised within the new course content.

The training we deliver is evolving to include areas we have not explored previously; this is supported by a new range of equipment installed within our practical laboratory on site. This ensures that delegates leave Eastwood Park with a full overview of the changing role of the Decontamination Lead, subsequently improving standards of patient safety within healthcare organisations.

The training for the Authorised Person (Decontamination) has been expanded from a four-day course to a five-day learning period. Such expansion includes an additional section on compliance and legislation background, in alignment with the principles of HTM 00. This is raising awareness of the increased engineering governance responsibilities required to be an AP(D) in 2023. Eastwood Park has worked with colleagues within the IHEEM Decontamination Technical Platform and other industry colleagues to review the expanded needs of the delegates going forward.

Such governance includes greater emphasis on the permit to work systems, review of CP(D) competency, and implementation of safe systems of work prior to authorisation to work on critical plant. Such systems not only protect the organisation, but are also in place to protect the wellbeing of the CP(D).

It is recognised that current UK guidance has identified an inconsistency with the AP(D) background in accordance with other AP roles. Currently there is no formal monitoring of Competent Persons (Decontamination), and no formal need for refresher training at set intervals. The new training course strives to raise the profile and knowledge base of the AP(D) candidates prior to formal assessment by the Authorised Engineers (Decontamination).

As a pilot scheme, agreed between NHS Wales as a pilot organisation and IHEEM DTP,



John Prendergast
AE(D), MIHEEM

Alongside being a Decontamination trainer at Eastwood Park Training, John Prendergast is the Senior Decontamination Engineer working within the specialist team at NHS Wales Shared Services Partnership/Specialist Estates Services. John is an AE(D), and the role is dedicated to all aspects of decontamination/reprocessing techniques for medical devices. John leads the team that provides validation services, and advice and guidance to Health Boards/Trusts within Wales, and works closely with Welsh governmental departments to deliver policy and strategy in this unique and often complex field. John is an active member of the IHEEM Welsh Branch, and he represents Wales on the IHEEM AE(D) Registration Panel. Additionally he has been a member of the IHEEM Professional Development Committee.

a stakeholder day was held at Eastwood Park in March 2023, to discuss the suggested course reconfiguration and learn the practical difficulties experienced by AP(D)s at the coal face. Although feedback from the audience indicated that all agreed that there needs to be recognition and increased governance from AP(D)s, resources and lack of clarification within HTMs remained as

AE(D) Framework

obstacles to change.

It is an exciting time for us at Eastwood Park, with summer 2023 having seen us unveil our first training course on Controlled Environment Storage Cabinets – another important evolution in how healthcare has developed with new technologies.

As discussed in this article, it is imperative

to keep our training up to date with the changing landscape of a Decontamination Lead. Following the development of our brand-new state-of-the-art training facility, with its sustained focus on hands-on, practical training, our aim of preparing learners for the responsibilities of their role has never been clearer. Please do not hesitate

to contact us for further information on the training course portfolio. We listen, and will react to meet the ever-changing world of decontamination services across the UK and beyond.

John Prendergast, Authorising Engineer, Decontamination and Eastwood Park trainer

SPOTLIGHT ON

JAMES TINSDEALL

After leaving school at 16, James Tinsdeall undertook a mechanical apprenticeship. He subsequently joined the NHS as a craftsman, a job he says was his first where the work felt meaningful and had purpose. His career has seen him progress through various roles to Head of Estates until, more recently, he decided a new challenge was in order. Having discovered an interest in microbiology, chemistry, physics, and engineering through his decontamination work within Estates, the Authorising Engineer (Decontamination) framework felt appealing to pursue.

James is now an AE(D), based in Truro in Cornwall, a proud achievement which supports his position operating a small company offering services and consultancy to healthcare organisations across the UK. He has full control over the direction of his work, which he finds extremely fulfilling. His activities in a typical day range from administrative responsibilities, to working on specifications, reviewing records of audit reports, and teaching. James says his AE(D) status means clients benefit from a vast amount of knowledge acquired through experience and site visits to other hospitals, as well as peer knowledge and support via the extended network of AE(D)s.

Of pursuing Authorising Engineer status, James cites as key motivations the desire for a change in career, and a new challenge. He notes that 'the AE(D) framework should not be underestimated, as it took about 1,500 hours' works to provide the necessary evidence'. However, he stresses, support is available, adding: "There have been many people along the way that have helped in terms of my career development. You have to take control of your own career, but also know when to ask for help, as there are always people willing to assist if asked." He intends to give back in the same vein, planning for his future by both continuing his existing contracts, and encouraging new individuals to progress their careers, as well as helping others wherever, and whenever, he can.

He says: "Having progressed in my EFM career to a role as an NHS Trust Head of Estates, in my early fifties I decided I needed a new challenge. Having enjoyed the decontamination elements of my work during many years spent in NHS healthcare estates roles, the framework for Decontamination AE(D) looked like the right challenge. Decontamination has a number of different and very interesting facets – including microbiology, chemistry, physics, and engineering.

"No two days are the same, and every day is an opportunity to learn something." A typical week includes office-based administration work, typically three days on different hospital sites, and occasional teaching on decontamination courses. "Now, rather than being an employee, my career is within my own small limited as company, which allows me full control of my work and direction, which is extremely fulfilling.

My advice to someone considering becoming an AE would be to decide if it is something you really want to do, and in making that decision, carefully consider the input that will be needed and how you will meet that requirement. Also, talk to your existing AE, and always ask for help when you need it.

"Customer organisations using an AE benefit via a wealth of knowledge, including the individual's experiences at other hospitals. The AE can also seek knowledge and solutions through the network of other AEs and industry contacts, as no one knows it all. Long term I hope that part of my role will be supporting other professionals in progressing their careers and offering them whatever help I can. One of the biggest highlights of an interesting career to date was receiving AE(D) certification."

