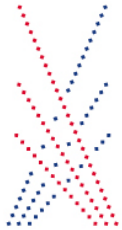

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Building and Sustaining High Performance Organisations During Uncertain Times:
Challenges and Opportunities

Track 13: Leadership and Leadership Development

DEVELOPMENT PAPER

"They have the power because they've got the knife": Examining leadership in an interprofessional healthcare arena

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Abstract
This development paper presents a critical discourse analysis of leadership as a dialectical relational construct. In so doing, we draw upon a comparative-intensive case study of the implementation of the 1000 Lives+ national patient safety programme in NHS Wales, and direct empirical attention on the implementation and operationalisation of the World Health Organization's Surgical Safety Checklist in the interprofessional arena of the operating theatre.

Introduction

Patient safety remains one of healthcare's most pernicious and persistent global grand challenges (WHO, OECD, & The World Bank, 2018). Driven by the individual human and broader societal costs incurred through failings in patient safety, governments and their respective healthcare institutions have turned to high reliability organisation (HRO) theory (La Porte, 1981) in an attempt to emulate the practices which enable other high risk organisations to operate in a reliable manner over a sustained period of time (Pronovost, Berenholtz, Goeschel, Needham, Sexton, Thompson, Lubomski, Marsteller, Makary, & Hunt, 2006; Sutcliffe, Paine, & Pronovost, 2017).

HRO theory emerged from research that examined how organizations that functioned as complex adaptive systems in high-hazard technological industries—exemplified by chemical, nuclear, military, and transport (Bierly & Spender, 1995; Hofmann, Jacobs, & Landy, 1995; O'Neil, 2011)—remained effectively accident-free even during crises and times of fluctuating demand (Shrivastava, Sonpar, & Pazzaglia, 2009). Its foundational perspectives (La Porte, 1981; Roberts, 1990, 1993; Roberts, Rousseau, & La Porte, 1994; Rochlin, 1993; Weick & Roberts, 1993), conceptualize reliability as the capacity of an organization to anticipate and contain potential incidents. They present a varied, though overlapping, debate on the characteristic features of high reliability organizations. In synthesizing these statements, as discussed in the next section of this paper, we consider the following to be the fundamental tenets: (i) an aspiration to be failure free; (ii) enculturation through training and socialization; (iii) rigorous learning in relation to the complexities of the system and the discovery of errors; (iv) social and technical redundancy; (v) distributed decision-making; (vi) transition from hierarchical to informal, network-based authority in the event of unexpected events; and (vii) heedful interrelating, both with co-workers and with the system.

The adoption of HRO theory in healthcare demands leadership that is committed to the goal of high reliability, complemented by the use of robust tools for process improvement that collectively foster a culture of patient safety (Chassin & Loeb, 2011, 2013; Martelli, Rivard, & Roberts, 2018). Despite application in healthcare (Aboumatar, Weaver, Rees, Rosen, Sawyer, & Pronovost, 2017), the attainment of highly reliable performance and sustained improvements in patient safety remains elusive. Attuned to the discourse of public service reform it is leadership from board to ward that is deemed pivotal (Benn, Burnett, Parand, Pinto, Iskander & Vincent, 2009; O'Reilly & Reed, 2010), though too often defective (Brown, Dickinson, & Kelaher, 2018; Vogus & Hilligoss, 2016). HRO informed healthcare therefore warrants deeper examination in order to discern the relational processes by which patient safety leadership emerges and operates in such contexts (Ford, 2015).

The genesis of this paper lies in a curious finding from a comparative-intensive case study of the implementation of a national patient safety programme (Herepath, Kitchener, & Waring, 2016). It centred on the use of a globally recognised tool to improve patient safety during surgery—the "World Health Organization's Surgical Safety Checklist" (hereafter WHO-SSC) (WHO, 2009a, 2009b)—in four NHS Wales' Health Boards. Despite the use of the WHO-SSC, in only one of the four Health Boards studied was patient safety unmarred by surgical "never events": an adverse incident, exemplified by a retained foreign object (typically a swab or surgical instrument), wrong implant, prosthesis or site of surgery, that is considered to be preventable when national guidance or safety recommendations that provide strong systemic protective barriers are implemented effectively by healthcare providers (Burnett, 2018). This therefore raised an intriguing question: what, if anything, was different about the

enactment of leadership in the single positive outlier within these cases? At first sight, the difference appeared to revolve around the clinical versus managerial staffing structure of the different surgical units. With our curiosity piqued, we therefore sought to undertake a critical discourse analysis of leadership as a dialectical relational construct (Collinson, 2005; Cunliffe & Eriksen, 2011; Fairhurst & Uhl-Bien, 2012).

Literature Review

Adoption of HRO theory in healthcare to enhance patient safety

The adoption of HRO theory is not a simple undertaking in healthcare (Davidoff, Dixon-Woods, Leviton, & Michie, 2015; Roberts, Madsen, Desai, & Van Stalen, 2005). When viewed through HRO theory's systems perspective, healthcare does not have a discreet or readily delineated boundary. Rather, it is composed of multiple, open, fluid and intersecting sociotechnical microsystems embedded within the broader public sector, each attuned to a different context-specific and socially determined concept of high reliability (Martelli, Rivard, & Roberts, 2018). Research that examines the implications of high reliability at the public sector network level is scarce (Berthod, Grothe-Hammer, Müller-Seitz, Raab, & Sydow, 2017). Typically, healthcare studies focus on a discrete issue, high-risk domain or tool, exemplified by leadership (Frankel, Leonard, & Denham, 2006), intensive care (Madsen, Desai, Roberts, & Wong, 2006) and plan-do-study-act (PDSA) cycles (Langley, Nolan, Norman, Provost, & Nolan, 1996).

Healthcare demonstrates profound variety across its microsystems. As a process that seeks to address the needs of individual patients, delivered by clinicians who may, or may not, adhere to their specialisms' protocolized evidence-based treatment, healthcare is inherently less reliable than many industrial processes (Resar, 2006). As such, some of HRO theory's fundamental tenets are difficult to transfer to this context. For example, the aspiration to be failure free (La Porte, 1981, 1996; La Porte & Consolini, 1991), though laudable, appears an insurmountable barrier as one in ten patients is harmed during their healthcare (WHO, OECD, & The World Bank, 2018). The need for collective mindfulness and a constant preoccupation with failure, anticipating and containing harm (Weick, Sutcliffe, & Obstfeld, 1999; Weick & Sutcliffe, 2007) represent little more than risible rhetoric given that harm is accepted as an inevitable feature of healthcare (Chassin & Loeb, 2013). However, much of this harm is avoidable but remains unrecognised (Mayor, Baines, Vincent, Lankshear, Edwards, & Aylward et al., 2017). The adoption of HRO theory in healthcare must therefore confront a daunting leadership challenge to continually strive for success through the development of resilient patient safety practices, while knowing there may never be a victory (Wears, 2005).

HRO theory asserts the need to subject employees to intense enculturation, through training and socialisation, placing emphasis on reliability, safety, the complexities of technology and associated production processes (Rijpma, 2003; Rochlin, La Porte and Roberts, 1987). In the necessary absence of trial and error (where the consequences of error may be disastrous), substitute learning strategies such as imagination, vicarious experiences, stories, simulations, and other symbolic representations of technology and its effects are advocated (Weick, 1987). This ensures that, if the situation required, the structured, hierarchical decision-making processes through which the organization normally operated could rapidly give way to more flexible distributed decision-making based on local expertise underpinned by homogeneous decision premises (Hopkins, 2000, Weick, 1987).

Healthcare has attempted to embrace these principles. Beyond the demands of

profession-specific knowledge, skills and competencies, the requisite curriculum and tool-kit of techniques to support patient safety is exacting (WHO, 2011). A non-exhaustive list includes the application of PDSA cycles (Langley et al., 1996), root cause analysis (Kellogg, Hettinger, Shah, Wears, Sellers, Squires, & Fairbanks, 2017), human factors (Glavin & Maran, 2003), checklists (WHO, 2009a, 2009b), and assessment of the safety climate (Mannion, Konteh, & Davies, 2009). Undeniably, though fostering a commitment to resilience and general sensitivity to operations, such tools may over simplify interpretations of system failure and harm (Weick et al. 1999; Weick & Sutcliffe 2007). Yet this array of techniques addresses HRO theory's notion of conceptual slack, whereby several systems may be maintained in relation to the technology and processes used in order to avoid hasty decisions and blind spots (Schulman, 1993).

Nonetheless, while designated leaders, exemplified by patient safety champions (Holland, Meyers, Hildebrand, Bridges, Roach, Vogelman, 2010), may be required to cultivate such knowledge, undertaking rigorous learning in relation to the complexities of the system and the discovery of errors, other employees, including those in formal management positions with a statutory responsibility of patient safety, may not. This therefore limits the development of technical and social redundancy to back up failing parts or personnel (La Porte & Consolini, 1991). Furthermore, the legacy effects of healthcare's traditional model of professional hierarchy—whereby nursing, other professional, and paraprofessional groups are subordinate to medicine (Currie & White, 2012)—may inhibit distributed decision-making and deference to local expertise (Roberts, 1990), as medicine remains the pivotal catalyst for, or barrier to, the enactment of patient safety (Chreim, Langley, Comeau-Vallee, Huq, & Reay, 2013; Spyridonidis & Currie, 2016).

In an extension of HRO theory, Flin (2001) sought to understand how its premises manifested themselves at the level of the team as opposed to the organization. Flin found that strong enculturation of team members, such that they shared a common mental model and were able to predict each other's responses and reactions to unforeseen events, fostered high reliability (Flin, Slaven, & Stewart, 1996). Notably, this homogeneous thinking left room for a critical attitude among members and a vigilant approach to tasks and situations. This vigilance implies an attitude of organizational mindfulness (Hopkins, 2000) or heedfulness (Weick & Roberts, 1993) in one's interactions with others and with the system, wherein mutual checking is a positive, non-blame related activity. Hence, it echoes La Porte's (1996) emphasis on stringent quality assurance, and the need to reward the discovery and reporting of error to foster a culture of high reliability.

This adaptation of HRO theory now informs the development of teams and team work in healthcare (Baker, Day, & Salas, 2006). Emphasis is placed on situational awareness, use of standardized or closed-loop communication, and shared mental models (Riley, Davis, Miller, & McCullough, 2010), enhanced by cross training in co-workers' tasks, team self-correction, and guided error training (Wilson, Burke, Priest, & Salas, 2005). Yet a blame culture persists (Armstrong, Brewster, Tarrant, Dixon, Willars, Power, & Dixon-Woods, 2018). Pivotally, such research illuminates how changes in leadership and team composition may rapidly erode high reliability and advances in patient safety (Roberts, Madsen, Desai, & Van Stalen, 2005). In so doing, the debate on attaining high reliability in healthcare bifurcates. At board level, emphasis is directed to formal leadership through the managerial oversight and governance of patient safety (Millar, Mannion, Freeman, & Davies, 2013; Fitzgerald, Ferlie, McGivern, Buchanan, 2013; Mannion, Davies, Jacobs, Kasteridis, Millar & Freeman,

2017). At ward level, it focuses on the leadership relational dynamics of the healthcare team (Currie & Spyridonidis, 2018; Dennis, Lamothe, & Langley, 2001; Dennis, Langley, & Sergi, 2012).

Relational leadership for high reliability in healthcare
Please refer to comments at the end of the paper for an overview of how we plan to develop this section in preparation for the BAM Conference 2019.

Research Design
Empirical Context: *NHS Wales' National Patient Safety Programme*
In April 2008, the 1000 Lives campaign—an adaptation of the Institute for Healthcare Improvement's 100,000 Lives campaign in the US (Berwick, Calkins, McCannon, & Hackbarth, 2006)—was launched across NHS Wales. It had two distinct goals: (i) to reduce by 1000 the number of deaths caused by suboptimal care, and (ii) to reduce by 50,000 the number of adverse incidents. All health-care organisations in NHS Wales volunteered to participate in the programme (NHS Wales, 2010). In 2010, the 1000 Lives^{+} national patient safety programme superseded the campaign. This mandated Welsh Government initiative continued the ethos of high-quality person-centred care, and offered a broader range of patient safety interventions, and aligned resources, for NHS Wales' Health Boards to implement. This ambitious and complex intervention comprised eleven patient safety improvement areas (Figure 1), including the WHO-SSC, and constituted a core component of the Welsh Government's delivery framework for the NHS in Wales. Despite these laudable patient safety programmes, the aspiration for healthcare delivery to be failure free in NHS Wales remains unfulfilled. A recent study determined that 10% of patients were harmed by their healthcare—a similar proportion to that reported in other countries (Sari, Sheldon, Cracknell, Turnbull, Dobson, Grant, et al., 2007)—and that half of such adverse events were preventable (Mayor, Baines, Vincent, Lankshear, Edwards, & Aylward et al., 2017).

Empirical Focus: *World Health Organization's Surgical Safety Checklist*
The WHO-SSC, created in collaboration with the Harvard School of Public Health, was disseminated to a global audience through the WHO's Safe Surgery Saves Lives initiative (WHO, 2009a, 2009b). It aimed to reduce the number of surgical deaths that occurred by advocating 19 standardised practices set out in three stages: (i) before induction of anaesthesia; (ii) before skin incision; and (iii) before the patient leaves the operating room, to guide the co-ordinated actions of the theatre team (Figure 2). Although studies have demonstrated that WHO-SSC has a positive effect on patient safety (Sleiman, Sayeed, Padela, Padela, Bobba, Yassir, Frush, & Saleh, 2019; Treadwell, Lucas, & Tsou, 2014), the effectiveness of this intervention has been found to be highly variable (Leape, 2014; Vats et al., 2010), being marred by the hierarchical disdain of surgeons who act as the 'captains of the ship' within the operating theatre (Alidina, Hur, Berry, Molina, Guenthner, Modest, & Singer, 2017, p. 463).

Case Study Design
A multi-site comparative-intensive case study design was employed to build theory from data (Eisenhardt, 1989). Originally, in selecting cases, a purposeful theoretical sampling strategy was used (Herepath, Kitchener, & Waring, 2016). Case site organisations were considered from each of NHS Wales' seven Health Boards. Guided by their respective corporate parent, case sites were selected to demonstrate different degrees of complexity, function, and geographical coverage. In this paper, Four Health

Boards were selected for further study of the WHO-SSC due to access to operating theatres and healthcare staff: case sites A-D, wherein B represented the positive outlier with no recorded 'never events' throughout the during the study.

Data collection

Data were collected through 160 semi-structured interviews undertaken with individuals, purposively drawn from a wide range of organisational roles, within each case site. Selected individuals were asked to suggest further potential research participants from their Health Board. All interviews were digitally recorded and professionally transcribed. As illustrated in Table 1, this approach helped to secure access to staff across NHS Wales with relevant knowledge and expertise of the 1000 Lives^{+} national patient safety programme. Interviews concentrated on the individual's knowledge and understanding of the 1000^{+} Lives and the WHO-SSC. A story telling approach was adopted, wherein the field-researcher—a former healthcare clinician, manager, and government strategist—participated in an active conversation that aimed to optimize cooperative disclosure through the 'creative search for mutual understanding' (Douglas, 1985, p.25; Vaara, 2002, p.222). Interview data were supplemented by observation of use of the WHO-SSC.

Data Analysis

We undertake a critical discourse analysis of leadership through a dialectical focus and a relational focus, drawing upon interview data discussing the implementation and operationalisation of the WHO-SSC in the four Health Boards and observation of the interprofessional arena of the operating theatre. In so doing, our analysis positioned discourse as socially conditioned and constitutive—a building block of social systems and thus of situated leadership—and, as such, performative in the co-constitution of patient safety (Fairhurst & Uhl-Bien, 2012; Mantere & Vaara, 2008).

Findings

Findings, illustrated below, are supported by data presented in Table 2.

Dialectical Focus (Control/Resistance)—Relational Focus (Managerial sanction over mandated practice): In Case Site B, discursive enactment of leadership by the Theatre Manager—a nurse in a long established hybrid clinician-manager role position—counterbalanced the surgeon-dominated professional hierarchy and enforced the implementation and operationalisation of the WHO-SSC. On-going "spot-checks", in addition to mandated monitoring, heightened engagement with the WHO-SSC.

Dialectical Focus (Control/Resistance)—Relational Focus (Managerial monitoring of mandated practice): In Case Sites A, C and D, discursive enactment of leadership accommodated resistance by condoning a legitimacy façade so that monitoring was rendered ineffective. The WHO-SSC was undertaken as a "tick-box" exercise wherein "the figures that are sent in to the centre about compliance bear no resemblance to what's actually going on out in the service" as staff "ticked the boxes on the checklist but they didn't do the checklist if you know what I mean".

Dialectical Focus (Consent/Dissent)—Relational Focus (Professional Hierarchy): In Case Sites A, C and D the surgeon-dominated professional hierarchy persisted. The

implementation and operationalisation of the WHO-SSC became "an interesting shambles as the senior people decided that they were above it all basically".

Dialectical Focus (Consent/Dissent) – Relational Focus (Manager Led) In contrast, in Case Site B, the Theatre Manager and her staff had moved the debate from: "I don't want to be part of it" to "you can't start without me". This demonstrated that, in the absence of a dominant medical/surgical professional hierarchy, "if the nurses take ownership, sometimes, it encourages the surgeons and anaesthetists to take part!" Indeed, a positive professional quid pro quo had been established whereby nursing staff, led by the Theatre Manager, "came to an agreement with the surgeons" so that the "scrub nurse would not start helping the surgeon until the WHO checklist was completed". Therefore, at that stage of practice, they—scrub nurses—have the power to enforce the WHO-SSC because "they've got the knife".

Discussion and Further Development of the Paper

This paper remains at an early stage of development. Guided by our reviewer's comments we plan to extend the literature review to encompass relational leadership in high reliability healthcare organisations, expanding our argument in alignment to a relational social constructionist stance. We are considering expanding the data examined to include formal leadership, through the managerial oversight and governance of patient safety in the four Health Boards studied, which would require a redesign of our method section. We would greatly welcome feedback on whether readers see this as a positive development or a distraction from our main line of argument. We also welcome the opportunity to discuss other ways in which we might further refine the paper's focus and contribution to the relational leadership debate at BAM 2019.

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Table 1: Research Participants

Welsh Government • Policy leads	10
NHS Wales board-level executive directors • Chair, Chief Executive, Director of Medicine, Director of Nursing, Director of Therapies and Health Science, Director of Workforce and Organisational Development • Non-executive directors, health board stakeholder representatives	20
NHS Wales sub-board-level associate directors • Associate Director of Medicine, Associate Director of Nursing, Associate Director of Therapies and Health Science, Associate Director of Workforce and Organisational Development, Associate Director Corporate Performance	20
NHS Wales medical and surgical staff • Consultant-grade staff, 1000 Lives^{+} local leads, junior doctors in training	20
NHS Wales nursing staff • Ward managers, ward sisters, band 6 through to band 2	40
NHS Wales, pharmacy staff • Departmental managers, clinical pharmacists−antibiotic medicines management, clinical pharmacists−surgical/theatre department management, 1000 Lives^{+} leads	20
1000 Lives^{+} national programme • Team members	10
External stakeholders • Public sector partner agencies with external oversight of patient safety • Advocacy groups • Academics with expertise in patient safety	20

Table 2: Leadership as a dialectical-relational construct

Dialectical Focus (Control/Resistance) — Relational Focus (Managerial sanction over mandated practice)
If you want to play heavy handed then what you need to do is—which is what they've done in many Trusts in England—is they sack people. It happens, that's what NHS England does. But we don't do that in Wales. Surgeons are in a position where we have security and the stick that the medical director can wield is just not big enough. Consultant Surgeon, Case Site A_1
[How did you get surgeons to participate in the WHO checklist?] Well, they didn't have a choice! [Laughs] Don't tape that! We said to them: "you know, we've got to do the WHO checklist"—it is a mandatory patient safety check—"so we haven't got a choice, you've got to be part of it, and we'll do it with the patient, and you, in here [Theatre], so you're going to have to listen". Theatre Manager, Case Site B_1 [Positive Outlier Case Site]
With the WHO checklist, of course, there was a consequence because they had to do it but we still looked at different ways of giving people incentives and persuading them that it was necessary. But as I say, like all these things, people, some of them come round very, very quickly, others are a little bit more reticent, and a lot of people will point blank just refuse! [Some still refused even though it's mandated?] Oh yes, yeah—that's just the nature of how it is—it's like any leap of faith, you have to, sometimes. You don't believe it until you're shown it directly in front of you. Certainly some of my colleagues, within my own speciality, were a little bit sceptical and still are about many things. But again you can't change people's characters. Consultant Surgeon, Case Site C_1
With 1000 Lives^{+}, the WHO checklist, whatever, resistance to that sort of change has to be managed in an open and transparent way, and it has to be managed in terms of saying a number of things—different drivers—if you like. I haven't yet used the word, but we'll use it now—"Francis" [Report of the public inquiry into Mid Staffordshire NHS Foundation Trust]—Francis will act as an important driver. Francis is ground breaking. So, I will use Francis, as a lever, to say: "if you are not…". But revalidation is another important lever; so we've got two levers. The third is: "well, the Welsh Government expects this of you", and I don't like using that as a lever but why not chuck it in!' [It causes more resistance…] Yes, it does. But where I need to get to as a medical director is to have a culture where I go to a consultant and say: "Oh dear, I hear your complication rates are a bit high", to which I get an open answer in which they say: "Yes they are, and do you know what, I'm doing an audit to check whether …", as opposed to "No, I'm fine". So, I think, that we want to develop is that

candour culture that Francis wants. With revalidation everybody has to reflect now—I've just revalidated all the medical directors, so I'm reflected out!—but now you have to reflect on everything! This is good; but they're going to have to do that. So, now, if they say to me: "No, everything's fine", then they won't revalidate. So that is how I will be moving forward, in terms of driving openness and transparency, and saying: "You have no choice but to engage in this because otherwise those mechanisms will see to it that you are removed." Medical Director, Case Site D_1
Dialectical Focus (Control/Resistance) — Relational Focus (Managerial monitoring of mandated practice)
The WHO checklist should be 100% compliant: end of story! But drilling down through our data for that in more detail revealed problems. We do the safety briefings but what we were finding was it was a tick-box exercise—they were being done—but they were being done without the presence of the key members of the team, such as the consultant; they were being done a little bit flippantly, not necessarily with the real information that we needed for patients on the list; there were assumptions. They were very much nurse-led… [Long pause]. Look, I'm not confident that the data is accurate. I couldn't actually find evidence as to who was not doing it but whether or not it's 100% reliable I'm not sure. But the trend that we're setting is that we're 98-100% compliant. Theatre Manager, Case Site A_1
We have a really proactive Theatre Manager, who is really good at working with the doctors and surgeons, so I think the WHO checklist was a breeze! I am assured that it is fully implemented because I have spot-checked them. I spoke to [Name, Theatre Manager] when I first came into the organisation and I saw that we were 100% compliant. So, yeah, we seem to be rocking with the WHO checklist! Consultant Surgeon, Case Site B_1 [Positive Outlier Case Site]
As far as the WHO checklist [long pause]. I think it's disappointing that the figures that are sent in to the centre about compliance bear no resemblance to what's actually going on out in the service. I just worry that people at the top may be comfortable in the fact that everyone's having a WHO checklist done and that's not—that's not—the case. Theatre Manager, Case Site C_1
I get the monthly reports from the computer system on the checklist compliance and it's always about 99 something percent! I don't suppose that's true for a moment because people are just ticking the box on the computer. [You don't think that's a representative value?] No, I don't believe it: 99% every month, no way! My problem with all this is it's quantitative data being collected about a qualitative process. Take the incident that happened back last year. Somebody sat there in front of me, after it had all happened, and said: "well, I did do the checklist", and I said: "well, how do you account for the fact that they nearly did the wrong operation?", "I don't know, perhaps the surgeon didn't hear me". So they ticked the boxes on the checklist but they didn't do the checklist if you know what I mean. Theatre Nurse, Case Site D_1
Dialectical Focus (Consent/Dissent) — Relational Focus (Professional Hierarchy)
There was a surgeon I worked with—an orthopaedic surgeon—who I really respected. One day, because I'd just been on a course and knew the proper way of doing the procedure he was going to do, I realised he was going to use the wrong approach. Basically, he was going to go in from the other side of the leg. I knew he was wrong, so I told his registrar because I couldn't tell him. The registrar knew he was wrong, and he couldn't tell him. That's the example I always use with theatre clinicians: "if the most senior consultant was just about to stick a knife into someone, and the most junior member of the department walked in and said—excuse me, stop—what would be the response?" Would the response be: "okay, what have you got to say?" or would it be "get the hell out of my theatre" with somebody throwing something at him? That usually raises a smile, and once you start talking about it, they realise that the teams that they think were good teams are actually not. Getting back to my example, I said to him in the end: "Mr [Name], so you're using the medial approach today, are you?" and it was as if somebody switched a switch on in his brain. You could see him almost like come awake and go: "no, I think I will go in laterally". But he couldn't say to me, you know: "thanks for that, I was going to make a mistake"—we both had to play the game—this whole thing about hierarchies! 1000 Lives^{+} National Programme Team Member
[What problems have you encountered in implementing the WHO checklist?] One surgeon didn't want to play, he thought: "why should I introduce myself to the anaesthetist? I'm busy writing up my previous case, so I'm not going to…" Also, the WHO checklist was all done, sort of, at the wrong time—you know, the end of the case bit, well it was done sort of retrospectively rather than live! [Laughs] It was all quite an interesting shambles actually. The senior people decided that they were above it all basically.

Consultant Anaesthetist, Case Site A_1
It's routine now—the WHO checklist, the team brief and the debrief—it's routine, nobody complains about it, nobody. I think our best achievement is now an anaesthetist will say: "you do not start the team brief until I'm present". So, for me, that was our biggest achievement. Moving the debate from: "I don't want to be part of it" to "you can't start without me". But it does show, if the nurses take ownership, sometimes, it encourages the surgeons and anaesthetists to take part!
Theatre Manager, Case Site B_1 [Positive Outlier Case Site]
Getting the surgeons and the anaesthetists there—at the beginning of the day, before the list—because, for various reasons, they were reluctant to do so. For example, we have a consultant surgeon who has to drop their kids off at school by 8 o'clock, so they can't get here for the 8 o'clock briefing. Their list starts at 8.30 and they just said: "I'll be there at 8.30, perhaps a little later", it was as rudimentary as that in the end. For others, well there would be doctors going to see patients—particularly on a Monday, you can imagine what it's like after a weekend—going to see patients that have been moved over the weekend to facilitate bed management in the hospital. So, they'd be going off to see those patients, and not being able to be physically present. But I didn't really want to delay sending for patients, so it was very unpopular, I think, it's fair to say.
Theatre Nurse, Case Site C_1
When I first started in the health board, I got asked to assist with the implementation of the WHO checklist. I think—I'm not quite sure if I had an official title as such—but I was responsible for some of the surgical aspects. [Did you encounter any resistance towards the WHO checklist?] Ah yes…[Long pause]…that was an old chestnut, we had to deal with it at the time. I think with a lot of these projects where people are looking to try and implement change the difficulty is the people who volunteer to do them, of course, they're the believers! And the people who don't volunteer are not the believers. So, there's always a sort of a clash of culture, I guess, between the two. But clinicians like to see themselves as being very independent. Surgeons probably more than most! They have a certain arrogance and belief in themselves that they need in order to survive their day-to-day job. So, yes, you're right, there were a lot of, I don't know, issues. There were lots of little teething problems. One of which was how you actually record that you've done it!
Consultant Surgeon, Case Site D_1
We can only persuade people that it's what they need to do. I can do very little—I have no authority over any of the medical staff—I have some power to tell staff what to do. But I think all along we've taken the approach that we're trying to get people on our side, to understand the importance of the WHO checklist because what I'm asking people to do is—before you hand the knife over to the surgeon, after you've prepped and draped the patient, and it's all ready to go, the anaesthetist is ready to go—is that you stop and get everybody's attention and there is a point where you have that opportunity. But they have the power because they've got the knife. If they don't hand it over and say: "right, we're going to do the time out, we don't start operating" because if you give them the knife then they're away, and they're doing it. But it's the constant sort of having to nag—it needs quite a strident person to be able to stand there, an empowered person—to stand there and say: "you're not starting until you've done this".
Theatre Nurse, Case Site D_1
Dialectical Focus (Consent/Dissent) — Relational Focus (Professional quid pro quo)
In theatre, traditionally, the surgeon was the captain of their ship—they ran the show and all the rest of it—and people just did their bidding. But today that's completely the wrong way round! That's completely not what modern surgery's about because you're only as good as your parts. Now a lot of people won't believe that still! So if you're trying to get people to implement the WHO checklist and yet they believe that everything depends on them performing correctly and that they don't make errors [Laughs] then it's a very difficult task! You're far more likely to engage with people that actually are slightly less self-assured because they understand there may be a better way to improve the care of the patients. So my gambit with some of my colleagues was to say: "I'm not as perfect as you—but do you know your error rate? Are you perfect? Are you one in a million perfect? And if it is that one in a million then what are you going to do to improve"—but people have to accept there's a problem before they'll look for a solution. I think they have to see that it's a problem before they'll change their practice.
Consultant Surgeon, Case Site A_1
Basically, we came to an agreement with the surgeons. We agreed that the scrub nurse would not start helping the surgeon until the WHO checklist was completed. So they had to be part of it! In the end, I think, they came to the conclusion that they hadn't a choice really. It was a bit of a battle at the very beginning because they started arguing with us, and we just said: "no, we don't want to argue about this, we haven't got a choice, we've got to do it." We took the same approach with visiting consultants.

[How did you manage them?] Well, actually, that was the easy bit. What I said was: "if you're doing it in the [Name, alternative hospital theatre site in Health Board], well then it doesn't bother you to do it here, does it? I think a big issue that helped with the implementation of the checklist was the scrub nurses—a lot of the scrub sisters know more about the kit that they use than they do—I mean, the juniors are lost without the knowledge and experience that that scrub sister's got, but that also impacts on us, they learn to listen. Theatre Nurse, Case Site B_1[Positive Outlier Case Site]
[Have you encounter benefits from your implementation of the WHO checklist?] Yes, I have, absolutely—you don't have to convince me that it works—I think it has been useful. I think it helps a little bit with team cohesion. But it's like any checklist, if you follow the checklist as it's intended—and think it through—then it's of benefit. But if it just becomes a tick box exercise then you don't get quite the same benefit. So you have to point out to people that errors do happen—the wrong legs do get chopped off; the wrong kidneys do get taken out—we all know this has happened. We looked at some of these things, when we were doing the checklist within [surgical specialism], for example, and it worked out, in terms of the Welsh Government's figures for the Health Board, that the surgeons had a wrong site surgery about once a month. And the story that came back of course was that: "oh their other knee was a bit dodgy as well, or they've had a bit of pain in that one, they told me they did", there's always something which will do as an excuse, even though the operation wasn't the same as the one the patient was listed for. Consultant Surgeon, Case Site C_1
[How did you build a sense of engagement with the WHO Checklist?] We tried on several fronts. Obviously you have to engage people and actually go and speak to them and provide them with the information beforehand. So there's a knowledge base that people have to be up to date with and that involves a certain amount of planning in terms of providing them with the information so that they can digest it for themselves. You have to then follow that and see whether there are any points in it which people don't feel is right—because we're trained to assess evidence—and there is, you know, very high quality evidence out there, and there's very low quality evidence out there, and it's very easy to pick holes in published work if you don't feel it's necessarily applicable to your own practice. If you read about a study in Uganda, then you can quite easily say: "well, Wales isn't quite Uganda!" and just dismiss it like that and, of course, people will do just that if it doesn't suit their agenda. So there's a certain evidence base that you have to try and make sure people are familiar with. When we started we also went to people, individually, and spoke with them and gauged their resistance to it—you have to negotiate that with the individuals—a lot of it was, you know, a lot of people were fairly positive; but as I said they were the believers in the first place. Some people said: "well okay, well it won't do any harm, so I might as well just do it just to please you", which isn't particularly positive but they did it. Now, there are always going to be a group of people that will simply refuse and we basically ignored them—that was too big a fish to fry—because they were worried about other issues of their job of which the WHO checklist was a very small part. I mean colleagues would say, in as many words: "why would I worry about doing the WHO checklist at the beginning of the list when I can't even guarantee that all of my patients get into hospital!", which is understandable and real problem and it's something we all grapple with. So it's very difficult to say to them: "okay, well this is only a small change that you're going to make and I can't help you with your patients' access" as some will just say: "well, okay, I'll help you out" but others will say: "sort out my issues first, then I'll help you!". One way or the other, they're sort of trying to get leverage. Consultant Surgeon, Case Site D_1
Dialectical Focus (Consent/Dissent) — Relational Focus (Practice enactment by operating theatre team)
We have one surgeon who was doing the WHO checklist before it was even implemented here—they had their own sort of version of it—and that because…[long pause]…they had had an incident happen, I think it was here, a wrong site surgery. From that moment on, they now make sure that everybody stops, everybody agrees, so that they get it right. They're the biggest convert! But most of them are ambivalent about it and just realise that they've got to do it. Theatre Nurse, Case Site A_1
To begin with we had difficulty with the PDSA approach [Underpinning methodology supporting the implementation of the WHO-SSC]. Yes, we had difficulty with that! We had difficulty in getting our heads around it—we thought we'd mastered it but we hadn't—but we did eventually get through it! We worked with the 1000 Lives^{+} team and the Transforming Theatre team and looked at what we could improve. With the PDSA, well, we didn't understand it very well: we couldn't get our heads around it! At times we thought we'd mastered it but then they'd say: "no, that's not right", and we thought: "oh God, you know, somebody please give us a simple explanation so we can just get it

right". We'd sort of grasped it but we were trying to do it in sort of one hit and not doing small things—small rapid cycles of change—and then sort of escalating it gradually. Theatre Manager, Case Site B_1 [Positive Outlier Case Site]
The WHO checklist has been rolled-out across the organisation for some time now and it's used in each of our theatre suites. But how it's used is different, it's different: some of them will do their team de-brief on the same day, others will do the WHO meetings all in the meeting, and then it's managed differently. But what ever they're doing it's audited. The activity around the WHO checklist is audited every month. Associate Director, Case Site C_1
I've had students come and tell me: "Oh, the surgeon introduced themselves, they did the checklist"—so the tick on the box said: "yes, we did it"—but then they tell me: "they introduced themselves as Mickey Mouse", so they weren't taking it seriously. When you question them on that, they will say, quite rightly: "we've worked together for five years, we all know each other". We have even had: "I am Spartacus, no I'm Spartacus!" when they go round introducing themselves. About 99% of our audit data is saying they're doing it, and yes, they might. But they're probably not doing it that often and, even when they are doing it, it might not be as fully comprehensive as it should be. Theatre Manager, Case Site D_1
I was seconded, part-time, to theatres. From my perspective, I was brought in late. It had already started, and the staff, which were heading it up for [Name, health board], had already gone and had their briefing session. So I felt I was brought in blind. I didn't really understand it at the start to be honest. But we were given drivers of things that we needed to address—improvements that we needed to achieve; change in practice and audit really—and told to gather data to see if we were meeting the drivers and the standards. It was my job to tell the staff about what the standards and the drivers were, and how we were going to identify how we were going to change practice in line with what they were saying we needed to do. I had to gather all the data, put it into a graph, and then present that on a monthly basis. But I was isolated. I did the PDSA cycles—I tried to involve people, I tried my hardest, I even had champions—but I was doing the PDSA cycles, writing them up, because they wanted written evidence that they were being done. It's embarrassing when you're presenting data that you haven't got—so I was doing it to make sure I had data to present—so that I wasn't going to be standing there saying: "well sorry, I haven't got anything". When theatre staff are working clinically they've got the pressure of patients coming through—and they come first—this is [WHO checklist] just a bit of paper that doesn't do anything.' Theatre Nurse, Case Site D_1

Figure 1: 1000 Lives+ National Patient Safety Programme

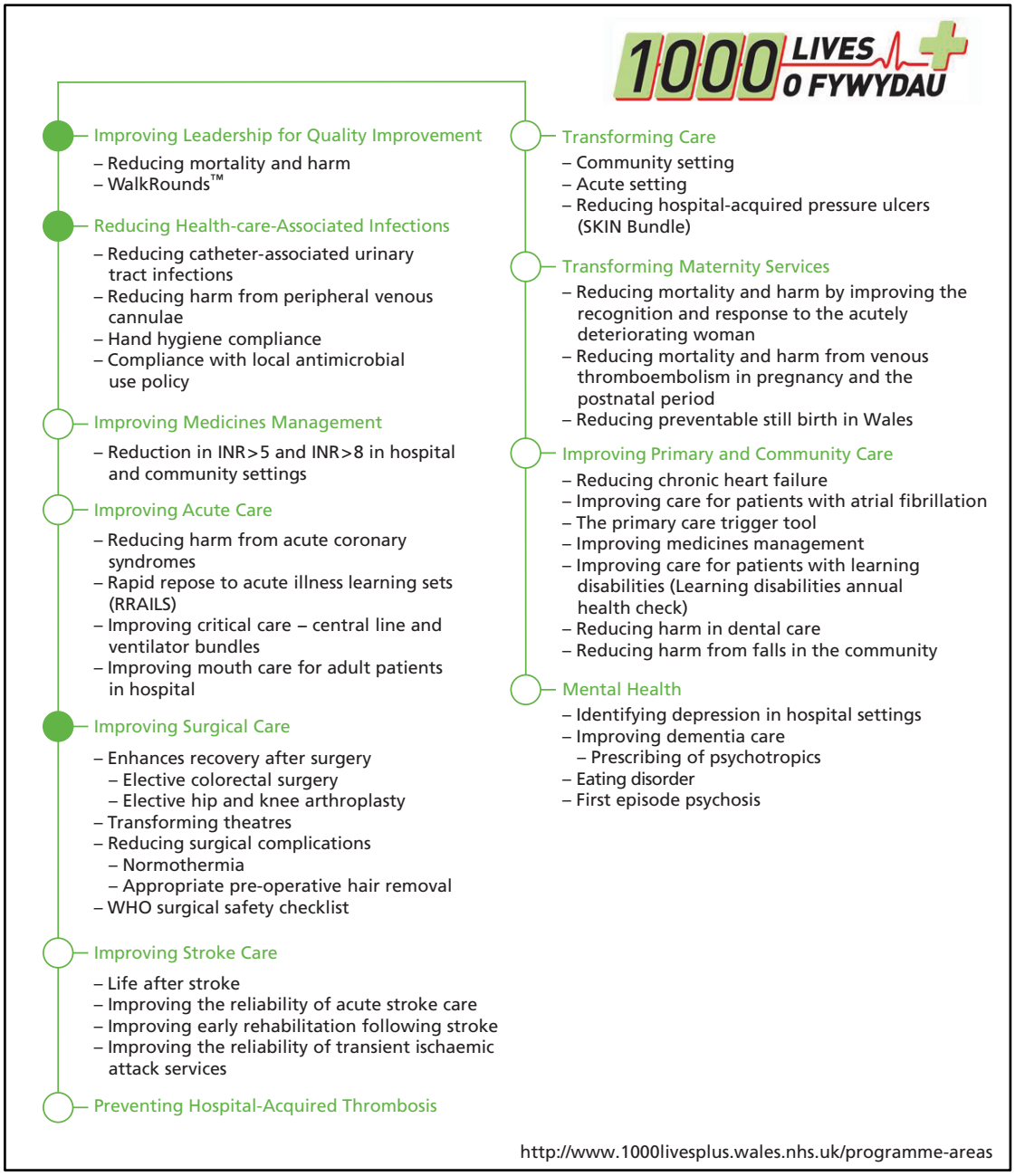
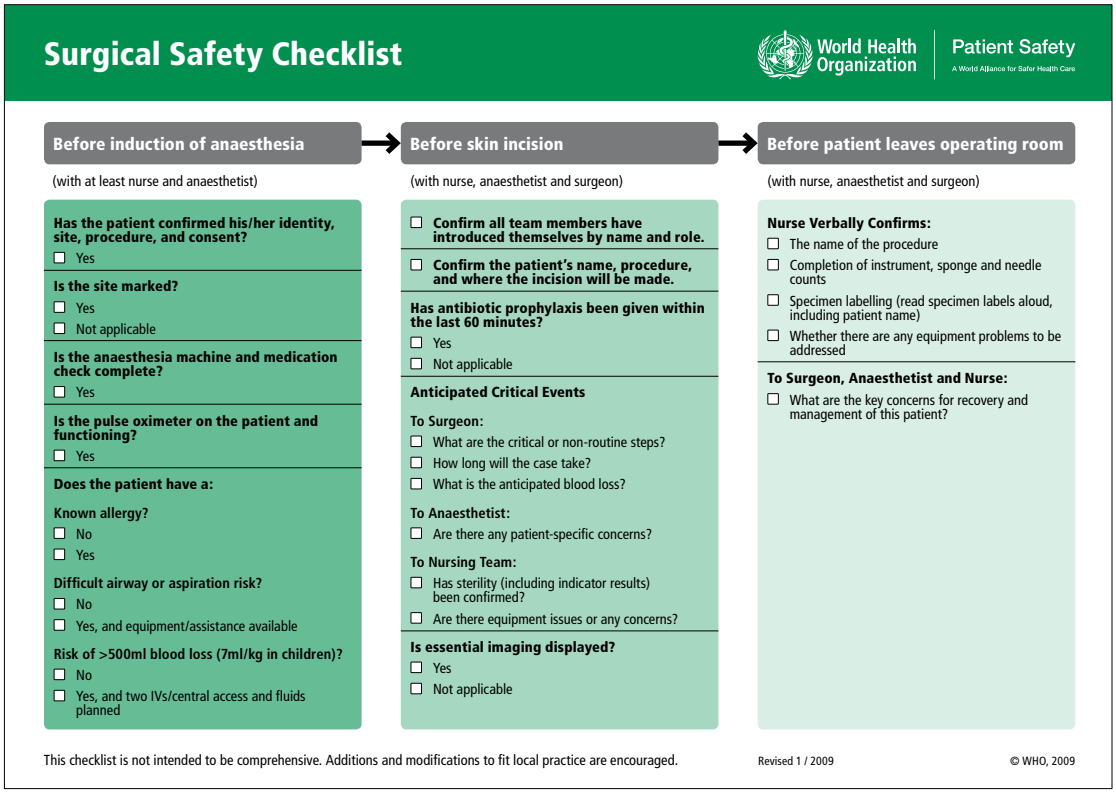


Figure 2: WHO Surgical Safety Checklist



Surgical Safety Checklist

World Health Organization | Patient Safety
A World Alliance for Safer Health Care

Before induction of anaesthesia
(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision
(with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room
(with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009