Understanding the determinants of infection control practices in surgery: The surgeon sets the tone

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Background

- Risk, technical complexity and time pressures may influence operating room staff infection control (IC) attitudes
- Inappropriate perioperative behaviour can compromise the sterile environment and increase risk of surgical site infection (SSI) [1]
- The absence of high-quality evidence in some areas means myths, rituals and habits can develop over time [1]
- Understanding key social and contextual determinants of perioperative team behaviours may help to improve the consistency of infection control practices

Materials/methods

- Setting: London acute care hospital group covering 1500 beds across 5 different sites
- Study design: Qualitative semi-structured interviews
- Participants: Participants were purposively sampled to include a range of staff groups and ensure representation from clean (cardiac, orthopaedic, and neurosurgery) and contaminated surgery (gastro-intestinal)
- Topics covered in the interviews were:
  - Perceptions of causes and risk of SSI
  - Attitudes to responsibility and accountability for SSI prevention
  - Awareness of policies and guidelines pertaining to SSI
  - Understanding of SSI diagnosis and surveillance
  - Relative priorities of SSI to other concerns
- Interviews were recorded and transcribed verbatim, transcripts were manually coded and analysed thematically using an inductive-deductive approach

Results

- The 15 participants were: surgeons (n=5), nurses (n=5), theatre personnel (n=3), anaesthetists (n=1), and microbiologists (n=1) in orthopaedic, neurosurgery, vascular, cardiac and general surgical specialties
- Most participants stated that prevention of SSI was a team responsibility. Several participants felt patient factors were behind most SSIs, but despite this, some surgeons felt that high SSI rates would negatively impact their professional reputation.
- Behaviours are influenced by the lead surgeon in the room, which some participants felt powerless to change as “whoever holds the knife holds the power”

"[Surgeons] don’t care sometimes about our opinion... but [other theatre staff] are not comfortable [challenging the surgeons], they are scared sometimes and I’m scared sometimes as well...I have never seen a junior surgeon scrubbing without mask, for example... but they are scrubbing with surgeons who don’t use a mask, but they will never say anything to that surgeon, never.
...So, sometimes I just prefer not to say anything, I know it’s not right, but I just prefer not to say anything... I will get nervous, because... we say that they have the knife, they have the power"

Scrub nurse

"...they have some very, very unry surgeons who will not [react well], thank god we have got good surgeons who would listen to us and not be fused. But there are some surgeons that the staff would not be confident to mention that to. Which is unfortunate."

Critical care nurse

"Oh, definitely. There is hierarchy...there are people who... will do their way anyway, without, whatever you tell them it doesn’t, it wouldn’t really matter. [It’s harder to challenge someone] who’s very senior, yes. Yeah, it’s harder to challenge..."

Vascular surgical registrar

- Participants’ comfort when challenging the behaviours of others was related to their interpersonal relationship and confidence in expressing themselves tactfully, particularly nurses challenging surgeons, or juniors challenging seniors
- Challenging others was also influenced by the participant’s perceived expertise on the subject, and by having policies, guidelines, or literature to support their point

"Before that I can only suggest maybe we shouldn’t be doing this, other people can see you like, oh, smartass is coming and saying oh, we should do this or that and what is your evidence? Well, there are multiple evidence, WHO guidance from 2016, for example..."

Cardiac surgical registrar

"Once you find the evidence you can challenge that."

Microbiology consultant

"We rely on our NICE [National Institute for Health and Care Excellence] guidelines because they should be taken from solid recommendations and good grades of evidence."

Anesthetic consultant

- Most participants were unaware of their SSI rates at individual, specialty, or hospital level. Even when data are available, they are shared only with surgeons
- Opportunities for sharing best practice and peer-to-peer learning are missed because of lack of data on outcomes – the impact of a recent national audit (Getting It Right First Time) highlighted problems that had been overlooked previously

Discussion & Conclusions

- Unhelpful hierarchies that prevent staff from challenging inappropriate behaviour are similar to those that have been noted in other studies on IPC practices [2,3]
- Confidence to challenge others can be developed by having policies and high-quality evidence to refer to; experienced staff can support this by acting as role models to normalise challenging inappropriate behaviour
- Improvements could be made by:
  - Ensuring staff receive regular evidence-based training
  - Ensuring staff have easy access to up-to-date policies and guidelines
  - Collecting and analysing data for in-house quality improvement programmes with engagement from the whole perioperative team to foster a sense of accountability
  - Providing opportunities to support peer-to-peer learning and share best practice

References


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