IPS spotlight

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Profile: Evonne Curran

How did you become an infection prevention and control nurse?

I first became interested in infection control when I was a staff nurse working on a surgical ward and was appalled by the practice of reusing bowel washout equipment after rinsing it out and hanging it to dry in the sluice. At that time the procedure manual contained no decontamination instructions, although shortly after this was rectified. I was successful at obtaining a post as an Infection Control Sister in a large inner city hospital. Initially there was no team and no resources but I was lucky enough to have the support of the senior management, microbiologists in the laboratory, Professor JD Sleight and the Infection Control Nurses Association (ICNA).

How did your role as Infection Control Sister develop?

To illustrate the challenges facing me at that time, surprising as it may now seem, one of my earlier achievements was to get a sink installed in a sluice in a busy orthopaedic ward (this brought the sink tally to two). However, I gradually acquired or developed the tools and resources to manage the care of patients infected with different organisms. The scope of my responsibility soon grew and I became responsible for more than one hospital and I began to build a team of nurses to help me. While still working as a hospital Infection Control

Nurse I worked part-time for the NHS Board developing our first Infection Prevention and Control manual for all the hospitals within the Health Board. It is remarkable that it was one of the first to include standard precautions.

One advance that made a large impact on my infection prevention and control practice was developing the ability to collect and analyse data through the acquisition of a computer and 'Epi Info'. Our surveillance programme focused on patients with alert organisms and communicable diseases – although we did undertake some surgical site infection surveillance. However, this was a time when alert organisms were increasing exponentially and we became very good at measuring 'things that went up'. Preventing infections rather than focusing on 'people with an alert organisms' became ever more paramount. As a result of this I introduced statistical process control charts for both MRSA and *C. difficile*, which allowed the infection control and clinical teams to not only identify and respond to any infections and outbreaks but also to measure how well we were at preventing these infections.

My final NHS post was a Nurse Consultant in Health Protection Scotland working on a national programme of work to prevent, prepare for, detect and control outbreaks within healthcare across Scotland. I also initially worked on the development of care bundles within clinical practice. I was particularly proud of the fact that I managed to convince the Institute for Healthcare Improvement that we needed a peripheral vascular catheter bundle which I believe has contributed to a vast improvement in the care of vascular catheters and reduction in Staphylococcal bacteraemias.

What papers do you think have had the greatest impact on your infection prevention and control practice?

This is difficult to answer.

- Benneyan's (1998a, 1998b) papers were extremely influential in introducing me to statistical process control.
- Price and Sleight (1970) demonstrated early on what to do in the face of overwhelming antibiotic resistance (stop antibiotics).
- The CDC (1997) produced guidelines for an infection that was yet to be seen in the US (Staphylococcus

aureus with resistance to vancomycin). This was the best example of outbreak preparedness I have seen. It basically said don't wait for a case or an outbreak; get ready. The paper was followed to the letter when we experienced a case not long thereafter and the guidance was extremely useful.

- Haley et al.'s (1980) SENIC project was pivotal and I consider Haley's 1985 paper to be the most useful and readable paper on surveillance and was in fact the first on systematic healthcare quality improvement.
- The explanation of clinical microsystems (CMS) as the critical components of healthcare systems was another extremely valuable work (Nelson et al., 2008). It describes the anatomy of what the best CMS look like and provides a template of how to achieve healthcare excellence.
- Early work on isolation (even before my time) by Bagshawe et al. (1978) includes an insightful statement which sums up the infection prevention challenge: 'Precautions against infection are often costly in money and the time of skilled staff and may be exasperating impediments to medical and surgical work'. We have to enable healthcare to continue while ensuring effective infection prevention and control is not an impediment to progress.
- As many will know infusate contamination has been where I have focused much effort over the years. There are many excellent authors but I summarised their work in a literature review (Curran, 2011).
- I have also learnt much about how to make things better from non-infection experts who explain how things go wrong (Cook 1998; Reason, 2000) and by learning from people who explain how to understand situational awareness (Endsley and Garland, 2009) and what the characteristics for high reliability are (Weick et al., 2008).

What has been or are the biggest challenges for infection prevention and control?

Historically it was convincing people of the need for change but now it is overcoming the culture of checklists and 'sign to say it's been done' documents. This culture does not always help frontline workers and it stifles innovation and leads to a 'tell me what to do' approach to decision-making. We need to make it easy for practitioners to do the right thing and to be sure they know what the right thing to do is. If it is not easy we need to help change the system. I don't think people have always understood what the role of the infection prevention and control team is. We are the radar; we say what challenges are here and what is coming, what the risk is, what is needed to negate it and how effective we are at reducing that risk. There is still plenty of work to be

done. In my view, the book on how best to do infection prevention and control has yet to be written.

What do you consider are your greatest achievements or the highlights of your career?

I don't think I have been exceptional in anyway. I am extremely pleased to have led four multi-centre research projects (The Phlebitis Study, The CHART project, HOUDINI and The WINCL project). I was also proud to have led on the production of the first Infection Control Manual for all Glasgow. And to be the first to use statistical process control charts for MRSA and *C. difficile* (I believe in the world) was something special (Curran et al., 2002). I am delighted with the Outbreak Columns in general and in particular the latest one, Outbreak Column number 18, on the undervalued work of outbreak: prevention, preparedness, detection and management (Curran and Dalziel, 2015). I was honoured to have been invited to deliver the Cottrell Lecture at last year's Infection Prevention Society (IPS) Conference. I think it is always a great achievement whenever people ask to use your work; I have been fortunate that this has happened a few times. However, whatever I have achieved it is only because of the help and support of many excellent others and the networking facilitated by ICNA and now IPS.

What's next for you?

I have recently retired from the NHS after 28 years in Infection Prevention and Control but I am not leaving just yet. I am moving on to a new challenge of setting myself up as an independent infection control consultant. Hopefully this will include the entire portfolio that is part of today's infection prevention and control service.

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The IPS Research and Development Committee

Kate Previc and Maurice Madeo, Joint Chairs R&D Group Coordinator

The Research and Development committee is one of four standing committees of the Infection Prevention Society (IPS). The remit of this group is to fulfil the parts of the IPS strategy that relate to research. Each year the IPS awards research grants to projects that it considers will:

- Generate high quality research for practice
- Engage in collaborative research with academic and clinical partners
- Develop research capability and capacity among its members.

There are three award categories. The Post-Doctoral Grant which awards £3000 per annum for 2 years, the Collaborative Small Project Grant which offers a team of up to five researchers £5000 for 1 year to undertake a piece of research on any aspect of infection prevention and control, and finally a Novice Investigator Grant which offers up to £1000 per annum for 3 years to support research at either masters or doctoral level. The lead applicant for these awards must be a member of the IPS for at least 12 months and hold an academic qualification at the appropriate level.

The R&D Committee is responsible for making these awards on behalf of IPS. Last year we awarded the Post-Doctoral Grant to Dr Carolyn Dawson and a team from University Hospitals Coventry and Warwickshire NHS Trust, who are investigating learned and inherent behaviours in relation to hand hygiene compliance, concentrating on the ‘yuck factor’. The Collaborative Grant went to a team from Wolverhampton, with Matthew Reid as the lead for this work, which is also looking at hand hygiene compliance but investigating technology assistance in this area.

This year we have received seven strong applications and the Committee are starting the process of evaluating and making the awards. The successful applications will be announced at the IPS Annual Conference in Liverpool at the beginning of October.

In addition to both making these awards and monitoring their progress, the Committee undertakes a membership survey every 3 years to identify what our members consider our research priorities should be. The committee wanted to actively involve IPS members, and conducted a survey using SurveyMonkey. We had a really interesting response, with an overwhelming majority of respondents (62.2%) wanting standard infection prevention and control (IPC) to be the main focus. Antimicrobial stewardship was the second most popular receiving 21.6% of votes.

The Committee then considered how best to address this; a previous survey in 2013 had identified that the study of human behaviours in the field of IPC was also something that members considered to be important. We decided that we needed to understand some fundamental issues;

1. What do practitioners really understand by the term ‘Standard Precautions’? Do all practitioners understand the same thing?
2. IPC has been teaching and promoting Standard Precautions since 1986; if there is confusion, what is it, and what human factors have been at play? How can we improve our practices but also respond to an evolving and complex healthcare environment which requires healthcare workers to risk assess safely. This is particularly true within IPC where we face multi-drug resistant organisms and reduced efficacy of some current antibiotic therapy, in addition to increasing demands for healthcare.
3. The committee considered using tools such as the behaviour change wheel developed by Dr Susan Mitchie which is a framework for understanding behaviour. Which behaviours are at play when IPC decisions are to be made and how can these behaviours be addressed by education and novel methods of IPC management and policy development?
4. The Committee are to meet to discuss the results of literature searches and to plan next steps. We are considering either using focus groups and involving

IPS committees around the country, or developing a questionnaire to gather information initially. Initial feedback from IPS regional groups has been very positive and members do seem to be very excited by this research proposal.

5. We have applications of interest from several regional groups: the West Midlands, Yorkshire and the South West so far. Next steps will be published

on the IPS website and disseminated to regional groups of the IPS following our August meeting.

The Committee also facilitated a piece of research by Professor Reilly who investigated the IPS members' views on the use of 'Fist bumps' (Reilly et al 2015). We helped develop the data collection tool and analysis, the results of which are now published in *JIP*.