Communication Skills for Surgeons

A Contemporary Guide

Benjamin Patel
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Editors

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For Viren Patel, who taught me that high calibre communication with his patients and team were the foundations of clinical success.

Preface: The Importance of Communication in Surgery

When one considers the remarkable advances in the history of surgery, we are immediately drawn to scientific and technical innovations. The introduction of antiseptic surgery by Joseph Lister, the refinement of modern anaesthesia, the development of surgical skill such as in transplant and microsurgery and the ongoing innovation in the fields of robotics and prosthetics, to name but a few. While these improvements have had an immeasurable impact on the field of surgery and the lives of patients, we too frequently overlook the profound significance of quality communication.

Surgical practice can be broken down into three core components: knowledge, technical skill and non-technical skill. Technical skills are psychomotor actions that the surgeon acquires through practice. Historically, great investment has been made into training surgeons in these technical aspects of surgery. On the other hand, training in 'non-technical skills' such as communication, decision-making and personal resource is only a relatively modern phenomenon.

Communication occurs in various contexts: between the surgeon and patient; between surgeon and trainee; between surgeon and the greater clinical team. In all of these environments, communication can be modified and optimised to enhance efficiency, prevent harm and improve the experience of both the patient and clinician. To understand the importance of communication, we can consider the sequelae of communication failures.

In 2000, a landmark publication, 'To err is human' [1] described how almost 100,000 deaths/year in US hospitals were caused by human error, with many of these due to communication failures. In a highly cited review of surgical malpractice claims resulting in actual injury to patients, Gawande et al. [2] identified communication breakdown as a cause of at least 60 of 444 analysed cases. In 2015, a systematic review and root cause analysis of contributing factors to surgical 'never events' concluded that a 'need for better communication' was the most significant contributing factor [3].

In 2001, the 'Kennedy Inquiry' [4] analysed the management of children receiving complex cardiac surgery at the Bristol Royal Infirmary (BRI) between 1984 and 1995. This inquiry concluded that paediatric cardiac surgery services were substandard, resulting in excess morbidity and mortality, and deeming the care a 'tragedy'.

Importantly, in its analysis of contributing factors, it highlighted a 'failure of communication', including a lack of leadership, accountability and teamwork.

Another frequently cited case that highlights the sequelae of inadequate medical communication is that of Elaine Bromiley [5]. In 2007, Elaine Bromiley underwent a routine sinus operation. During her anaesthetic induction, her airway became obstructed and the clinical team was unable to secure an airway. For 20 min, while the team attempted to gain an airway, her oxygen saturations were around 40%. She sustained a significant hypoxic brain injury and life support was turned off two weeks later. Communication failure was again cited as the major contributing factor to Mrs. Bromiley's demise.

In 2018, the Chief Nursing Officer for Scotland and GMC jointly funded and commissioned a review to understand the different types of communication failures that lead to patient harm [6]. This review assessed 139 studies and provided a comprehensive description of the types of communication errors, distilling them into four typical groups: (a) failure to provide the patient with appropriate and timely information (b) failure to keep colleagues informed, (c) failure to listen to patients and (d) failure to work collaboratively with patients, family or carers. By addressing these issues, it was suggested that communication breakdown and harm might be avoided.

The healthcare system is a complex and difficult place to work with a multitude of stressors and pressures. Burnout, a syndrome of exhaustion, depersonalisation and a diminished sense of personalised accomplishment is a growing problem in the healthcare system, resulting in reduced job satisfaction, mental health illness, suicide and inefficient or unsafe clinical care [7]. A systematic review of burnout [8] in the UK identified that surgical trainees have the highest prevalence of burnout. Importantly, there is a well-established inverse relationship between communication skill and burnout [9, 10]. Furthermore, those who have had formal communication training appear to have greater resilience to burnout.

High-calibre communication has a series of positive 'side-effects' other than simply preventing patient harm. Good communication enhances patient trust and patient experience. In a questionnaire of surgical patients, Hamelin et al found that patients viewed verbal communication skills as more important than technical skills when developing confidence in the surgeon [11].

The financial viability of global healthcare systems is a growing concern, in the context of ageing and growing populations. Fortunately, good communication can enhance the efficiency of healthcare systems. One adjunct that is being used to optimise clinical communication is telemedicine, defined as the delivery of medical services using information and communication technologies to bridge the separation between clinician and consumer. Telemedicine has the potential to reduce travel, optimise referrals and triage systems and automate aspects of clinical care, such as patient monitoring [12]. However, telemedicine platforms themselves have an upfront cost and training associated with them and should not simply be adopted without clear evidence demonstrating benefit.

Poor communication is a major contributor to a number of problems in healthcare systems, including patient harm, reduced patient satisfaction, burnout and

cost-ineffectiveness. Training in communication is the obvious solution to this issue. Historically, medical training has focussed primarily on knowledge and skill, rather than communication. Indeed, even within the context of communication training, there is a significant focus on patient–doctor interactions, overlooking other key interactions within healthcare systems such as handover, surgical brief and mentoring.

Formal training in communication has significant value: it improves clinician confidence [13], increases patient satisfaction, reduces error and enhances collaboration between healthcare professionals [14, 15]. Several training programmes now exist that focus more on communication. These include the popular 'None-Technical Skills for Surgeons' (NOTSS) course run by the Royal College of Surgeons Edinburgh, or the 'Human Factors' courses run locally by NHS trusts. Communication skills training can cover a wide range of topics, for example, communication models such as SBAR; stressful or emotional scenarios such as breaking bad news; or giving feedback to trainees. Training may have a theoretical basis but should include practical sessions such as role-play.

This book aims to provide a clear framework to enhance the communication skills of surgeons. It is based primarily on Western and particularly UK standards, including values endorsed by key medical bodies and societies such as the General Medical Council (GMC) and British Medical Association (BMA).

For the individual, we hope that this book will make you more self-aware, increase your confidence in communication and be a useful adjunct for examinations, both in the undergraduate and postgraduate setting. For individual trusts and healthcare systems, we hope this book will provide a clear structure for training surgical teams in communication skills, thereby improving patient outcomes, efficiency, surgeon satisfaction and patient experience.

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Part I
Key Concepts in Surgical Communication

Chapter 1
The Components of Communication

George E. Fowler

Abstract

- Break down surgical communication into four broad components that should be considered in all communication interactions
- Enable the reader to identify the objective of the communication interaction
- Help the reader to prepare for communication interactions
- Facilitate reflective practice so as to ensure ongoing development in communication skills.

Keywords Communication · Surgery · Reflection · Patients

Introduction

Effective communication is essential for quality of care and patient safety. Ineffective communication is recognised as a leading cause of inadvertent harm [1]. This can lead to medical errors, treatment delays, patient and/or staff dissatisfaction and a breakdown in teamwork and trust [2]. The commercial aviation industry has shown the adoption of standardised frameworks, tools and behaviours to be an effective strategy in enhancing teamwork and reducing risk [1]. Several of their concepts for effective communication have been adopted over time in clinical practice, including surgical checklists and team briefs.

In healthcare, standards exist to promote effective communication and the responsible clinician should keep up to date with their respective regulatory body. In the United Kingdom (UK), the General Medical Council (GMC) [3], Royal College of Surgeons [4] and Royal College of Physicians [5] have set standards and/or expectations to guide both physicians and surgeons to be good communicators as both an individual, but also within a clinical team and the wider multidisciplinary team. Their

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guidance advocates the communicator to be a good listener, show mutual respect and use appropriate body language. Several frameworks also exist to promote effective communication. The World Health Organisation (WHO) has developed a strategic communications framework for effective communications [6]. This framework is organised according to six principles to ensure their communications are: accessible, actionable, credible and trusted, relevant, timely and understandable. These principles are all relevant to a surgeon.

While several standards and frameworks exist, this chapter aims to provide the key components of communication (i.e., the building blocks) as an easily accessible aide-memoire to the prospective or current surgeon. The overarching key components are in essence the four subsections (i.e., identifying the objective, preparing for the consultation, delivering the message, and reflective practice). The components will focus on three key interactions: 1) surgeon and patient, (2) team members and (3) trainer and trainees. The surgeon and patient interaction will be a patient-centred approach, rather than an authoritarian approach, which reflects the clinical practice of the authors.

What is the objective (information gathering)?

It is important to establish the objective of the consultation early. This will prepare you for all communications, including the more difficult conversations in clinical practice. This book will equip you with the relevant skills to address several important and challenging communication scenarios in clinical practice, including breaking bad news and responding to significant events. With all these encounters, an appreciation of the commonly encountered objectives and where to gather the relevant information will provide structure to your clinical communications.

Interaction 1: Surgeon and patient

Typically, the intent of the clinical consult is known to the surgeon, whether it is to diagnose, educate, consent, inform, manage a situation or shared decision-making. When the intent is not known, the patient records (i.e., hospital and GP records) are a valuable resource to gather information on recent patient visits and new investigation results. Allied healthcare professionals are another great asset, especially as they may have seen the patient before you. Otherwise, the patient and/or relative can directly inform you on why they have come to see you and to ensure expectations are met, without misunderstandings.

Interaction 2: Team members

Encounters with team members can be formal (daily, weekly and monthly) or informal and include surgical briefs and de-briefs, responding to significant events, giving feedback, handing over and presenting patients and reflective practice. For these encounters, it is important to establish your role early, as this will give you more time to make the necessary preparations.

Interaction 3: Trainer and trainees

The objective(s) may be formally set by a national curriculum, including meetings relevant for Annual Review of Competency Progression (ARCP), or set by the trainer and trainee as appropriate. Ideally, trainees should feel empowered to take a lead and arrange these meetings and set the objectives to meet their own individual learning needs and those from a national curriculum. This will be with the support and guidance of their trainer.

Preparation for the consultation

In clinical practice, there are time constraints and a limited availability of clinical staff. Preparing for a consultation therefore requires an efficient use of time to ensure the key people are present, at an appropriate time and location with the required resources available.

Who is needed?

Once the objective is known, the surgeon should identify whether they have the expertise for the consultation. They should also identify whether other members of the multi-disciplinary team need to be present, including for team briefs, formal handovers (i.e., start and end of a clinical shift) and more sensitive patient and family discussions. For the latter, additional team support may also be appropriate for immediately after the surgeon's consultation.

When are you needed?

It is important to have an awareness of when you are needed, but also on whether you can spend the appropriate amount of time to have a consultation with the patient, team member and trainer or trainee. You should also take into consideration when patients relatives or team members may be present. The timing of the consultation will be influenced by both the urgency of the meeting and your clinical commitments. A planned meeting will be more appropriate than a rushed meeting, which can be less effective for building a rapport and communicating your message.

Where is an appropriate place?

Planning an appropriate place to have the communication should take into consideration the objective, mode of communication planned (i.e., in-person or telemedicine) and the resources required. A quiet location is preferable, including in the operating theatre, where noise and irrelevant verbal communications have been shown to compromise surgical performance, experience and team functioning [7]. Other considerations should include minimum number of people required to avoid overcrowding and the comfort of the individuals present, depending on the length of the consultation.

What resources are needed?

Deciding on an appropriate place for a consultation will take into consideration what resources are required in the room, including an examination bed, investigation equipment (e.g., otoscope, ophthalmoscope, slit lamp and rigid flexible sigmoidoscopy) and a computer to record, review or present information. Additional resources may be required too, including patient records, dictation equipment, consent forms and patient information leaflets.

Key tip: identify the appropriate team, timing, location, and resources required for the consultation.

The surgical conversation

Communication skills involve both style and content, which can be taught, learnt and modified [8, 9]. Each surgeon will develop their unique style to build rapport and provide structure to their communications. Here we propose a simplified three stage model for the surgical conversation: the introductions, message and plan.

The introductions

In all conversations, it is important to introduce your name and role. This can be considered as the first step to building your relationship with a patient, colleague, or trainee. "Hello, My Name Is…" was a social media campaign started by Dr Kate Granger, who was a geriatrician working in the U.K. National Health Service and frustrated by healthcare professionals not introducing themselves to patients, including herself when terminally ill. This campaign both encourages and provides a framework for healthcare professionals to introduce themselves to patients, but also within the wider clinical team. In the operating theatre, the WHO Surgical Safety Checklist encourages all team members to be introduced by name and role as part of the 'Time out' [10].

The next step is to correctly identify the person and ensure important information is not disclosed to the incorrect person. For clinical encounters, a minimum of two pieces of patient information is typically standard practice (i.e., name and date of birth or postal address). At this stage, it should be apparent to the surgeon on whether a translator is required for the conversation.

The conversation

At this stage, the surgeon hopefully knows the objective and is prepared for the consultation. This may not always be achieved due to the complexity of medical care and the inherent limitations of human performance [1]. However, with all interactions, several important steps can be considered:

– Listen actively and allow people to complete their thoughts [5].
– Be aware of body language, both given and received: posture, eye contact and facial expressions [5].
– Be aware of communication barriers e.g., hierarchy and language barriers.

– Appropriate use of open and closed questions, typically starting with open questions and followed-up with closed questions for specific details.
– Check understanding.
– Avoid hierarchy and blame.
– Avoid medical jargon (i.e., Layman's terms versus medical terms).

Communication models and tools kits are used to teach and develop communication skills. Several of the key models will be explored in this book or have been summarised in Table 1.1 as a reference.

Table 1.1 Communication models and tools kits

Communication model	Intent	Key components
Calgary-Cambridge model [11]	Help facilitators teach and students learn communication skills	1. Taking a medical history—presenting complaint, history of presenting complaint, past medical history, family history, personal and social history, drug and allergy history and a systems review 2. Flow of medical tasks in clinical practice—initiating the session, gathering information, physical examination, explanation and planning, closing the session
SBAR	Provides a commonality in communication structure in the clinical setting and allows staff to share concise information [5]	1. S—Situation (concise summary of the problem) 2. B—Background (pertinent and concise information related to the situation) 3. A—Assessment (what you have found and done) 4. R—Recommendation (action recommended)
Call-out and check-back [5]	A call-out is a technique used to communicate critical information in an emergency [5] A check-back is a closed-loop strategy to confirm information given by the sender is received and understood	1. Call-out—clinician calls out key information to ensure the rest of the team are informed and updated and can anticipate the next steps [5] 2. Check-back—confirmation that information shared by the clinician is received and understood [5]

Table 1.1 (continued)

Communication model	Intent	Key components
SPIKES [12]	A tool providing structure for delivering bad news and first developed for delivering bad news to cancer patients	1 S—Setting (arrange for privacy, involve significant others, sit down, make connections with the patient and manage time constraints and interruptions) 2. P—Perception/perspective (find out what the patient knows about their medical situation so far) 3. I—Invitation (find out whether the patient wishes to hear the details) 4. K—Knowledge (warn the patient bad news is coming and then inform them) 5. E—Empathy/emotion (observe and respond to the patient's emotions) 6. S—Summary/strategy (check understanding, summarise plan and discuss the next steps)
SPIES	A tool for dealing with difficult consultations between colleagues (e.g., a drunk colleague attending work)	1. S—Seek information (what is the issue?) 2. P—Patient safety (has or could patient harm arise?) 3. I—Initiative (what appropriate actions can be done, including to ensure patient safety is not compromised?) 4. E—Escalate (involve colleagues and seniors as appropriate) 5. S—Support (support the individual or team)

Plan

Towards the end of the consultation, the plan can be summarised and the level of understanding can be checked by the patient, colleague or trainee. It can also be an opportunity to address unanswered questions, provide reassurance and arrange future consultations. For a patient, it may be appropriate to safety net and provide advice on how they could seek further medical attention should their condition fail to improve or worsen.

Key point: a more patient-centred approach results in better patient and doctor satisfaction [8].

Developing your communication skills

In the UK, doctors are expected to keep their professional knowledge and skills up to date [3, 4]. The Royal College of Surgeons recommends in each revalidation cycle, a surgeon should undertake at least one patient feedback exercise using a validated tool [4]. This can be reviewed in their appraisal [4]. The GMC has developed patient and colleague questionnaires which can be used for individual feedback and to reflect meaningfully on the feedback received to improve practice. New skills can be acquired and practiced from attending educational events, adopting good techniques seen from colleagues and seniors and reflecting on clinical practice, whether excellent or poor. The latter could be done as a short team brief after a significant or challenging event to reflect and discuss how the situation could have been better managed.

Pitfall: doctors tend to overestimate their ability to communicate and lose their ability to provide holistic patient care over time [8].

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Chapter 2
The Patient-Surgeon Relationship

Benjamin Patel

Abstract

- Explore the patient-surgeon relationship
- Explain different models and approaches that have been described
- Analyse the relevant ethical considerations
- Provide practical tips to strengthen the patient-surgeon relationship.

Keywords Surgeon · Patient · Relationship · Empathy · Boundaries

The Importance of the Patient-Surgeon Relationship

The Patient-Surgeon relationship is a central concept in healthcare that is built on trust, respect and communication. In surgery, perhaps more so than other medical specialties, there is a clear uneven footing between patients and professionals. Patients are anxious about going under the knife; they may not understand technical language; they are entirely reliant on trust in their surgical team during the operation, particularly when they are unconscious during general anaesthesia. Ultimately, they are in a vulnerable position and it is our duty to guide them through the process. The Royal College of Surgeons England highlights these relevant points in its Professional Code of Conduct [1] (Box 1).

> **Box 1: Royal College of Surgeons England: Professional Code of Conduct**
>
> - Put the needs of patients at the centre of their practice and decision-making
> - Hold the health, safety and dignity of patients as their primary responsibility
> - Communicate clearly, openly and compassionately with patients

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– Commit to developing a partnership with patients, honouring the relationship of trust and respecting and supporting patients' autonomy in making decisions about their care
– Inform patients of the nature of their clinical role.

The surgeon–patient relationship should really be considered a 'partnership' with the goal of enhancing health outcomes. The quality of this unique partnership is important because it will make or break interactions across different healthcare settings: acutely in the admitting phase, on the ward, perioperatively or in clinic. During these interactions, a high-quality relationship leads to more freely transferred information between the two parties, enhanced accuracy of diagnosis and improved patient education regarding their condition and treatment options. The downstream effects of these sequalae include improved patient trust, improved compliance and patient satisfaction. In turn, we know that a high-quality patient-doctor relationship results in improved health outcomes, including emotional health, symptoms resolution, functional physiological measures and pain control [2].

Models of Patient-Surgeon Relationship

Historically, the relationship between patient and surgeon has been firmly paternalistic; the patient would consult the expertise of the surgeon, who would in turn provide a diagnosis and plan. The biopsychosocial model of health [3] proposed that each patient is a unique person, with their own past experiences, emotional memories and expectations for the future. These values are influenced by interpersonal relationships with family and friends, as well as societal values, political agendas and media power. These factors are all important in the patient-physician relationship as they define the patient's values, which in turn help explain their suffering experience and their preferred choice of treatment.

A more balanced approach has emerged over the past decades, with physicians holding experience and knowledge and patients controlling values and preferences over clinical care. It is thus the aim of the patient-surgeon partnership to work together so that the appropriate information can be exchanged in the most appropriate manner at the most appropriate time. This is particularly relevant in the age of the internet, where significant information (and misinformation) is readily available to patients.

The 'ideal' relationship between patient and surgeon cannot be defined as this is a question of personal ethical viewpoint. It is, however, useful to explore the different models that have been proposed [4], so as to consider differing approaches, values and assumptions (Table 2.1).

Table 2.1 Models of patient-surgeon relationship

Model	Role of the surgeon	Values
Activity/passivity	Acts without patient involvement	Surgeon knows best
Guidance/cooperation	Tells patient what to do with the aim of helping the patient	Surgeon knows how to act in patient's best interest. Assumes surgeon shares patient's values
Mutual participation	Surgeon and patient work in partnership	Patient autonomy, respect for patient's values and experience

To emphasise the difference between these models, consider the following case:

Case example: patient-surgeon relationship

Jane Williams is a 28-year-old journalist who has been admitted with migratory right iliac fossa pain, fevers and tachycardia. Her history is typical for appendicitis. Inflammatory markers are raised, pregnancy test is negative and urinalysis is normal.
    Here are the alternative ways that surgeons might handle this situation.

Guidance/Cooperation: Mr. Jones told the patient that she had appendicitis, that she should be admitted to hospital, start intravenous antibiotics and go for laparoscopic appendicectomy. Jane, the patient, was extremely anxious about going for surgery but presumed there were no alternatives. She waited in fear for her operation and was fearful of going to the hospital in the future.

Mutual participation: Miss Clancy asked the patient what she thought was going on, establishing that the patient's mother was a GP and had already informed the patient that she likely had appendicitis. The patient had been googling the condition and had some pre-formed expectations that she would be going for surgery, which she was anxious about. Miss Clancy agreed that the most likely explanation for her presentation was appendicitis and provided several options for treatment: (a) do nothing, which she recommended against, explaining that things could get worse and she could become very unwell; (b) antibiotics and observation; (c) laparoscopic appendicectomy and antibiotics. She gave the benefits and risks of each. She explored the patient's anxiety regarding surgery and was able to determine that this stemmed from a film she had watched about patients never waking up from anaesthesia. She was able to reassure the patient that the risk of this was extremely low. Based on this information, the patient felt empowered to make the decision to go for surgery. She felt her concerns were listened to and this enhanced her trust in the healthcare system.

    We can see how, in this scenario, the patient ultimately had the same treatment, but their experience of the healthcare system was vastly different, which in turn affected their long-term healthcare outcomes. It is worth considering how the 'mutual participation' model is a broad umbrella term, with several 'sub-models' having been defined, including 'consumer/informative', 'deliberative,' and 'ethnographic' models. For example, in a consumer/informative model, the surgeon merely provides the patient with treatment options and leaves the choice to the patient. Although this

may provide the illusion of empowering the patient, there exist several disadvantages: the surgeon does not explore the context of the decision, nor the patient's values and ultimately does not support the patient in making an informed decision. In comparison, in a 'deliberative' model, the surgeon helps the patient develop their own values, working in partnership and suggesting a course of action. This approach is supported by research that suggests that patients who participate in decisions about their healthcare have improved medical outcomes [5, 6].

Ethical Perspective

Amidst the complexity of the patient-surgeon relationship, each party has several responsibilities. For the surgeon, these are listed in Box 2. The surgeon must be competent in terms of clinical judgement, technical skill and knowledge. They must show commitment, even if they deem the patient to be 'a difficult character' or when they deem patients to make unwise decisions. They should always act in the patient's best interests, avoiding harm and conflicts of interest.

Box 2: Surgeon's responsibilities towards the patient

- Competence
- Commitment to patient
- Truthfulness and trustworthiness
- Empathy
- Advocating for the patient
- Avoiding harm (non-maleficence)
- Acting in patient's best interest (beneficience)
- Maximising patient autonomy
- Avoiding conflict of interest.

Trust is an essential component in the surgeon–patient relationship, for which both parties are responsible: the surgeon must trust the patient to disclose appropriate and truthful information, while the patient must trust the surgeon to provide them with honest information and act with integrity. Historically, it was routine for surgeons to withhold the truth about poor prognosis, risks and even their own mistakes. However, in modern practice, so called 'duty of candour' is expected, with the surgeon informing the patient of any mistake, apologising, explaining the implications and offering an appropriate remedy where possible.

Being truthful, particularly when it comes to bad news, may appear to be at the expense of kindness and empathy. No-one enjoys telling a patient that they have metastatic cancer, and for this reason, bending of the truth may appear an appropriate way of 'managing' the patient's emotions. The best surgeons, however, are able to

recognise that patients need to hear the truth but also require support in processing and re-evaluating ambitions and values, to prevent feelings of hopelessness and devastation.

How to Strengthen the Patient-Surgeon Relationship

The concept of the 'ideal' patient-surgeon relationship is theoretical; given the pressures of real healthcare systems, it can be difficult for both parties to support each other fully at all times. Nonetheless, it is useful to be armed with some practical tools and aims, that might help to strengthen the patient-surgeon relationship (Box 3).

Box 3: Tools for improving the patient-surgeon relationship

- **Be dependable**: do as you say
- **Listen**: do not simply talk
- **Appear interested**: otherwise they will feel unimportant
- **Do not hurry the patient**: otherwise they will feel unimportant
- **Involve the patient in decision-making**: this builds rapport
- **Legitimise the patient's concerns**: this will make them feel you are on their team
- **Offer hope**: even when times are tough
- **Respect boundaries**: remain professional.

Professional Boundaries and Difficult Relationships

Patient-surgeon boundaries are governed by social expectations, ethical principles and legal requirements. Extreme examples of violating these boundaries include failure of confidentiality and sexual misconduct, which are unfortunately more common than one might expect [7]. In the case of sexual relationships between patient and surgeon, we can appreciate the obvious conflict of interest and abuse of power. More complex and subtle violations of professional boundaries include messaging patients on personal phones, use of social media, accepting gifts, and treating family members or friends. Patients share some responsibility for maintaining professional boundaries, for example demanding 'extra' appointments or being aggressive is inappropriate.

To uphold professional boundaries, the surgeon must first be aware of any blurring or change in the boundaries of their relationship. If it is evolving into an inappropriate relationship, it might be sufficient to increase the formality of their language or reduce small talk. In more extreme cases a change of surgeon may be warranted.

Sometimes, the patient-surgeon relationship can be extremely difficult to navigate and maintain, resulting in poor transfer of information, dissatisfaction, litigation and poor outcomes [8]. Struggles can stem from difficult diagnoses, as in terminal illness, incurable disease or chronic pain, where the surgeon may feel helpless. Specific patient personality traits can test the relationship: manipulative patients tend to drive their own agenda, hypochondriacs may be difficult to reassure and self-destructive patients may ignore your help or advice. Superimposed on these factors are cultural differences which may change the colour of a relationship.

Conclusions

This scoping chapter has provided an insight into the importance of the patient-surgeon relationship, considered different approaches and models, analysed the background ethics, explored the concept of professional boundaries and provided practical tips for galvanising the relationship. As you progress in your own surgical practice and career, you will develop your own techniques in optimising and enjoying this relationship.

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Chapter 3
Teamwork in Surgery

Olivia Smith

"Surgery has always depended on exceptional leadership, effective management and teamworking" – Royal College of Surgeons of England, 2007.

Abstract

- Define a team, teamwork and performance
- Explain why organizations (like the NHS) use teams
- Describe the structure of different types of teams
- Identify the characteristics of effective teams.

Keywords Teamwork · Surgery · Leadership

Introduction

Teams and teamwork are ubiquitous in society. Most businesses and organizations use teams to perform and complete complex tasks. The aim of a team is to provide synergy between people with complementary skillsets that will maximize output or the achievement of an outcome. For corporate bodies this may be a new line of products, for healthcare professionals this may be a successful surgical procedure and safe patient discharge.

Generally, successful delivery of surgical care relies on effective teamwork [1]. Arguably, effective teamwork is essential in surgery since there are a variety of allied professionals equipped with different expertise who must perform in a high-stake environment to deliver good and safe patient care [2]. However, existing literature within the field reveals contrasting results. While some studies report a large impact of teamwork on performance [3], others report only a small or no effect [4]. Inconsistencies in the literature may be attributed to several factors. Firstly, there are heterogenous frameworks used in researching teamwork across a variety of fields e.g. business,

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psychology, medicine. This means that it can be difficult to draw any firm conclusions about teamwork and team structure when the subject is approached from a variety of angles. Secondly, most studies have a small sample size owing to the challenges of recruiting clinical teams who must balance this research with patient priorities. Finally, certain confounding characteristics are often ignored e.g. work environment, team size, personalities [5, 6]. This lack of clarity has perhaps diminished the importance of teamwork within the clinical setting. However, a recent systematic review and meta-analysis has highlighted the significance of teamwork within clinical practice [6]. Considering how integral teamwork is to healthcare delivery, this chapter will introduce the concept of teamwork, different team structures and evaluate characteristics that may promote effectiveness of teams in healthcare environments.

Definitions: What Are Teams, Teamwork, and Team Performance?

As concepts teams, teamwork and performance are familiar to us but can be difficult to define. Definitions are important in terms of training and help facilitate understanding of more complex topics. Here the definitions of teams, teamwork, and team performance are outlined.

- **Teams** may be defined as *"identifiable social work units consisting of two or more people with several unique characteristics. These characteristics include (*a*) dynamic social interaction with meaningful interdependencies, (*b*) shared and valued goals*, (c) *a discrete lifespan, (*d*) distributed expertise and (*e*) clearly assigned roles and responsibilities"* [7].
- **Teamwork** is *"a process that describes interactions among team members who combine collective resources to resolve task demands"* [6].
- **Team performance** is *"the accumulation of teamwork"* [8]. It is what the team does, and it may be described in terms of an IMO model i.e. Input (e.g. an individual team members experience), Mediator (e.g. leadership skills) and Output (e.g. quality of care/never events) [9].

It is clear from these definitions that teamworking is dynamic and rooted in interpersonal skills as well as good communication. It requires individuals to function within a larger group in a role assigned to them e.g. a leadership role. There is an adage that *'a team of experts does not automatically translate to an expert team'*. As such, there is a greater emphasis towards developing communication skills and teamworking in surgery in the hope of improving patient safety. Prior to discussing teamwork in surgery specifically it is worth being aware of the different team structures that exist.

Team Structures

Teams are categorized in various ways. Katzenbach and Smith proposed three types of teams: (a) teams that run things, (b) teams that recommend things and (c) teams that make or do things [10]. Contrastingly others classify teams and multidisciplinary teams, interdisciplinary teams, and interdisciplinary learning teams [11]. The most commonly utilised classification of team structures is proposed by Robbins and De Cenzo [12] who classify teams into those which are functional, problem-solving, self-managed or cross-functional. These team structures and examples are detailed in Table. 3.1.

Characteristics of Effective Teams

Different team structures may be more effective when applied to different situations. In healthcare, there is evidence suggesting that adverse events result from teamwork failures [13]. An effective team is required for delivering high quality surgical care. In general, there is much literature that highlights the characteristics of an effective team. In 2018, The Royal College of Surgeons of England published 'The High Performing Surgical Team', which outlined the components of a high-functioning team broken down into seven attributes: individual, team, trust, conflict resolution, commitment to task, accountability, and results [14].

Another literature review describes eighteen characteristics of effective teams [15]. Table 3.2 provides an overview of these characteristics. There are broad similarities between the literature review and the components published by the Royal College of Surgeons. As such, the 18 characteristics highlighted in Table 3.2 will be discussed in the context of healthcare.

Organizational Structure

1. **Clear purpose**
   For a team to perform effectively it should have clear purpose [16]. Having specific goals for delivering patient care is essential in healthcare and in surgery and the team must work together to achieve these goals [17].
2. **Appropriate culture**
   "Teams should be recognised and integrated within their organisations" [15]. Within the NHS it is important that team roles and expectations are clearly defined. This aids goal setting and achieving a clear purpose. With respect to surgery, some stereotypical *"arrogant and ego-orientated"* behaviours have been noted to have a negative consequences on teamwork, team wellbeing and patient care as well as inhibiting communication [18].

Table 3.1 Classification of team structures [12]

Type of team	Example	Pros	Cons
Problem solving	A team from the same department that works to improve certain activities or to solve specific problems	Large amounts of information shared through member participation	Ineffective team collaboration
			Delayed decision making
			Dominant personalities
Functional	A manager or leader and his/her employees	Clear leadership and direction	Team members are not permitted to make their own decisions without approval
		Potentially more streamlined	Less adaptable
Self-managed	A group of employees that function without a manager. They have collective control of the work and assign tasks amongst themselves	Builds confidence of team members in decision making	Risk associated with decision
			May be disconnected with other parts of a larger team to the point where goals no longer align
Cross-functional	A team of many different people across different specialties. This may be applied to healthcare services. For example, a multi-trauma patient on ICU will have input from doctors, nurses, surgeons, dieticians, physiotherapists (amongst others) who work together for the patient's best possible care	Problem solving through information processing	May rely on the experience of one or two more experienced team members and therefore, is limited to their knowledge
		Diverse team member experience means more complex problems may be solved	Diversity of knowledge but not always depth of knowledge may be present
		Reduced time to achieve goals	
		High creativity due to diverse members	
		Team members are more likely to learn from one another	

3. **Specific task**
   Patient care and patient needs can be complex requiring significant multi-disciplinary input. It is important that specific tasks are made clear and appointed to the appropriate individuals to increase effectiveness of the team [15].

4. **Distinct roles**
   "*Within a team, individual roles need to be clarified and understood by all*" [15]. Quality of healthcare may suffer if staff incompletely understand their role within a team [19]. The role within a team may be influenced by interpersonal

Table 3.2 Characteristics of effective teamwork [15]

Organisational structure	Individual contribution	Team processes
Clear purpose	Self-knowledge	Co-ordination
Appropriate culture	Trust	Communication
Specific task	Commitment	Cohesion
Distinct roles	Flexibility	Decision making
Suitable leadership		Conflict management
Relevant members		Social relationships
Adequate resources		Performance feedback

factors and individual experience. Within healthcare, teams tend to change daily so there needs to be a degree of flexibility to allow transferability of roles and retain high quality care.

5. **Suitable leadership**

   As a team's task become more complex, a leader becomes increasingly essential. In their guidance the Royal College of Surgeons of England state that *"surgical teams require leaders who understand the clinical and personal needs of patients and will inspire and manage the team to deliver those needs"* [20].

6. **Relevant members**

   The optimum amount of team members with the appropriate skill mix are required within a team. Heterogeneity of knowledge, skills and attributes is associated with positive teamwork [21]. This is because the team is more diverse however, there is some evidence to suggest that there is less conflict among teams comprised of similar individuals [22]. Diverse teams tend to outperform homogenous teams.

7. **Adequate resources**

   For teams to perform efficiently they need to have funding, administrative support, and training opportunities. Environmental design has been shown to be one factor that promotes the *"efficiency of teamwork and collaborative communication"* [23]. Since COVID there are additional conflicts between clinical duties and training that might influence teamwork [24]. Additionally, some COVID stressors e.g. overwork, fatigue, unfamiliarity with new team members, working for a different team, insufficient PPE, have been shown to affect teamwork negatively. These stressors have been outlined elsewhere [24].

Individual Contribution

1. **Self-knowledge**

   Individuals within a team bring with them their own ideas, beliefs, and preconceptions. Horwitz described four "images" that each member offers to a team

in healthcare settings: (a) personal and professional self-image, (b) professional expectations, (c) knowledge of colleague' skills and (d) duties, and perceptions of colleagues' impressions of the individual are all examples [25].

2. **Trust**

   Multiple studies highlight the significance of trust within the surgical team and the impact this has on both teamwork and communication [26, 27]. One study found that in patients undergoing abdominal surgery, team familiarity improves team performance and lowers morbidity [28].

3. **Commitment**

   Commitment to the team and the goal set by the team is important in surgery. A "lack of commitment in a team environment is defined as a combination of lack of ownership for decisions made and not speaking because of anticipation of rejection from the hierarchy" [29]. Not advocating for patients or taking ownership for decisions could comprise patient care and affect trust within the team.

4. **Flexibility**

   "Flexibility is the ability to maintain an open attitude, accommodate different personal values and be receptive to the ideas of others" [15]. The Royal college of surgeons of England state that effective team coordination requires the "team to remain flexible and adaptable to changing situations" and that high performing teams have "leaders who are flexible enough to modify their approach and objectives as new information emerges or conditions change" [14].

Team Processes

1. **Co-ordination**

   Co-ordination of teams is an essential non-operative skill. It includes activities such as information management and task management [30]. Coordinating a surgical team effectively ensures that all members are held accountable for specific tasks and mutual performance is monitored. It also ensures that work isn't duplicated.

2. **Communication**

   As a profession we are increasingly aware of numerous preventable patient harms including surgical errors [31]. Often communication and teamwork failures are at the heart of these errors [13, 30]. Between 1995 and 2003, the Joint Commission on Accreditation of Health Care Organization reported that a total of 70% of errors involving serious injury or death could be related back to ineffective communication [32].

   Rosen et al. recognize three sentinel communication failures [13]. These are (a) at transitions of care, (b) team member interactions and (c) team hierarchy. These communication failures are explored in greater detail in Table 3.3.

3. **Cohesion**

Table 3.3 Communication failures in the delivery of patient care [13]

Type of failure	Example	Comment	Reference
Transition of care	Handing over a patient to the night shift	Information about a patient and their management plan could be miscommunicated. Responsible for approximately 28% of adverse patient events	[13, 33]
Team member interactions	Incorrect route of delivery of a medication	Individual lapse of concentration or inadequate written communication	[34]
Team Hierarchy	Consultant violating evidence-based protocols	Issues of interpersonal power and conflict	[35]

Teamwork cohesion improves team performance [36]. It also promotes learning within the team [36]. It enhances team cooperation, fosters trust, and improves team efficiency.

4. **Decision making**

   Decision making is an essential skill in surgery. Often, the larger overarching decisions are consultant-led. However, different types of decisions are made in different environments that affect the team. For example, the two step model of intraoperative decision making (based on Orasanu and Fischer [37, 38]) which splits decision making processes depending on the amount of time available and also the amount of risk to the patient. Sharon Mickan and Sylvia Rodger highlight that *"team decision making can be problematic in healthcare environments when doctors' opinions are rewarded very differently from those of other team members. Current medico-legal requirements also reinforce unequal responsibility for clinical decisions"* [15].

5. **Conflict management**

   "*Team conflict can source both creativity and destruction* [15]." Some view team conflicts positively to constructively extract critical ideas from team members without individual blame [39]. However, there is a large body of evidence that view work-based conflicts negatively [40–42]. They are associated with harsh language, can diminish team cohesiveness, reduce trust, and subsequently impact upon team performance [43, 44]. Overarchingly, team conflict detracts from patient care, reduces staff concentration, increases staff stress, and may threated the quality of patient care [45].

6. **Social relationships**

   Teams that are on good social terms make more effective teams. Studies have shown positive correlation between individual and team scores for positive and negative affect. One can infer that the team's total affect level was influenced

by individual team members [46]. Increased social networks within the team increase cohesiveness, communication, and trust.

7. **Performance feedback**

Feedback about performance has become the norm in healthcare and yet, it is applied inconsistently in this context [47]. Feedback may be formal or informal or individual or to the group (e.g. audit). For surgical specialities, The World Health Organisation has introduced performance indicators that mandate communication improvements such as the team brief, use of the Surgical Safety Checklist and OR team performance feedback debrief upon cessation of the list [48]. Critics argue that there is still room for improvement to the current debriefing team culture [49].

Summary

Teamwork is a complex and nebulous topic. Understanding the basic structure of teams and the characteristics of effective teamworking is fundamental to the delivery of surgical care. This chapter should provide an overview of these topics and assist readers in their understanding and evaluation of factors that contribute to effective teamworking.

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Chapter 4
Trainer-Trainee Relationship

Mark Coleman, Joshua Franklyn, and Tom Cecil

Abstract

- Understand the learning curve in surgical training
- Analyse dysfunctional trainer- trainee relationships
- Focus on attributes of an ideal trainer
- Provide real world suggestions to improve training experience.

Keywords Teamwork · Training · Surgery

Introduction

The trainer-trainee relationship has evolved since Halsted's[1] days of 'see one, do one and teach one'. Many countries have shifted from an apprenticeship-based training method to a more objective competency-based training model. In reality, the trainer-trainee relationship is more nuanced and is a complex interplay of personalities within a socio-cultural framework, navigating government and or management directives whilst factoring in resource constraints and patient safety.

Whilst this chapter focusses on operative training, the importance of soft skills transference between trainer and trainee cannot be overstated. Surgeons with an insight into how human factors affect surgical outcomes display a level of emotional intelligence that is necessary in the twenty-first century.

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[1] William Stewart Halstead (1852 – 1922): Considered as the father of modern surgery. He is credited with establishing the first formal surgical residency program in America.

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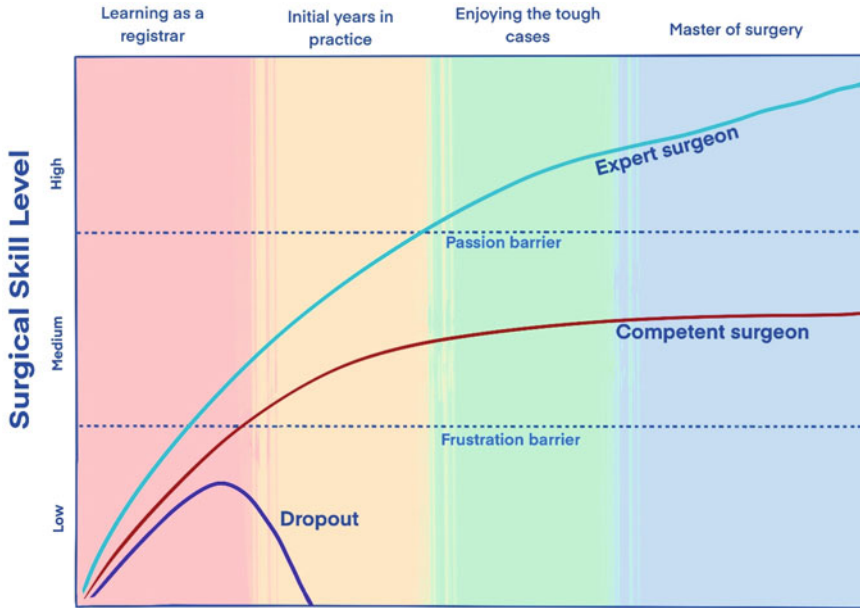
Fig. 4.1 The learning curves of surgical training

The Learning Curve and Repetitive Training

Surgical training is a life-long journey. The trainer-trainee relationship plays a crucial part throughout the journey; however, it is important for trainees to have a broader perspective of the ultimate goal of surgical training (Fig. 4.1).

To be considered an expert, a surgeon requires many hours of sustained practice. These hours are unlikely to be experienced during residency alone and this 'trainee mindset' needs to persist for many years throughout their career as a surgeon. However, merely chasing operative numbers is not enough. The Swedish psychologist **Anders Ericsson**[2] made famous the concept of deliberate practice wherein the trainer and trainee have a focussed 'coaching environment'. The main tenets are as follows:–setting targets, focussing on achieving tangible goals, constant feedback between trainer and trainee and a trainer who pushes a trainee beyond their comfort zone. This concept has been validated in laparoscopic colorectal and endoscopy training in England and is applicable to surgical training in general [1, 2].

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[2] Anders Ericsson (1947–2020): Swedish psychologist and professor of psychology at Florida State University who worked as a researcher in the psychological nature of human performance.

Barrier's to Training and Dysfunctional Trainer-Trainee Relationship

Whilst all of this appears theoretically sound, the reality is different and rather sobering.

There are multiple systemic barriers to training the modern surgeon, as elucidated below.

- European work time directive (EWTD) and its impact on operative case load and modern shift structure. The EWTD reduces operating opportunities, leads to more shift changes, creates a more transactional relationship between trainer and trainee results in a less intimate and trusting working relationship.
- Litigious environment—patients, clients and consumers are aware of their legal rights and the trainer is conscious of the additional scrutiny this places on their practice.
- Deanery-based training system—a trainee needs to rebuild a working relationship and rapport each time they move hospital. This leads to a constant vetting process and bedding-in period with each new post.
- Renewed focus on patient safety—it is no longer considered appropriate to train at the cost of patient outcomes.
- Complexity of modern surgery—The best example would be in the training of open and laparoscopic inguinal hernia repair. An open hernia repair is a basic general surgical procedure which when attempted laparoscopically is a more complex procedure requiring significantly different skill sets.

To surmount these barriers, the trainee and trainer need to set goals, acknowledge obstacles to training and reach a healthy compromise. However, very often this is not the case and there is a break down in the relationship for a plethora of reasons. The most common reasons for a dysfunctional trainer-trainee relationship are the trainer and the trainee (Table 4.1). These difficulties are usually secondary to personality clashes, power differential and inter-generational factors [3].

Table 4.1 Causes of a dysfunctional trainer-trainee relationship

The difficult trainee	The problem trainer
Inflexible and unaccommodating	Authoritarian and controlling
Arrogant	Poor communicator
Lack of enthusiasm	Indecisive and disorganised
The dependent junior who wants to be constantly supported and cannot make appropriate decisions	Burnt out and grumbling
The principled, argumentative and combative junior	Consultant never around
The trainee who already knows it all	Bullying and undermining behaviour

Undermining and Bullying

Surgical training over the years has been steeped in bullying behavioural practices (Box 1). Very often this culture is considered a mandatory rite of passage and most trainees are expected to wear it as a 'badge of honour'. Whilst the days of throwing surgical instruments are hopefully behind us, both subtle and overt humiliation is still commonplace.

Without a doubt, a bullying environment besides destroying a trainee's self-worth also leads to adverse patient outcomes. At the same time trainers may feel that any harsh interaction can be perceived as bullying and therefore avoid having honest discussions or provide critical feedback. Interestingly, many surgical trainees themselves would vouch for "good intimidation" as an effective surgical training tool, as long as it is well intentioned. All said and done, trainees work better in a friendly environment, with no intimidation or fear. Aggressive behaviour may be motivated by good intention, but the impact is often the opposite.

Bullying is most commonly seen as perpetrated by a trainer to a trainee, however this is not always the case and very often trainees may be subject to bullying by other health professionals, nurses, managerial staff and trainees themselves may engage in bullying. For example, the anaesthetic or theatre staff may routinely prevent trainees from performing procedures to finish cases quickly, in this context a consultant who does not support their trainees may unknowingly facilitate this 'undermining behaviour and work environment' [4, 5].

Box 1. Bullying and undermining usually includes the following behaviour
Aggression

- Verbal or physical threats
- shouting abuse or obscenities
- shouting at people to get work done

Humiliation

- ridicule or criticism in front of patients, colleagues or in isolation

Professional ostracizing.

- Unjustified changes of area of responsibility
- Exclude individual from appropriate professional discussions

Undermining

- Behaviour meant to erode confidence and cause self-doubt

Cyber bullying

There are various mechanisms at organisational and departmental levels and through the freedom to speak up forums or whistle blowing routes to

combat and prevent bullying. Safe communication channels, including means of complaining are crucial to end this scourge on the profession.

Attributes of a Good Surgical Trainer

Fortunately, only a minority of trainer-trainee interactions are entirely dysfunctional or abusive. There has been an increased awareness and understanding of the importance of communication, teamwork and collaborative approach to the education of surgical trainees.

However, not all good surgeons are good trainers. And not all well-meaning trainers are good trainers. Like all other skills good training practices have to be learned and assimilated.

Good communication skills, enthusiasm, leadership by example, resourcefulness, mindfulness and enthusiasm are qualities that trainees like to see in their trainers.

In the context of training styles, generally there are certain positive and negative training approaches (Box 2) [6].

Box 2. Positive and negative attributes of surgical trainers.

Positive Attributes of trainers

1. Has a structured approach to training
2. Adjusts training style appropriately to level of trainee
3. Is encouraging and non-threatening
4. Takes over procedure where appropriate
5. Provides corrective critique (positive and negative) with explanation
6. Encourages team awareness
7. Is patient focussed
8. Encourages reflective learning

Negative Attributes of surgical trainers

1. Too much irrelevant verbal input (distracts trainee)
2. The opposite, provides too little or no verbal input.
3. Provides too much physical input and 'handholding' (didn't stretch trainee's ability)
4. Provides too little physical input (fatigued the trainee and/or made procedure unsafe)

Different Training Styles

The trainer may be either authoritarian, delegatory, explanatory or consultative. Likewise, a trainee may be a 'dependant trainee' in need of constant support, or a trainee who is confident and thrives when freedom and responsibility is given. A functioning trainer-trainee relationship is mindful of these training preferences and philosophies and is able to adjust and adapt.

Different Learning Patterns

Different trainees learn at different rates and the classical sigmoid curve, whilst generalisable may not represent each trainee's learning pattern (Fig. 4.2).

Very often a complex operative procedure can be divided into multiple steps and a trainee may show a linear learning curve with one step whilst having a longer more frustrating learning curve for another step of the procedure. These differences in learning patterns need to be recognised by both trainer and trainee and expectations and training approaches may need to be adapted.

Evidence Based Suggestions for Improving Trainer-Trainee Environment

Every trainee is unique; likewise, all trainers have different training philosophies in a challenging surgical environment. It is therefore important to have a structured approach to operative training.

There are three fundamental time points when the trainer and trainee interact around the operation or procedure. Each of these can be used to create an open and interactive training experience [7]. The set takes place before, the dialogue during and the closure is after the procedure (Fig. 4.3).

Time point 1: Set

This is probably the most important step in enhancing the trainer-trainee interface and to a great extent is led by the trainer, however a trainee who is mindful of these steps can also guide the conversation prior to the operation.

- Reviewing trainee's prior operative experience: to get a firm grasp of baseline knowledge and skill level.
- Alignment of agendas: To obtain clear common understanding as each operative list is unique and therefore it is important that expectations are realistic. This will avoid disappointment and frustration.
- Setting ground rules: Examples would involve defining the term 'stop' or establishing clear instructions with respect to the use of vessel sealing devices in laparoscopic surgery.
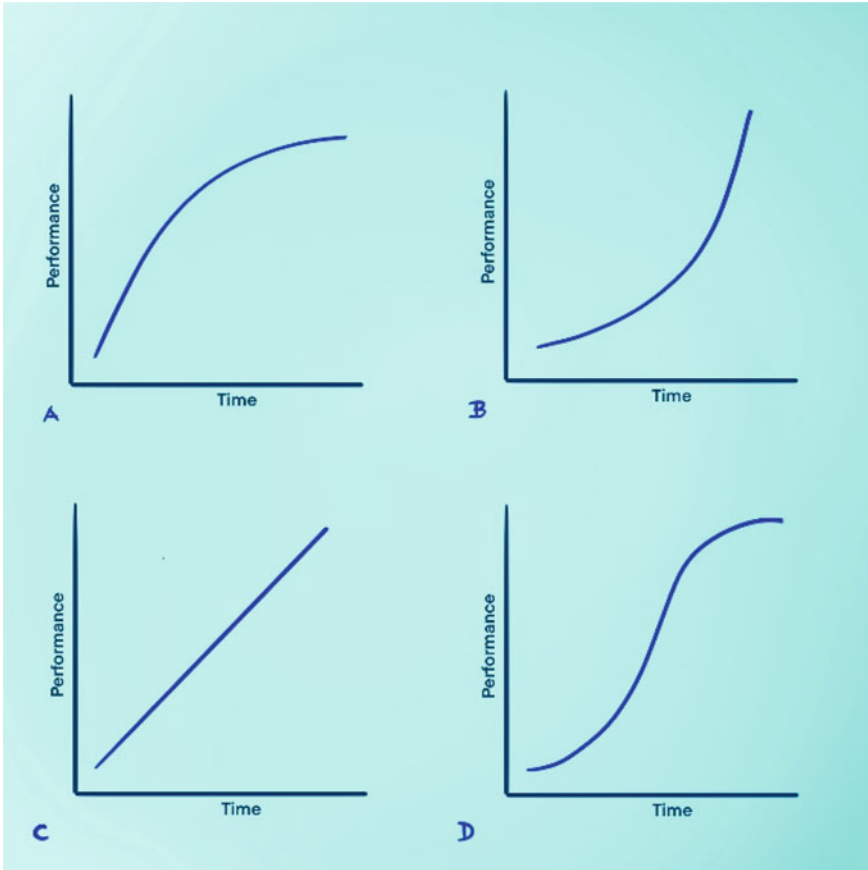
Fig. 4.2 Types of learners: positive **A**, negative **B**, linear **C** and sigmoid or classical **D**

- Discussing operative setup/approach: This would involve the trainer and trainee discussing the setup of the theatre, including positioning and any other procedure related detail.

All of these steps would form the basis on which a productive operative training session takes place.

Time point 2: Dialogue

Once the trainee proceeds with the operation there are three important aspects of the dialogue during a procedure which will be discussed

(I) Performance enhancing trainer-training interaction.

Optimum communication between a trainer and trainee is essential to calm and reassure both the stake holders. In Table 4.2, the various levels of instruction provided by the trainer to the trainee is listed. It is clear that good communication between
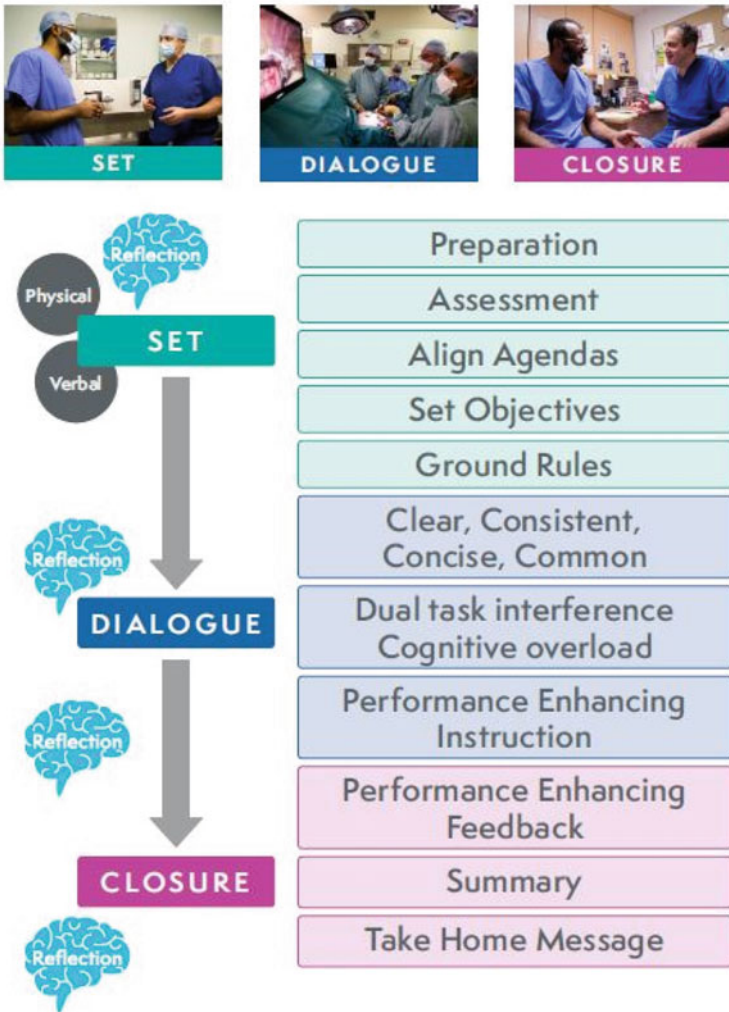
Fig. 4.3 Summary of systematic approach to training (used with permission from LAPCO consultancy) [8]

the trainer and trainee, with specific feedback is crucial to enhancing the training experience. On the other hand, random comments or muted silence can negatively affect the trainee and also lead to patient harm.

(II)   How to avoid taking over a procedure (the '6 steps procedure')

One of the main concerns that a trainee has is the fear that a trainer takes over a procedure and thereby deprives them of their training chance. At the same time a trainer needs to be confident that patient safety is not compromised.

Table 4.2 Levels of instructions during a procedure

Level of trainer	Trainer comment	Example
Level 1 (poor)	No comment	
Level 2	Non-specific negative comment	'That was rubbish' or 'If the patient leaks it's on you'
Level 3	Non-specific positive comment	'good' or 'well done, you are an excellent trainee'
Level 4	Some directions, but non-specific	'bit more left' or 'don't make it bleed here'
Level 5 (excellent)	Specific and focussed and asking the trainee for feedback	'Are my instructions clear?'. 'Why can't you see the ureter?', 'stop, please point to the common hepatic duct?'

A trainee may also be fearful that once they make an error their training opportunity for the rest of the procedure may cease. However, very often a good trainer will take over for a short period just to navigate a difficulty and hand the procedure back to the trainee (if appropriate).

There are six steps a trained trainer can take when the trainee is not making progress or is likely to compromise patient safety. This again circles back to asking a question then giving clear and unambiguous instructions. (Figure 4.4)

1. Stop—The trainer tells the trainee to stop. This should be pre-agreed in the Set.
2. Identify—The trainer and trainee identify the reason for lack of progress by asking the trainee a question (see level 5 performance enhancing instruction)
3. Explain—The trainer tells the trainee what's going on
4. Instruct—The trainer instructs the trainee the ways to resolve the situation or takes over the procedure briefly.

Fig. 4.4 STEPS of safe mentoring (used with permission from LAPCO consultancy)

5. Check—The trainer checks with the trainee to make sure that there has been an understanding of the problem and the solution.
6. The trainer hands the procedure back to the trainee to proceed (if safe).

(III)   Dual task interference and minimising distractions in the operating room

Performing two tasks simultaneously often degrades performance of one or both tasks. In the context of surgical training, the presence of additional sensory stimulus may affect the ability of a trainee to perform an operation or listen to instructions given by the trainer. The presence of distractions such as music, loud conversation, pagers and telephones, constant movement of people in the theatre, etc. can interfere with the task of performing an operation. Many trainees would additionally find that nervous trainers who provide too much physical or verbal coaching may distract them from performing a procedure.

By virtue of having a higher level of authority and situational awareness, a trainer can control most of these factors. Equally, a trainee who is mindful of these distractions can pro-actively reduce some of these interferences, for example by asking a colleague to carry the pager for a short period whilst performing a complex operating procedure.

Time point 3: Closure

Feedback takes place after a training procedure and is covered in more detail in Chap. 15. In brief, its purpose is to improve subsequent performance. Feedback should open with a general question such as: 'how do you think the procedure went? This helps to align the trainer with the trainee to initiate and frame a structured dialogue for each key step of the procedure. At the end of feedback, the trainer asks the trainee to develop a single take home message. This is a learning point which will help the trainee to improve between one training procedure and the next. Examples include reviewing a video of the last procedure, undertaking further simulation training or to look at online video recordings of the same or similar procedures. The take home message can be reviewed as part of the Set before the next training episode.

Trainee evaluation of trainer: This is an important aspect of squaring the circle and providing feedback to the trainer. This requires a surgeon who is open minded and self-assured. This allows the possibility for the trainer to improve. This cycle has been proven to enhance and improve surgical training especially in the context of laparoscopic colorectal training in England using the LAPCO™ model.

Learning by Observing and Assisting

An important aspect of surgical training is learning by assisting and observing. Unfortunately, most teaching is directed to the senior trainee or the first assistant. Rather paradoxically, senior trainees learn better with limited instructions whereas junior trainees who are usually retracting or playing a less active role in the surgery need

more detailed instruction and teaching. The novice trainee therefore finds it difficult to make sense of the procedure and doesn't know where to focus their attention. This probably explains why junior trainees find it difficult to learn through passive observation.

A trainer who is mindful of these difficulties could aim to include and engage with trainees during the operation. This can be done by using the above-mentioned approach (set, dialogue and closure) or by explaining one or two key decisions during a procedure and could attempt to be more explicit with the steps of the operation [9].

Conclusion

Communication is fundamental to a good trainer-trainee relationship. Various strategies and insights to enhance the trainer-trainee relationship are available, however individual trainers and trainees are ultimately responsible for creating the best environment to foster surgical training. Reflection, insight and civility are the cornerstones to a modern and productive surgical training process.

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Part II
Scenarios and Frameworks: Patient–Surgeon

Chapter 5
Information Gathering and Diagnostics

Arish Noshirwani

Abstract

- Introduce the learner to the skill of history-taking
- Highlight areas that are more important for surgical history taking
- Provide a "syllabus" of common presentations for the surgical trainee.

Keywords Surgery · History · Communication

Introduction

The history elicited from patients constitutes one of the key pillars of the diagnosis. During this process, the patient is asked to divulge sensitive information about themselves to a stranger. For this interaction to be productive, rapport must be developed. While there is no single best way of achieving this, listening is of paramount importance—as the aphorism in medicine goes "listen to the patient and he or she will tell you the diagnosis" [1]. History-taking is a skill and without an appropriate structure, there is a risk of missing critical pieces of the diagnostic puzzle.

Components of the Surgical History

A thorough medical history is comprised of:

- Presenting complaint (PC)
- History of the presenting complaint (HPC)
- Past medical history (PMH)
- Drug and allergy history (DHx)

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- Family history (FHx)
- Social history (SHx)

While the above framework will provide a comprehensive collection of information, it is important to remember that the basis of a good history is through good communication between the doctor and the patient.

The Presenting Complaint

This is what has brought the patient to your clinic. Importantly, it should be expressed in the patient's own words—"My head hurts". If the patient has presented with multiple complains, it can be helpful to address these individually. Common presenting complaints in surgery are listed below.

Textbox: common surgical presenting complaints

Breathlessness
   Chest pain
   Abdominal pain
   Vomiting
   Diarrhoea
   Blood in stool
   Blood in urine
   Problems swallowing
   Lumps (e.g. groin, neck, breast)
   Problems passing urine
   Back pain
   Joint pain
   Headache
   Leg pain when walking

The History of the Presenting Complaint

This section of the consultation focuses on obtaining and clarifying the history of the complaint. Initially, it is the most difficult part of the consultation, but one that gradually eases with increased clinician experience and knowledge.

The accounting of the history should be done in the patient's own words using a series of open-ended questions to develop the consultation. A useful mnemonic for a common symptom, pain, is "SOCRATES"—site, onset, character, radiation,

associations, timeline, exacerbating or relieving factors, and severity. This can be adapted to assist with other presenting complaints as well [2].

Site—The location of the pain as described by the patient—"Where exactly is the pain?".

Onset—Whether the symptom came on suddenly, has been gradually increasing in intensity, or is constantly there or intermittent throughout the day—"When did it start?".

Character—A description of the pain the patient is experiencing. It is sometimes helpful to provide examples as it can be difficult to describe a pain in words. For example, a heart attack can feel like a crushing pain, while pancreatitis can present as a stabbing pain—"What does it feel like?".

Radiation—This asks if the pain is isolated to a specific part of the body or whether it moves about—"Does the pain move anywhere?".

Associations—This asks whether the pain is associated with other symptoms–"Do you experience any other symptoms at the same time?" Occasionally, patients may not have recognised significant associated symptoms, so it is the clinician's responsibility to ask about important symptoms, particularly 'red flags'. For example, in the context of back pain, clinicians are expected to ask about symptoms associated with cauda equina, such as problems with urination or defaecation, abnormal perineal sensation, sexual dysfunction and weakness or numbness in the legs.

Timeline—The time course of the pain is important and here you attempt to identify if the pain follows any time patterns—"How long has this been going on for?".

Exacerbating or relieving factors—Asking about worsening or alleviating factors can aid in clarifying the diagnosis, as certain things can make the pain better or worse—"Does anything make the pain better or worse?" For example, in the context of joint pain, exacerbation with movement and deterioration throughout the day may be suggestive of osteoarthritis, in contrast to rheumatoid arthritis where pain is typically worse in the mornings and improves with movement.

Severity—Scored on a scale from 1 to 10, the severity of the pain is an important part of the consultation, however one must remember that pain is subjective and one person's '10' could be another's '6'—"On a scale of 1 to 10, how bad is the pain?".

At the completion of the history of the presenting complaint, a generalised picture of the diagnosis should present itself with an indication to which organ systems will be involved. As such, it is prudent to ask specific system-based questions to further elucidate the diagnosis, and to help discount unlikely pathology. For example, a patient presenting with chest pain and breathlessness should be further questioned about the cardiovascular and respiratory system, however it must be remembered that certain symptoms can arise from multiple systems. It is through repetitive exposure, experience, and education that a clinician can differentiate the symptoms of one system from another.

The Past Medical History

The importance of a thorough documentation of the patients past medical history cannot be understated as it provides the context through which their current presentation is highlighted.

The patient's history spans from birth to your consultation room, and their various diagnoses of bodily conditions, both physical and psychological, are pertinent. It also includes questioning of any surgical interventions that the patient has received in the past.

When obtaining information, it is important to assess the severity of the condition, it's current management and follow up plan, and the impact it has on the patient. This allows one to narrow the pool of differential diagnosis.

Sometimes, patients do not offer any comorbidities. It can therefore be useful to prompt patients using common diagnoses such as 'diabetes,' or using broad, simple terms such as 'heart problems'.

The Drug History

While ascertaining the patient's medication history, it is always important to start with clarifying if the patient has any allergies as missing this information and prescribing an allergic medication can be disastrous. The medications can also provide a hint towards the patients past medical history, which can be valuable if the patient is not a good historian.

The Family History

The family history can provide you with valuable information toward hereditary and genetically predisposed conditions. There are specific scenarios whereby family history plays a more significant role. For example, in the context of a patient presenting with a breast lump, asking about a family history of breast cancer is an absolute requirement.

The Social History

In this section of the consultation, you can ascertain details about the patient's personal life; do they smoke, and if so, how often and for how long? This is relevant as smoking is a risk factor for multiple conditions and affects wound healing. Do they drink alcohol? Do they use illicit drugs? Who lives at home? Do they need

any support with activities of daily living? What do they do for a living? Certain aspects of the social history are more relevant than others for certain conditions and it is through repetition and experience that one hones this skill. For example, in a hand clinic, asking about hand dominance and occupation would be of particular relevance.

Open Style Questions

Using open-style questions allows patients to speak freely about their current presentation and concerns, giving them the freedom to reflect upon their situation, and offers the opportunity for them to provide you with information you may have not thought to ask.

Summarising

At the end of the consultation, it is always wise to summarise. Summarising allows you time to repeat the consultation in chronological order, which allows you to notice patterns and correlations you may have missed and allows the patient the opportunity to add further or correct your understanding.

By the end of summarising, you should be on your way to identifying a list of differential diagnoses, and combined with assessing the patient's ideas, concerns, and expectations (ICE) and an appropriate examination, the diagnosis should reveal itself.

Ideas, Concerns and Expectations

While history taking is a skill which is developed over time, in most consultations, patients will present with an agenda—particularly with an idea about how the consultation will go, and how their expectations will be met.

Taking a moment to ask patients about their ideas for why they have presented, any concerns they might have which they would like addressed, and their expectations of the consultation can provide us with valuable insight into the patients worries and concerns and is another tool in helping elicit the diagnosis and manage it appropriately, while also maintaining patient satisfaction [3].

Ideas

Many a patient will present to your clinic with ideas about their ailments and the reason for their presentation, particularly in the digital age, when so much information and misinformation is at patients' fingertips. Approaching this topic at the end of the history-taking can help to elicit further information which can guide your consultation towards an appropriate diagnosis.

Concerns

Some patients will present with concerns about their health, which they will not directly reveal to you, and which need to be specifically asked about to ensure these are addressed. Patients typically present hoping for these concerns to be managed by their health care practitioner and failing to do so can lead to misunderstandings which result in patients leaving their consultation unsatisfied, not heard, and no more reassured than earlier [4].

Expectations

Patients have expectations of their consultations—a patient presenting with back pain will expect that it will be addressed, and a management plan initiated. However, the management plan can vary vastly (maybe the patient simply wants to discuss their back pain with their doctor and not be prescribed strong pain killers which they think are unnecessary, or they have concerns that their back pain may be signs of a more sinister diagnosis and are demanding further investigations) and so, investigating the patient's expectations can greatly help guide the direction of the consultation and ensures the patient leaves satisfied with the outcome.

Example Scenario: PR (Per Rectal) Bleeding

Mr. J is a 71-year-old male patient who has been referred to the general surgery clinic by his GP with bleeding per rectally.

In this scenario, you have time to consider the differentials, which would include malignancy, benign polyp, fissure, haemorrhoids and inflammatory bowel disease.

'Hello Mr. J, my name is ___. How may I help you today?'

'I have been having problems with blood in my stool. I don't think it is anything worrying but my wife made me see my GP who told me to come here.'

It is now important to determine the following information: timings, volume, whether blood is mixed into the stool or on the toilet paper or toilet bowl only, whether there has been any mucous or change in bowel habit and whether there are any associated features, specifically pain on defaecation, abdominal pain, nausea/vomiting, weight loss, fatigue, fevers or jaundice.

'I first noticed it about 4 months ago but did not think much of it to be honest. It has become more frequent and I now notice it mixed in with my stool when I defaecate. But I don't have any pain so I'm sure it's nothing worrying. I have lost a little bit of weight over the last few months but that is because I have recently been outside more, I think.'

Unfortunately, this is concerning for malignancy (the red flags being, but not limited to, being an elderly gentleman with increasing frequency and quantity of blood that is mixed into his stool, with a recent history of unexplained weight loss). It will now be appropriate to complete your PMH asking about other malignancies and comorbidities that may affect treatment options. You would complete a drug history, ask about family history of bowel cancer and determine a social history as well. Ultimately, at the end of the consultation, it will be important to further explore the patient's ideas, concerns and expectations. The patient has mentioned it not being 'anything worrying' several times and in our experience, patients who are worried sometimes try to reassure themselves in this manner. It is important to explain your concerns in an empathetic manner, while also explaining the next steps in the diagnostic process: examination and investigations.

Conclusion

The history is perhaps the most important aspect of diagnosis and requires not only keen clinical knowledge but astute skills in communication. These consultations must be approached with empathy, respect and understanding for the patient as we aim to work with the patient to manage their health, which in turn leads to better patient satisfaction [5], improved adherence to treatments with the use of fewer prescriptions and investigations [6] while also improving patient outcomes [7, 8].

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Chapter 6
Shared Decision-Making and Consent

Heather Pringle

Abstract

- Provide an introduction into the legal frameworks that underpin shared decision-making and consent.
- Increase the reader's confidence in the consent process, by working through real-life scenarios.

Keywords Consent · Confidentiality · Capacity

Introduction

There is a set of legal and ethical principles which healthcare professionals must adhere to when treating patients. The patient has a right to make decisions about what happens to their body and the legal framework is there to protect them. If doctors or other healthcare professionals do not follow these principles, then they may face repercussions from their regulatory body or the criminal justice system. There has been a move away from the paternalistic model of healthcare delivery in which the doctor makes the decisions for the patient. The best outcomes result from situations in which the patient has been involved in their care. On top of this, various legal trials have changed the course of shared decision-making and consent.

The General Medical Council (GMC) website is an essential resource to help doctors through the shared decision-making and consent process [1]. They set out what is required for doctors and give advice on how to achieve it. The consent process is fluid, and the patient should feel comfortable raising concerns. The doctor must provide the patient with tailored information suited to their situation and have the information they need so that they can make a truly informed decision.

Shared decision-making and consent are enormous topics, and this chapter aims to provide the basics so that the theory can be put into practice. This is not an exhaustive guide but can be used as a revision tool. This chapter will deliver a guide to the legal

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framework for adults in England followed by three common scenarios encountered in every-day practice.

Law and General Approach

The legalities of consent and shared decision-making go hand in hand with the ethics behind the process and it is a GMC requirement to keep up to date with the law [1].

The Law

In English law the two Acts which the legislation behind consent stems from are the Human tissue Act (2004) and Mental Capacity Act (2005) [2]. Although a knowledge of the ins and outs are not essential it is vital to be aware of these and can be a handy tool in exams or interviews to maximise points.

In medical practice to legally get consent from a patient it must be established whether the patient has capacity, what form of consent is appropriate for the given treatment or intervention and the duration that the consent is applicable for. The consent must be given voluntarily with full informed consent. If a healthcare professional fails to obtain appropriate informed consent prior to touching a patient then this may be deemed criminal assault.

When obtaining consent all individuals must be presumed to have capacity. For individuals who lack capacity the relevant aspects of the law are lasting power of attorney, independent mental capacity advocates (IMCAs) and advance decisions to decline treatment. There should always be a proxy-decision maker who is acting in the patient's best interests along with the medical team. The doctor must take into consideration the patient's prior wishes and pursue the least restrictive option whilst involving the individuals who can advocate for them.

General Approach

The Choosing Wisely program [3] was established to assist patients and their doctors to choose the care that is right for that particular patient in any given scenario. The program establishes safeguards so that decisions are backed by evidence, absolutely necessary, not replicative via other means, free from harm and in line with the patient's values.

It is useful to have a formula to follow when seeking consent. The acronym B.R.A.N. which stands for Benefits, Risks, Alternatives or Nothing follows this structure. Avoid medical jargon, leave room for questions, give the patient time to make their decision and provide them with an information leaflet. Ideally, consent for a procedure should be sought prior to the day of the surgery so they have time to consider alternatives. Consent should be sought by a suitably trained individual and ideally the person performing the procedure.

If the patient does not have capacity, then further steps must be taken to get consent. The patient's appointed advocate should be involved except for in emergency

scenarios when consent cannot be obtained then it is appropriate to act in the patient's best interests.

Scenarios

Scenario 1: Oeosphagogastroduodenoscopy (OGD)

In this scenario a patient has been referred to the two-week wait upper gastrointestinal cancer pathway for new dysphagia to solids. The proposed procedure is an OGD [4].

Explanation—Start with an open-ended question. *What do you understand about the reasons of why you have been referred for this camera test?*

Your doctor has referred you in because you have difficulty swallowing, and the main concern is that you may have a cancer somewhere in your gullet or stomach. An endoscopy is a camera test which looks at the oesophagus or gullet, stomach and the first part of your small bowel. This is normally done with a small amount of sedation so that you will be awake, but your discomfort should be reduced.

Benefits—The best way to diagnose disease in the oesophagus, stomach or small bowel is to look directly at it with the camera. If we see anything abnormal, we can take some photographs and biopsies. This way we can send it off to the laboratory and get the diagnosis. Once we have the results of this, we can discuss them in our multi-disciplinary team meeting where several consultants discuss the best course of action.

Risks—The main risks include discomfort, risks of sedation, making a hole in the stomach, bleeding and needing to repeat the procedure if we don't get the diagnosis.

Alternatives—An endoscopy is the only way we can get a tissue diagnosis, but alternative investigations include a barium swallow test. You have to drink a liquid we can see on Xray to look for a blockage. This is not as good a investigation for your symptoms, but it is something we can consider if you would prefer it?

Nothing—If you do decide to do nothing, then the worry is that your symptoms may get worse and if you change your mind further down the line then it may be too late. The benefit of doing it now is that we know what we are dealing with and we can manage it appropriately.

Questions—*Do you have any questions that you would like to ask me?*

Scenario 2: Blood Products

In this scenario a patient requires blood products following an elective popliteal artery aneurysm repair [5].

Explanation—Start with an open-ended question. *Has anyone explained to you the results of your most recent blood test?*

Your blood tests have shown that following your operation your haemoglobin is low. This is a blood test which tells us the amount of blood you have in your body. This is not unusual following an operation like you had and we check your blood after your operation to make sure we give you a blood transfusion if necessary.

Have You Ever Had a Blood Transfusion Before?

The nurses will arrange for the blood to be given to you over three hours. Whilst you are having your transfusion you will have regular checks done by the nurses to make sure that your blood pressure, heart rate, breathing and temperature are remaining normal for you. Please tell a member of staff urgently if you feel uncomfortable. After this we will repeat your blood tests again to see if you require more blood.

Benefits—The blood transfusion will make you feel better. It will also reduce your risk of stroke or heart attack. It aims to replace the lost blood to help you return to your normal abilities sooner and can help in the recovery phase after your operation.

Risks—Blood transfusions are common and generally very safe. As with any treatment there are risks. The main risks we encounter on blood transfusions are allergic reactions or a problem with your heart, lungs or immune system. Another risk is that the wrong blood product is given and there is a risk that a virus you have not been exposed to is transmitted to you from the blood.

Alternatives—Iron transfusion, iron tablets, watch and wait (for example no transfusion today but repeat the blood tests tomorrow to see if it can be avoided).

Nothing—There is a risk of a heart attack, risk of stroke, feeling unwell because of the blood loss for example fatigue or shortness of breath and also a slower return to full fitness after surgery.

Questions—*Do you have any questions that you would like to ask me?*

Scenario 3: Consent form 4

In this scenario a patient has presented with a fractured neck of femur that requires fixation. She is a nursing home resident with a background of vascular dementia and is acutely delirious. She has a supportive son who is her next of kin.

Capacity Assessment—Start with an abbreviated mental test then move on to assess capacity via the four domains. Patient understanding, retaining that information, weighing up of the information and communicating her decision. Remember that capacity is only applicable to one decision and must be re-assessed with each new decision that must be made.

Involve next of kin—Enquire about legal power of attorney and any advance directives the patient may have in place. If the patient does not have an appointed next of kin, then an independent mental capacity advocate (IMCA) may be required.

Consent—As before, systematically work through the consent process with her son keeping her best interests in mind using the explanation and B.R.A.N. approach. Consent form four is for individuals who lack capacity to consent to treatment or investigation.

Questions—*Do you have any questions that you would like to ask me?*

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Chapter 7
Breaking Bad News

Angharad Davies

Abstract

- Introduce the concept of breaking bad news.
- Provide a structure for tackling these difficult situations.
- Provide worked examples.

Keyword Surgery · Medicine · Communication

Introduction

Breaking bad news well is an essential skill in surgery; one that you must be familiar with at all stages in your career. Being able to communicate challenging news to patients or relatives with clarity and empathy can help the person feel supported and valued at a difficult time.

Baile et al. developed a six-step (SPIKES) protocol for delivering bad news in 2000, which is still useful today [1]. The goal of the SPIKES protocol is to provide a framework in which the surgeon can achieve four important objectives when breaking bad news: gathering information, providing information, providing support and forming a strategy or plan for the future.

The aim of this chapter is to apply these principles to two likely scenarios that you may encounter in examinations, interviews and clinical practice:

1. Informing a patient of a cancer diagnosis
2. Informing a relative about the death of a patient.

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Scenario 1: Cancer Diagnosis

Mrs Smith is a 68-year-old lady who presented to her General Practitioner (GP) with a lump in her left breast. She was referred under the 'two week wait' pathway to the Breast Unit, where a triple assessment (physical examination, mammogram and biopsy) was performed. The biopsy results have revealed an invasive ductal carcinoma.

You are the Breast Surgery Registrar. Mrs Smith has been invited to attend clinic today to receive her results. Please inform her of her diagnosis and answer any questions she might have.

1. Introduction

   - Introduce yourself with your full name and designation. Check the patient's identification.
   - Explain the purpose of your conversation (e.g. *'you have been asked to come to clinic today to discuss your recent tests'*). Gain consent to discuss this with the patient and explain that this will be confidential.

2. General communication tips

   - Establish a rapport—ask the patient how they are and acknowledge any emotions they might be displaying.
   - Exhibit active listening skills—use open body language, appropriate eye contact and allow space for the patient to speak.

3. S—SETTING up the interview

   - Make sure there is a box of tissues nearby.
   - Ensure that you and the patient both have somewhere to sit, preferably without a desk or another barrier between you.
   - Ask the patient if they would like a friend or relative to be present. Alternatively, if they have brought someone to the consultation, ask if they would like to be seen alone.
   - If there is a Cancer Specialist Nurse available, it may be helpful to have them, or another appropriate healthcare worker, present.
   - If possible, hand your bleep or telephone over to a colleague to minimise interruptions.

4. P—Assess the patient's PERCEPTION

   - After establishing rapport by asking an opening question (e.g. *'how are you?'*), start by asking about the events that have led to this point:

     'Can you tell me what has happened so far?'
   - Next, use an open question to gain an understanding of what the patient knows or expects:

     'What is your understanding of this appointment today?'

'What have you been told so far?'

'Is there anything that's been worrying you?' This last question can also act as a warning shot.

5. I—Obtain the patient's INVITATION

   - Find out whether the patient wants to know the news:

   'Would you like to find out about your test results today?'

   'Would you like to come back another time with a friend or family member?'

   - If the patient does not want to know, offer them a future appointment or ask if they would like you to talk to a friend or relative.

6. K—Provide KNOWLEDGE and information

   - A stepwise approach must be used to deliver the bad news. Between each step, it is important to pause and wait for the patient to speak.

   1. First, start with a warning shot:

   'As you're aware, we did the biopsy to look for the cause of the breast lump. Unfortunately, the results are not as we hoped.'

   2. Pause, see if the patient wishes to speak, then respond by delivering the next chunk of information:

   'I'm very sorry to say, but the lump is breast cancer.'

   Of course, being kind and empathetic is of paramount importance. However, we also have a responsibility to deliver accurate information. Trying to 'dress up' the truth by being vague will only confuse the patient and lead to compounded emotion down the line. If the histology shows a cancer, they need to know.

   From here, the patient leads the consultation. Ensure you answer the questions they ask, rather than overloading them with information that they are unlikely to remember.

7. E—Address the patient's EMOTIONS with EMPATHY

   - The patient must be allowed the space to express their emotion at this point. This might be distress, anxiety, anger or any other emotion. Acknowledge these emotions and respond in an empathetic way, for example:

   'I can see that this is a big shock.'

   'It's obvious that this isn't the news you were hoping for. I'm so sorry.'

   'Is there anything that is upsetting you the most?'

- The patient may ask you information about their case that you don't know the answer to, such as a prognosis. It is important not to lie or mislead them. A useful response might be:

  'I'm sorry, but I don't have enough information to answer that at this time. As we do more tests and have more information we will do our best to answer this for you. I'm sorry not to be able to give you all the answers now, I can imagine that this might feel frustrating.'

- Respond to non-verbal cues, for example by mirroring the patient's body

  language, passing them tissues if they are crying, or potentially (if it seems appropriate) by touching their arm.

8. S—STRATEGY and SUMMARY

- First, check that the patient is ready to move on to this step. They may ask you directly what the plan is, or they might still be registering the bad news and need silence and space for this.
- Summarise the conversation and check their understanding.
- Answer any questions they might have, checking any particular concerns or expectations.
- Provide reassurance (but not false hope) that they will be looked after by an appropriate team of specialists.
- If you know enough information at this stage, they may want to know their treatment options. Do not hurry this conversation though, or attempt it without enough information.
- As part of the plan, it can be helpful to arrange a ollow up appointment or offer help in communicating the diagnosis to their friends or family.
- If they would like it, provide them with sources where they can get more information or support (e.g. support groups, websites, patient information leaflets).

General tips:

- Remember to avoid medical jargon.
- Remember to consider the patient's feelings and emotions and respond empathetically.
- Use silence as a powerful communication tool.
- Allow the patient to lead the consultation and guide how much information it is appropriate to provide.

Scenario 2: Death of a Relative

You are a Registrar in Trauma and Orthopaedics. You performed a hip hemiarthro-plasty five days ago on Mrs Abioye, a frail elderly lady who fell and sustained a neck of femur fracture. The medical team were called to the ward overnight as Mrs Abioye developed an acute oxygen requirement. She continued to deteriorate and passed away in the early hours of this morning. As she had recent surgery, her death will be referred to the Coroner. However, the medical consultant feels that the cause of death was most likely a pulmonary embolism. She received venous thromboembolism prophylaxis according to trust guidelines and had a 'do not attempt cardiopulmonary resuscitation' (DNACPR) decision in place.

Mrs Abioye's son and next of kin, Mr Abioye, has been called in by the nursing staff. You have been asked to see him and inform him that his mother passed away during the night.

1. Introduction

   - Introduce yourself with your full name and designation.
   - Check the person's identification and relationship to the patient.
   - Explain the purpose of your conversation, for example:

     'Thank you for coming in to meet with me today.'

2. General communication tips

   - Establish a rapport.
   - Exhibit active listening skills.

3. S—SETTING up the interview

   - Find an appropriate environment to have the consultation.
   - Make sure there is a box of tissues.
   - Ensure you and the relative have a seat.
   - Ask if they would like a friend or relative to be present, or if they would like to be seen alone.
   - If there are any other appropriate health care professionals available (e.g. a member of the nursing staff, medical team, or bereavement team) it may be helpful to have them present.
   - If possible, hand your bleep or telephone over to a colleague.

4. P—Assess the patient's PERCEPTION

   - After establishing rapport, use an open question to gain an understanding of what the patient knows or expects:

     'What is your understanding of why you have come in today?'

     'What have you been told so far?'

'What is your understanding of what's happened during the last week while your mother has been in hospital?'

5. I—Obtain the patient's INVITATION

   - Find out whether the relative would like to continue at this point:

   'Would you like to come back another time with a friend or family member?'

   'Are you able to stay and continue this conversation now?'

6. K—Provide KNOWLEDGE and information

   - A stepwise approach must be used to deliver the bad news. Between each step, it is important to pause and wait for the relative to speak.

   1. First, start with a warning shot:

      'As you're aware, when your mother fell over she broke her hip, which is a serious injury.'

   2. Pause, see if the patient wishes to speak, then respond by delivering the next chunk of information:

      'Overnight, the doctors were called to the ward because your mother was starting to become more unwell.'

      'Despite our efforts and treatment, I'm very sorry to say that the doctors were unable to make your mother better and she passed away overnight.'

      From here, the relative leads the consultation. Ensure you answer the questions they ask, rather than overloading them with information.

7. E—Address the patient's EMOTIONS with EMPATHY

   - The relative may be upset, angry or expressing any other emotion. It is important to acknowledge these emotions and respond in an empathetic way, for example:
     'I'm so sorry to give you this sad news.'
     'I can see this is a big shock for you.'

   - If the relative responds with anger, it is appropriate to stay calm and respond compassionately. For example, in response to questions regarding whether the patient had inadequate treatment, it might be appropriate to respond by reassuring the relative:

     'We did all we could for your mother, but I'm afraid her frailty and the severity of her injury meant that when she became unwell, there was nothing more we could do to make her better.'

- It is important to provide enough information to adequately inform the relative, while not misleading them. For example, relating to the cause of death:

  'While we cannot be 100 per cent sure, it is likely that your mother died due to a clot blood in her lungs. She received the correct treatment to reduce the risk of this, but unfortunately the risk was still significant. However, although we think this is the most likely cause, we still need to speak to the bereavement team who will be able to help consider if there are any other potential causes.'

  The relative may want to know now, but it is likely that this is not the best time to explain the Coroner's Court process immediately after breaking the bad news. It may be more appropriate to point them to relevant teams, who can explain this more once they have had a chance to take in the bad news.

- Respond to non-verbal cues and allow space for the relative to express how they feel.

8. S—STRATEGY and SUMMARY

- First, check that the relative is ready to move onto this step.
- Summarise the conversation and check their understanding.
- Answer any questions they might have, checking any particular concerns or expectations.
- As part of the plan, it might be helpful to arrange a follow up consultation or offer help in communicating the news to their friends or family.
- If they would like it, provide them with resources where they can get more information or support (e.g. support groups, websites, the bereavement team, the chaplaincy team if appropriate).

General tips:

- Remember not to overload the relative with information.
- Consider the relative's emotions and respond empathetically.
- Signpost towards relevant teams (e.g. medical colleagues if appropriate, bereavement services).

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Chapter 8
Escalation Status and Palliative Care

Kin Seng Tong

Abstract

- Introduce the reader to legal frameworks surrounding escalation status and palliative care
- Explain the concept of 'ceiling of care'
- Discuss the 'do not attempt cardiopulmonary resuscitation' (DNACPR) order
- Provide ideas that will lead the reader to form their own personalised manner for undertaking these difficult discussions.

Keywords Surgery · Medicine · Communication · Palliative · Escalation

Background

The surgical profession is not always about saving lives – death and dying is an integral part of our practice. We will sometimes encounter patients who are 'not fit for a haircut', in whom aggressive treatment or surgery may lead to more harm than good. However tempting it may be to 'fix' the patient with our surgical expertise, we must not overlook the human elements of compassion and empathy which may mean a palliative approach is better justified. Yet, discussions around death and dying tend to be poorly done. A recent systematic review found that advance care planning for frail patients in the acute hospital setting takes place in only 0–5% of cases [1]. Patient factors include culture, religion and health literacy, whereas physician factors include a lack of training, insufficient time, reluctance to be the bearer of bad news, and fear of being wrong or losing the therapeutic relationship with the patient [2].

This chapter addresses some of the key issues surrounding the care of patients nearing the end of life, in order to equip surgeons with the skills required to help patients and their families experience a dignified death.

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Definitions, Legal Frameworks and Guidelines

According to the Royal College of Surgeons' *Caring for Patients Nearing the End-of-Life* guide to good practice, the term 'end of life' generally refers to the last 12 months of life. This is the optimal time to begin having conversations about death and dying in order to ensure the patient experiences a 'dignified death', in line with their wishes, preferences and beliefs. These discussions should be held by the admitting team, the patient and their family, and a multidisciplinary team including but not limited to the palliative care team. The discussions should encompass treatment escalation plans and consideration of nutrition, hydration, symptom control as well as psychological, social and spiritual support [3].

The General Medical Council has published a comprehensive guide on *Treatment and care towards the end of life*, with a legal slant addressing various scenarios including mental capacity in children and young people, clinically-assisted nutrition and hydration, and 'Do Not Attempt Resuscitation' decisions [4]. The reader is urged to refer to this document for detailed guidance on the legal stance on these matters.

Escalation Discussions with Patients and Family

Evidence has shown that early conversations about end-of-life care lead to better outcomes, and if held in the outpatient setting (before the patient becomes acutely unwell), is associated with significantly fewer emergency department visits and hospital admissions, as well as shorter hospital stays in the last 30 days of life [5]. Despite these benefits, the National End of Life Care Audit in 2016 revealed that only 4% of patients had a documented advance care plan or discussion of their preferences prior to hospital attendance [6]. Admittedly, such conversations are difficult and may sometimes even come as a surprise for patients and their families. As such, a sensitive approach is paramount, with the meeting held in a private area away from other interruptions. The conversation will inevitably involve some form of breaking bad news, for which strategies such as the 'SPIKES' model exist (Chap. 7).

One of the first questions you should consider in advance care planning is the patient's escalation status. In other words, how far do you actively manage the patient's illness and whether this involves providing organ support, use of invasive monitoring, or cardiopulmonary resuscitation (CPR). You should explain the concept of 'ceiling of care' to the patient and their family, namely ward-level care (level 1), high dependency unit care (level 2) and intensive care (level 3) (Fig. 8.1) [7]. Furthermore, three broad areas should be discussed: (1) what does the patient value most; 2) what does the patient most want to avoid; and (3) who will make decisions on the patient's behalf should they lose mental capacity [3]. These key questions are formally addressed in a single document created by Resuscitation Council UK in 2016, known as the ReSPECT (Recommended Summary Plan for Emergency Care and Treatment) form that is widely used in UK hospital trusts.
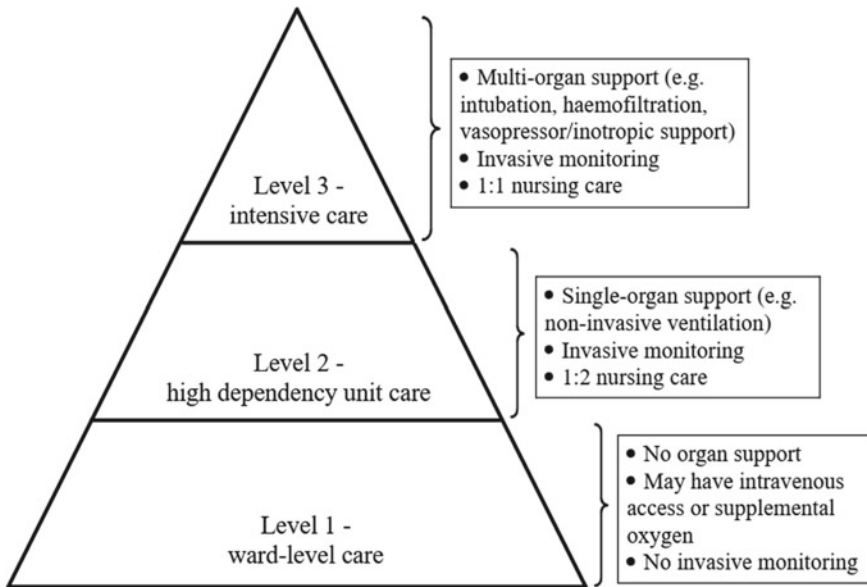
Fig. 8.1 Levels of care for the critically ill patient

You should adopt a consultative style during the decision-making process, balancing the risks and benefits to the patient, whilst also taking into account their personal values. The concept of medical futility is often used to guide these discussions, whereby a proposed treatment will not be offered if it is considered futile—in other words, the treatment cannot reasonably improve the patient's quality of life [8]. For example, if a multimorbid, frail patient presents with acute mesenteric ischaemia but is deemed not to be a suitable candidate for general anaesthesia due to significant cardiorespiratory co-morbidities, it stands to reason that intensive care support is futile as the patient will continue to deteriorate without surgical intervention, and therefore a ward-based ceiling of care prioritising patient comfort would be preferable. However, the circumstances may be less straightforward and these decisions are subjective, therefore any decision made should ideally be by mutual agreement with the patient and their next of kin. To take another example, if an elderly patient with no significant co-morbidities requires continuous positive airway pressure (CPAP) support due to severe post-operative pneumonia, but is struggling to tolerate the intervention secondary to claustrophobia, the physician may decide to reach a compromise with the patient by offering a single trial of CPAP for an agreed duration and to step down to a ward-based ceiling of care if they do not improve or fail to tolerate CPAP any further.

A closely related topic is the Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) order, which is usually made in the context of advance care planning. You should emphasize the distinction between DNACPR and other active treatments that may still apply, such as antibiotics, intravenous fluids, supplemental oxygen or

analgesia. As always, the decision is made in conjunction with the patient, weighing up the risks and benefits and taking into account their wishes. Some find it helpful to mention statistics of survival after a cardiac arrest (Box 1), but this should not be the sole focus of the discussion. The overarching principle is not to cause more harm than good (non-maleficence); the risks of CPR including rib or sternal fractures, hepatic or splenic rupture, brain damage and resulting disability, and subsequent requirement for intubation and ventilation in the intensive care unit, should be discussed openly and honestly. Another important point to discuss is that cardiorespiratory arrest is part of the dying process and CPR is unlikely to be successful when someone is dying from an advanced and irreversible or incurable illness [9]. Instead, the patient may find more solace in being fast-track discharged to their preferred place of death with close ones around them. Finally, the patient should be made aware that DNACPR forms are not legally binding, and they can always revisit the decision if circumstances change.

Box 8.1 Statistics of survival after a cardiac arrest (Royal College of Physicians, 2018) [9]

- Average survival to discharge after an in-hospital cardiac arrest: 15–20%.
- Long-term cognitive impairments remain in half of these survivors.
- Average survival to discharge after an out-of-hospital cardiac arrest: 5–10%.
- Non-shockable rhythm or unwitnessed cardiac arrest: survival rate <10%.
- In a person in the terminal stages of an incurable disease, the success rate of Cardio Pulmonary Resuscitation (CPR) is extremely low.
- In end-stage advanced cancer, the success rate of CPR is <1%, with survival to discharge close to zero.

The bioethical principles of patient autonomy and informed consent require that patients must be given as much information as they need, and that they are entitled to seek a second opinion (Chap. 6). A more pertinent issue in the context of end-of-life care is how much information the patient wishes to know. In general, you should not withhold information necessary for making decisions, unless you believe that providing the information would cause serious harm (more than just emotional upset) [4]. Patient autonomy, however, does not extend to requesting for treatments (including clinically-assisted hydration and nutrition) or CPR, and doctors are not legally obliged to provide such interventions that they believe are not clinically appropriate. If a mutual agreement cannot be reached, informal means of resolution include obtaining a second opinion, seeking advice from a more experienced colleague, holding a case conference, involving an independent advocate or using local mediation services. If these initial steps have failed, formal avenues would involve seeking legal advice and you may need to apply for an independent ruling from the Court of Protection [4].

Last but not least, there is the issue of mental capacity in relation to decisions around end-of-life care. Adults aged 18 or over can make a legally-binding advance decision to refuse treatment in the event that they lose mental capacity at the time

when the decision is needed. If the advance decision involves refusing life-sustaining treatments (including CPR), it must be in writing, signed and witnessed. Alternatively, a Lasting Power of Attorney (LPA) for health and welfare can be appointed to make those decisions on their behalf. Children under the age of 16 are governed by the rules of Gillick competence (Chap. 10) and can refuse treatment with capacity if deemed Gillick competent. Notably, there is a difference between English and Scottish laws in that parents can overrule a refusal of treatment under the former, but not the latter. End of life care decisions for children who lack capacity should be made in their best interests. Disagreements should first be resolved through informal means as discussed above, with formal legal avenues as a last resort.

Escalation Discussions with Colleagues

End of life care is a multidisciplinary effort involving surgeons (assuming admitting responsibility for the purposes of this discussion), nurses, allied health professionals (such as physiotherapists, dietitians and speech and language therapists), oncologists, radiologists, the palliative care team, and the patient's general practitioner, amongst others. Discussions with colleagues are useful not just for obtaining second opinions about escalation status (for instance, when there is any doubt or dispute) and prognostication, but also to provide holistic care for the patient. Crucial to the success of a multidisciplinary team is an understanding of each team member's roles and goals, with the use of negotiation and active listening to reconcile differences and forge a shared understanding of the patient's priorities of care [10].

Early engagement of the palliative care team is beneficial not only in terms of helping the patient and their family cope with grief, but from a multidisciplinary team perspective it serves as a reinforcing message as to the direction that the care of the patient should be taking. The palliative care team can provide specialist input on symptom management including pain, nausea, breathlessness, secretions and agitation, and are best placed to support and reassure patients and their families with regards to what they can expect as part of the dying process. Moreover, they can advise on rationalising medications, arrange chaplaincy involvement, and assist in fast-track discharges to home or hospice.

Conclusion

Escalation status and palliative care discussions remain central to our role as surgeons. When the need arises, it is vital that as the admitting team we are the first to broach the issue with the patient, even though we may feel disproportionately out of our depth – it is better to 'plant the seed' early and recognise that we do not have all the answers, than to ignore the elephant in the room and wait for the palliative care team to catch the patient by surprise when they first make contact. This chapter has

highlighted the key considerations when approaching a patient nearing the end of life. A consultative approach helps to empower patients and their families when discussing escalation status and palliative care decisions. With the combined expertise of a multidisciplinary team that places the wishes, preferences and beliefs of the patient at the centre of care, we can help this patient group preserve their comfort and dignity even in the last moments of their lives.

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Chapter 9
Navigating Patients' Emotions

Matthew Green

Abstract

- Discuss the important role healthcare professionals play in recognising and managing emotional situations with patients/relatives
- Outline and use a simple framework for approaching such situations
- Allow readers the chance to practically explore how they would manage two different scenarios involving highly emotional patients
- Offer readers the chance to develop the skills to approach future interactions with more confidence and consistency.

Keywords Communication · Surgery · Medicine

The Role of Healthcare Professionals

Conversations regarding our health and wellbeing, and that of those closest to us, provide a catalyst for a powerful emotional response. As healthcare professionals, we represent an important source of information, guidance and support for our patients and their families. It is our responsibility to do all we can to navigate these interactions effectively. Despite this, it is still important for us to accept that, no matter how experienced we may be, such situations can be extremely daunting.

This chapter will outline a framework for approaching emotive conversations with patients, and then use this to present two fictional scenarios. These scenarios could be used in preparation for exams, interviews or as a useful exercise to stimulate thought and discussion around the points raised in this book.

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Structure

Handling emotional situations is rarely clear-cut and there is no single 'correct way' to approach them. Having a rough structure in mind for approaching difficult scenarios helps us to present relevant points whilst remaining calm. The acronym 'SPIKES', can be a helpful way of organising our thoughts in high pressure situations. This is explored in more detail in Chap. 7: Breaking bad news, but in brief consists of Situation, Perception, Invitation, Knowledge, Empathy and Support.

Scenario 1: Angry Patient

You are working in vascular surgery. A 42-year-old female patient has come in for elective varicose vein ablation. The list has overrun, and it becomes apparent that her case will have to be cancelled. One of the nursing staff informs her of this. She becomes extremely angry and is demanding to see a doctor. You have been asked to speak to the patient. How would you approach this scenario?

Situation

- First of all, take a moment to prepare elements of the situation which are under your control: read through her notes to determine how long she has been waiting for the operation and whether it has been cancelled previously. Speak to the nursing staff; ensure you take a chaperone with you; If you have a bleep that can be safely left with another member of staff then do so, as a bleep mid-conversation may further inflame a potentially volatile situation.

You learn that this is the third time this lady has been cancelled. She has been seen in clinic on a number of occasions and has reported that her symptoms are starting to significantly affect her mood.

You feel you have prepared adequately for the conversation and approach the patient. As you approach, she angrily asks you why she has not gone to theatre, and states, "you can't cancel this operation again, I'm not leaving until I get my surgery". How do you respond?

Perception

- Offer the patient time to talk and vent their frustrations initially, without immediately trying to force your own reasoning on them. Open the conversation with, "I'm Dr. X on the vascular surgery team. I appreciate that we haven't met before, so would you like to first tell me about what's been happening?"

The patient is furious. She tells you that she cannot cope with her symptoms, she has stopped going out due to the pain in her leg, and is struggling to look after her young children. She reiterates that she will not leave until she has had her surgery.

Knowledge

- Now that you have ascertained what the patient understands it will be easier to respond to her worries and convey the information you need to, in the correct manner.
- Inform the patient that her surgery has been cancelled. Explain that the unpredictable nature of surgery does sometimes lead to a change in schedule.
- Apologise here. Although wording is important, it is important to unapologetically present the fact that theatre lists do change due to unforeseen circumstances. However, we are genuinely sorry that this has happed to this patient again.

Empathy

- In this situation it is vital that you acknowledge how difficult this further cancellation is for the patient and show insight into the disruption it may cause them. Whilst the situation may well be out of your control, it needs to be clear that the clinical staff share her frustrations and we are not on opposing sides.

Support

- Whilst demonstrating empathy and understanding is vital, it is also useful to include some proactive, practical measures which can be put in place to help the patient. For example:

  - If pain is an issue, it may be an appropriate gesture to review her medications.
  - If you feel able to, it may also help to reassure the patient that someone is fighting her corner. Whilst being careful not to give false hope, it may be a good idea to inform her that you will personally speak to the schedulers to try and find an appropriate list in the near future. If a patient has been cancelled multiple times, it may be appropriate to expedite their surgery and place them first on the next list.
  - Referral to specialist nursing teams may also be an invaluable source of ongoing support for patients awaiting surgery.

- The second element of this section is also about getting support for yourself if needed. If your conversation has not improved matters and the patient will not calm down, it may be advisable to seek support. You may for example want to speak to the patient's consultant. If they wish to make a complaint, then the consultant will need to be aware. This is also an appropriate time to debrief and reflect on the scenario, both with a supervisor and by yourself.

Scenario 2: Anxious Patient

You are working on the Surgical Assessment Unit. After seeing a 30-year-old gentleman with abdominal pain you decide to book him for a diagnostic laparoscopy, as he has a convincing presentation of appendicitis. Upon informing him of the need

for surgery he becomes extremely anxious and tearful. How would you approach this situation?

Situation

- Make efforts to create a private space.
- Check whether the patient would like someone present with him during the conversation.
- If possible, leave your bleep with a colleague, so the conversation may proceed uninterrupted.
- In the context of an anxious patient, adopting a calm tone and slower pace of speech can be reassuring.

Perception

- Again, offer the initiative to the patient by asking an open-ended question such as, "what do you understand about what is happening?". In doing so you not only gain an insight into what they have understood, but also allow them to dictate the pace of the consultation and ensure that you do not overload or overwhelm them.

The patient speaks quietly and tearfully, but demonstrates that he understands he may have appendicitis and that this would require an operation of some-kind. He informs you that he has never had surgery before and is worried about what this might involve. He also tells you that five years ago his father died in the operating theatre whilst having an open aortic aneurysm repair.

Knowledge

- Now we have a greater handle on what this patient understands and what may be driving his emotional response, we are better equipped to respond appropriately.
- After hearing this information, it is important to immediately acknowledge and empathise with the impact losing his father must have had on him.
- As this young patient has never undergone surgery, it is appropriate to start from the basics. Explain what an appendicectomy involves but also what the process of going for surgery involves: before, during and afterwards.
- Try to allay fears about the dangers of surgery. Any operation carries risk and this should not be understated. However, risk is relative and a laparoscopic appendicectomy clearly carries much less risk than an open aneurysm repair.

Support

- If the patient has no one with him, you could encourage him to speak to friends/relatives over the telephone.
- Ensure nursing staff on the ward are aware that this is a particularly anxious patient, as they will be a great source of support. If a side room is available, then this may also help to create a calmer environment.
- Try and see the patient again before and after surgery if at all possible. A familiar face may be comforting and reassuring.

Summary

The above scenarios have been presented in line with a structured approach. In practice, dealing with emotional situations is rarely structured or clear-cut. However, having a structure in place allows us to remain calm and collected in difficult situations. In essence this framework encourages clinicians to adhere to a solid set of communication principles, such as: good preparation of ourselves and our patients; allowing patients time and space to speak without being interrupted; delivering information in a sensitive manner and offering meaningful support wherever possible.

Chapter 10
Communication with Young People

Tanya Robinson

Abstract

- To explore the basic principles of communication with young people
- To understand the background and law underpinning capacity and consent in young people
- To understand Gillick competence and its relevance in clinical decision making.

Keywords Communication · Surgery · Paediatric · Capacity

Background and Law

Effective communication is fundamental for forming therapeutic and successful doctor-patient relationships in all aspects of Medicine. Communicating with children and young people comes with its own unique challenges though, making it difficult to navigate at times. Such challenges range from adapting to the understanding of the young person, communicating not only to the patient but to their parent(s) or guardian(s) too, and understanding the complexities of consent, capacity and competence in young people.

Communicating with children and young people should start with exploring what they and their parents already know about their health and treatment, and what they want and need to know. Approaching this may need adaptations such as using simpler terminology or using other forms of communication such as non-verbal techniques, and information provided must be appropriate to their age and maturity.

Shared decision-making in Medicine is extremely important for providing good care to patients. As a doctor treating children and young people you must of course keep them as your priority, understanding and respecting their thoughts, beliefs and preferences, whilst also involving their parents. However, a child or young person's ability to make decisions regarding their care is intertwined with the concept of Gillick competency and parental responsibility. In British law, those under the age

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of 18 are minors, under 16 are children, and 16- and 17-year-olds are young persons [1]. As children grow older, we can appreciate that their evolving maturity will impact their decision-making abilities. As outlined by Kennedy and Grubb in 1998 [2], there are 3 key stages in the development process to becoming an autonomous adult. Firstly, a young child who relies on a person with parental responsibility to consent to treatment. Secondly, a Gillick competent child under 16. Finally, 16- and 17-year-olds who can consent to treatment as if they were an adult [2].

Capacity and competence are two terms with similar meanings. Competence is a *legal* judgment and requires that a person can independently make a rational decision and understand the information provided to them. Capacity is a *medical* judgment which requires the patient to be able to communicate their thoughts and decisions, understand the information provided including the risks and benefits of an intervention, retain this information, and make a balanced decision based on this. It is important to remember that competence and capacity are time and decision dependent. So, for example, a child may have the capacity to consent for a minor, low risk procedure but would perhaps lack capacity for a more complex intervention with serious associated risks [3].

Children and young people can only consent to investigation, treatment or a procedure if they have capacity to do so. If a child or young person lacks capacity to consent then the decision lies with those with parental responsibility or a court. In an emergency situation where treatment of a child or young person is life-saving or will prevent serious morbidity, doctors can provide this treatment without consent. Those aged 16 and over are presumed to have capacity to consent. Those under the age of 16 are assessed for their competence and capacity to consent based on their maturity and understanding of what is involved; if they can then communicate, understand, retain and balance the information given then they are deemed Gillick competent [3].

What is Gillick Competency?

As touched upon above, the concept of Gillick competency relates to the ability of a child under the age of 16 to consent to treatment, irrespective of their parental consent. The initial Gillick case was related to contraception in children under 16 [1]. The Department of Health and Social Services (DHSS) set out guidelines in 1980 stating that doctors could prescribe contraception to children under the age of 16 without parental consent. Mrs Gillick, a mother to ten children, challenged the DHSS guidelines stating that they were unlawful and that they defied parental rights. Mrs Gillick lost her case in the House of Lords, and it was ruled that children who are competent may consent to treatment irrespective of their parents' knowledge or decision, and that the assessment of competence in minors should be the same as in adults. Therefore, any young person under 16 years of age who has capacity to consent to an investigation, treatment or procedure is referred to as "Gillick competent".

> **Key points to consider when assessing Gillick competence**
>
> - The maturity of the child, including their ability to independently form decisions while managing external influences.
> - Age and prior experience
> - Understanding of the indication, risks and benefits of the treatment.
> - Nature of the decision at hand, on a spectrum of a minor procedure to a major life-saving procedure.

Refusal of Treatment

The situation becomes more complex when a child is refusing treatment, and the law is variable by country. In Scotland, a competent child can refuse treatment and those with parental responsibility cannot consent in their place. However, in Wales, England and Northern Ireland, if a competent child refuses treatment, consent to treatment can be obtained from those with parental responsibility or a court if it is deemed to be in the child's best interests. This is obviously a challenging scenario, and legal advice should be sought if you deem a treatment to be in the best interests of a competent minor who refuses [4]. A summary of when young people can consent and refuse treatment is given in Table 10.1.

Scenario 1: Gillick Competent Refusal of Treatment

You are a surgical registrar on a Paediatric Surgery rotation. You go to review a 14-year-old girl who has come in with a 1-day history of right iliac fossa pain, reduced appetite, fever and raised inflammatory markers. On assessment the girl is profoundly septic and you suspect a perforated appendicitis. You proceed to discuss the management options with her and her mother, including that of an appendicectomy. The girl

Table 10.1 The ability to consent and refuse treatment dependent on age as set out by law. *The law in England, Wales, and Scotland is as above. *In Scotland those who are competent can refuse treatment and this cannot be overruled by a parent*

Age	Can they consent to treatments?	Can they refuse treatments?
Under 16 years and Gillick incompetent	No	No
Under 16 and Gillick competent	Yes	No*
Ages 16 and 17 years	Yes	No*
18 years and above	Yes	Yes

is adamant that she does not want an appendicectomy, stating that she just wants to get home as soon as possible. How do you approach the situation?

- You should firstly respect and explore the views and wishes of the young girl, ensuring she understands the situation and implications for her health.
- You would then assess whether she is deemed Gillick competent depending on her maturity and understanding, and whether she had capacity to consent or refuse treatment. At all times you would involve her mother in the conversation.
- In this scenario it seems as though, following initial resuscitation and treatment, an appendicectomy would be in her best interests. This should be explained in detail to the girl and her mother, clearly explaining the risks and benefits of the surgery but also of not doing surgery. If it remains that she is Gillick competent and still refuses treatment, then this is a challenging scenario that must be approached cautiously.
- It is important to remember that the laws differ depending on the country as outlined above. In Scotland, children who are competent *can* refuse treatment and this cannot be overruled by the parent. In Wales, England and Scotland children cannot refuse consent to treatment if consent has been provided by the parents or a court and this is in the child's best interests.
- Given the complexity of such a scenario you should consider the involvement of seniors, other members of the multi-disciplinary team (MDT), a designated doctor for child protection, or an independent advocate for the child.
- You may want to seek legal advice if such disputes about the best interests of the child are not resolved.
- Ultimately you and everybody involved in the decision-making process must balance the harm caused by potentially overriding a competent child's refusal of treatment with the benefits of treatment to conclude in the child's best interests.

Scenario 2: Gillick Incompetent Refusal of Treatment

You are the surgical registrar on-call and you are asked to cannulate an 8 year old boy who requires intravenous antibiotics for septic arthritis. His mother and father are present at the bedside and the boy is visibly upset. You explain to him and his parents that he needs a cannula in order to appropriately treat his infection, his parents agree to the cannula but the boy refuses. How to you approach this situation?

- As with the previous scenario you should firstly respect the child's views and explore his concerns. With him being 8 years old you may need to use simpler terminology to aid conversation.
- He is unlikely to have capacity to decide in this situation as he may not understand the potential consequences of not receiving his intravenous antibiotics. Nonetheless you can assess his competence based on his maturity and understanding of the situation and information given to him.

- In this scenario we have deemed this boy Gillick incompetent, and therefore parental consent is sufficient.
- This situation will need to be approached with empathy and patience, and continually communicating clearly with the boy and his parents to try and alleviate as much distress as possible. Alternative treatment options must be explored too, before concluding whether cannulation and intravenous treatment is in his best interests or not.
- The situation would be more challenging if the parents also refused treatment, and this would benefit from senior and MDT member involvement as with the previous situation.

Key points

- Competence is a legal judgement and capacity is a medical judgement.
- Capacity to consent requires the ability the **c**ommunicate, **u**nderstand, **r**etain, and **b**alance/weigh up the information given in relation to the proposed treatment. You can use the acronym **CURB** to remember these four essential requirements.
- Children under 16 may have capacity to consent depending on their maturity and understanding of the proposed intervention.
- Those aged 16 and 17 are presumed to have capacity to consent.
- For children and young people lacking capacity it is those with parental responsibility or a court who can provide consent.
- Capacity to consent is time and decision specific.
- Gillick competence refers to the ruling from the House of Lords Panel, which concluded that if a minor is competent, they can consent to treatment, and this does not require the corroboration of those with parental responsibility.

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Chapter 11
Communication with Patients with Learning Disabilities

Ciaran Barlow

Abstract

- Explore challenges associated with consultations involving patients that have a learning disability
- Arm the reader with simple strategies to assist in these consultations
- Provide a worked example to allow the reader to practice such strategies in a simulated environment.

Keywords Communication · Capacity · Learning difficulties

Introduction

According to Mencap, a learning disability can be defined as a reduced intellectual ability and difficulty with everyday activities which affects someone for their whole life. People with a learning disability tend to take longer to learn and may need support to develop new skills, understand complicated information and interact with other people [1]. They will experience difficulty with a certain aspect of communication whether that be limited comprehension, delayed processing, limited expressive language or difficulties with articulation [2].

The NHS estimates that approximately 1.5 million people in the UK have a learning disability. Of these, 350,000 are thought to be severe [3]. This means, that in a population of around 67 million people, just over 1 in 50 people could be thought to have a diagnosis of a learning disability. It is therefore likely that given that typical wards contain 24 beds, there will be a patient with a diagnosed learning disability on every other ward.

Health inequality is a significant problem for people with learning disabilities. In 2019, 85% of deaths in the UK population were in people who had lived to the age of 65 or over. In comparison, the corresponding proportion of the UK population living with a learning disability who died in 2019 over the age of 65 was 38%. Compared

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to the rest of the general population, people with a learning disability were three time more likely to die as a result of an avoidable cause of death (50%) [4]. Part of this is attributable to the problem of diagnostic overshadowing where the symptoms of physical ill health are automatically attributed as part of their learning disability or a mental health/behavioural issue.

Helpful Tips

The GMC provides five reasonable adjustments that can make a big difference in the care of patients with learning disabilities [5].

1. **Allow more time for consultations**
   It is important to appreciate that a consultation with a patient with learning difficulties is likely to take longer than normal. Therefore, appropriate foresight can ensure that the quality of the consultation is not compromised as well as ensuring there is no negative effect on the rest of the clinic. The extra time can be used to ensure you are able to build rapport, provide more thorough explanation and adapt to the individual needs of the patient. It is likely that the patient may require extended processing time.
2. **Make information accessible and try to provide it in advance**
   It is vital that you tailor your communication to the individual needs of the patient. There is no one size fits all approach. Medical jargon can be difficult to digest for the lay person, and is likely to be even more confusing for this cohort of patients. In 2017, the UK government introduced the Accessible Information Standard which aims to make sure that people who have a disability, impairment or sensory loss get information that they can access and understand [6].
   One strategy can be to send out information to the patient in advance. For example, in a consent clinic, it may be prudent to provide information on the procedure prior to the consultation. This allows for the patient to digest the information in their own time, and come prepared with any questions they may have. It ensures the patient has the best opportunity possible to be able to consent for themselves.
3. **Check for understanding**
   It is common for patients with learning disabilities to have their comprehension and communicative abilities to be under or over-estimated. For example, patients with a significant physical impairment may experience slurred or disordered speech and lead to an assumption of limited comprehensive abilities. Equally, a patient who is able to articulate well with good use of expressive language may be assumed to have good comprehensive and processing abilities.
   Short and simple sentences can be an effective technique to optimise understanding. Similarly, the use of literal language can help avoid confusion. For example, 'We are going to take you to theatre' is likely to be interpreted in the wrong context by the patient with learning difficulties.

Finally, it is also important to explore alternatives to verbal communication to ensure understanding. Pen and paper, writing, drawing, signing and the use of physical objects are all potentially valuable techniques.

4. **Offer the first or last appointment of the day if possible**
   Patients with learning difficulties are more likely to have hearing and visual impairment. Sitting in a crowded waiting area may cause undue levels of stress for the patient with learning difficulties. By offering the first appointment of the day you can reduce the likelihood of the patient having to stay in this area for too long as there is less likelihood of the clinic running behind schedule. Alternatively, the last appointment of the day may offer a time where the waiting room is likely to be less crowded.

5. **Demonstrate a physical examination on yourself or a carer**
   It may help the patient to comply with a physical examination if they have seen what it entails beforehand. Therefore, demonstrating on yourself or a relative may help alleviate any pre-existing concerns.

Consenting Patients with Learning Disabilities

According to the Mental Capacity Act (MCA) of 2005 [7], it is assumed that a person over the age of 16 has the capacity to consent to a decision. Law states that due to this default position, if appropriate, it is up to the professional to prove that the patient does not have the capacity to consent. Therefore, patients with learning disabilities over the age of 16 are assumed to have capacity until it is proven otherwise.

The MCA states that wherever possible, people should be assisted to make their own decisions. As outlined in the sections above, a variety of tools can be used to help patients with learning disabilities to understand information and communicate effectively. Consent can be given verbally, non-verbally or in writing. Similarly, for the consent to be deemed valid, it must be shown that the information shared with the patient has been displayed in an appropriate format. For example, if the patient is unable to read, this may be in the form of photographs or videos.

Where proven to lack capacity, it becomes the duty of the responsible healthcare professional to act in the best interests of the patient. When acting in their best interest, there are various considerations to take into account. These include:

- Whether the individual is likely to regain capacity—it is reasonable to assume that in the context of a permanent learning disability, the patient would be unlikely to do so.
- The person's past and present wishes and feelings, and any beliefs or values.
- Encourage participation of the patient.
- Consult with others who may share a close relationship with the patient. These include:

  – Anyone previously named by the patient
  – Anyone engaged in caring for them

– Close relatives and friends
– Anyone appointed under a Lasting or Enduring Power of Attorney
– Any deputy appointed by the Court of Protection.

It is worth noting, that assuming the patient is an adult, no other person (whether that be carer, relative or parent) can provide consent on their behalf as is possible in children. Therefore, should a patient be proven to lack capacity, a consent form 4 should be completed.

Communication Scenario

Ryan is a 43 year old who has presented to the Surgical Admissions Unit with a perianal abscess. He has a past medical history of Autism Spectrum Disorder but is otherwise fit and well. He smokes 10 cigarettes per day. He has been reviewed by the surgical registrar who has asked you to consent the patient for an incision and drainage.

Please consent Ryan for the above procedure, taking specific note of his learning disability and adjust your practice accordingly.

Station Guide

1. Setting: it is likely to be beneficial to enquire whether there is a carer, family member or trusted other who can be present. They are likely to be able to guide you in presenting the information in a way which Ryan is most likely to understand. This will not only make the consultation more valuable for Ryan, but save you precious time during a busy on call. Most hospitals will also have a Learning Disabilities team who may be able to assist you.
2. Knowledge: It is extremely important to not only deliver the information in a manner which matches Ryan's needs, but also to ensure that he demonstrates capacity to make this decision. Therefore, you should perform a formal capacity assessment. As this is an emergency situation, you will have minimal opportunity to provide information in advance. However, it is unlikely that an abscess will be taken to theatre immediately. Therefore, it could be beneficial to initially discuss the procedure and its relative risks/benefits before providing any additional materials (e.g. leaflets) which may aid understanding. You can then return after a short while to answer any questions and check Ryan's understanding.
3. Closure: Ensure all parties have a clear idea of the plan going forward. If Ryan has been deemed to have capacity, a consent form 1 should be completed. If lacking capacity, a consent form 4 should be completed.

Conclusions

- Patients with a learning disability are a vulnerable cohort of the population where careful consideration must take place to ensure they receive adequate care and protect them from health inequality.
- Ensure reasonable adjustments are made to your consultation to adapt to the individual needs of the patient.
- People with a learning disability do no automatically lack capacity.

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Part III
Scenarios and Frameworks: Teamwork and Teaching

Chapter 12
Referrals and Requests

David Stark

Abstract

- Explore the 'SBAR' framework for referrals and requests
- Provide four example scenarios that are commonly encountered in clinical practice and tested in interviews and examinations, including referrals to other teams, radiology requests and calling your consultant.

Keywords Surgery · Communication · Referral

Introduction

High calibre communication with colleagues facilitates efficient transfer of relevant information at the most appropriate time and is directly related to patient outcomes. It is also fundamental to streamlining the healthcare system and preventing wasted resource and time. This concept encompasses referrals to other subspecialties; referrals to intensive care (ITU); requests for investigations such as radiological imaging; and discussions with senior clinicians.

Communication with colleagues is assessed throughout the surgical career: with the 'call the boss' scenarios that are common at specialty interviews as well as in the Member of the Royal College of Surgeons (MRCS) examination. SBAR (situation, background, assessment, recommendation) prevails as the gold standard approach to patient handover in modern-day clinical practice (Fig. 12.1). This technique was initially developed and introduced by the United States Navy during submarine duty handovers [1]. Additionally, in 2002 the rapid response teams at Kaiser Permanente first implemented the SBAR acronym within healthcare after observing the diversity of communication styles, thereby structuring the communication between colleagues providing a detailed patient summary and alerting a current concern [1]. This advanced communication satisfaction between staff by encouraging a shared

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decision-making process [2]. SBAR is a memorable outline that enables individuals to escalate accordingly, raise attention on matters that require immediate action, facilitate effective handover and minimise communication errors during handovers. However, to utilise these benefits all healthcare professionals within a workplace must be trained to use the SBAR framework. In this chapter, we will introduce this powerful tool and illustrate its use by providing worked examples.

S Situation
1. Personal identification
2. Patient concern/reason for call
3. Patient identification and location

B Background
1. Reason for patient's admission, date of admission and admitting diagnosis
2. Relevant medical history / drug history / social history
3. Background of current concern
4. Relevant treatment so far

A Assessment
1. NEWS / vital signs / ABCDE / clinical impression / examination / investigations
2. OR "I'm unsure what the problem is but I'm concerned"

R Recommendation
1. Specify request: Telephone advice? Patient assessment?
2. Specify time frame: "This patient requires an urgent review"
3. "Is there anything that I should do in the meantime?"
4. Make suggestions

Fig. 12.1 SBAR framework

Scenario 1: Intensive Care Unit

Vignette

Mr. Smith is a 75-year-old male who has presented with generalised peritonitis. The consultant has decided to perform an urgent laparotomy. Your senior has given you the task of contacting the intensive care unit (ICU) to arrange a post-operative bed.

History

- HPC: sudden onset severe abdominal pain, graded 9/10, worse when lying down and associated with vomiting.
- PMH: type 1 diabetes mellitus (T1DM).
- DH: short and long-acting insulin, no known drug allergies.
- SH: lives with wife, smokes a pack of cigarettes a day.

Examination

- Abdomen grossly tender.
- Left abdominal guarding.
- Digital rectal exam (DRE) normal.

Investigations

- Observations: HR 110, BP 92/59, RR 24, SpO2 92% on air, T 38.2.
- Chest x-ray (CXR): normal.
- Bloods: CRP 340, WCC 11, Hb 88, Na 133, Cr 160.
- Abdominal ultrasound (US): free fluid in the abdomen.

Referral

Situation

- Hi, my name is David, surgical senior house officer (SHO). Can I confirm who I am speaking to please?
- I'm calling regarding a septic, peritonitic patient who is scheduled to undergo an emergency laparotomy today. I'm hoping to get your advice on peri-operative optimisation and arrange a post-operative ICU bed.
- The patient's details are.. (name, date of birth, hospital/NHS number, ward, bed space).

Background

- 75-year-old male admitted today with sudden onset abdominal pain, associated with guarding and vomiting.
- Background of T1DM on insulin and currently on a sliding scale.

Assessment

- Examination: generalised peritonitis.
- Observations: hypotensive, tachycardic and febrile.
- Investigations: Inflammatory response, anaemia, acute kidney injury and the abdominal ultrasound shows free fluid.

Recommendation

- Resuscitation: oxygen, fluids and catheterise (strict fluid balance monitoring).
- Initial management: sepsis 6 (blood cultures, urine output, fluids, antibiotics, lactate, oxygen).
- Investigations: arterial blood gas (ABG) and erect CXR.
- Operative: laparotomy.
- Post-operative ICU bed for organ support (cardiovascular due to sepsis and gastrointestinal) and close monitoring.
- Treatment escalation plan and update family.

Conclusions

When referring to an ICU team you must place yourself in their shoes. They are a busy team looking after a multitude of unwell patients. The key to success is conveying the critical information early on: 'septic' and 'peritonitic' are buzz words that will catch their eye and focus their minds. You must also be specific in your request: 'I'm hoping to get your advice… and arrange a post-operative ICU bed'.

Scenario 2: Tertiary Centre Referral

Vignette

You are at a small district general hospital (DGH) without cardiothoracics or interventional radiology input. Mr Smith is a 40-year-old male who was involved in a motorbike vs car road traffic accident (RTA). On arrival to the emergency department (ED), a chest drain was inserted and drained 300 ml of blood. He is systemically shocked and has had 3 L of fluid resuscitation, to which he is responding. Major haemorrhage protocol (MHP) has been requested. Mr. Smith is complaining of chest pain. Your registrar has documented that this patient should be transferred to a tertiary centre after a discussion with the cardiothoracic consultant.

History

- HPC: Motorcycle rider traveling at approximately 30 mph, slid on an oil patch causing him to lose control and crash into a parked car.
- PMH: Nil and DH: Nil.

- SH: Independent, non-smoker.

Examination

- Airway patent, three-point inline immobilisation of c-spine.
- Mild dyspnoea, right-sided chest pain, no surgical emphysema.
- Abdomen soft and non-tender.
- Right thigh tenderness and obvious deformity.

Investigations

- Observations: Glasgow Coma Scale (GCS) 14, HR 122, BP 102/60, RR 24, Sp02 94% on 4L, T 37.
- Bloods: Hb 80.
- CXR: mediastinal widening and haemothorax.
- Abdominal XR: psoas shadow not visible, small bowel dilated loops.
- Femoral XR: closed femoral midshaft fracture.
- Computer tomography (CT) scan is not available at the moment.

Referral

Situation

- Hi, my name is David, a core surgical trainee at X DGH. Could I confirm who I am speaking to please?
- I'm calling to discuss a major trauma patient that we feel needs cardiothoracic input and urgent transfer to your unit.
- The patient's details are.. (name, date of birth, hospital/NHS number, ward, bed space).

Background

- 40-year-old, otherwise fit and well male, involved in a motorbike vs car RTA 2 h ago.
- CXR: mediastinal widening and haemothorax.
- Right femur XR: closed femoral midshaft fracture.

Assessment

A: Patent, c-spine stabilised.
B: Chest drain inserted and drained 300 ml of blood.
C: Haemodynamically shocked, fluid responsive, awaiting blood products.
D: GCS 14, pupils equal and reactive to light.
E: Motor and sensory functions of limbs intact. Peripheral pulses are palpable and capillary refill time is 2 s.

Recommendation

- Resuscitation:

  - MHP and blood resuscitation 1:1:1.
  - Keep patient warm.
  - Thomas/traction splint for femoral fracture.
  - Repeat CXR now drain inserted.

- CT if no delay in transfer.
- Transfer patient urgently after liaising with bed managers.

Conclusion

This is a patient who has been 'scooped and dropped' by the paramedics at a small DGH without full trauma services. It is imperative that initial resuscitation is started here, but the surgical and emergency teams have rapidly identified that this patient will require transfer to a separate unit for definitive treatment and observation. You have highlighted the key information early on in your referral: 'major trauma patient' 'needs cardiothoracic input'. You have provided clear recommendations and will await their response.

Scenario 3: Radiology Request

Vignette

A 67-year-old lady has attended ED due to difficulties mobilising secondary to leg weakness. No associated constitutional symptoms. You are concerned about cauda equina and feel an urgent magnetic resonance imaging (MRI) is indicated.

History

- HPC: one-day history of urinary incontinence and bilateral lower limb weakness.
- PMH: Hypertension (HTN), atrial fibrillation (AF) and previous breast cancer (mastectomy).
- DH: Ramipril and apixaban.
- SH: Lives at home with husband, package of care twice a day.

Examination

- Severe tenderness of lumbar spine on palpation during log roll.
- Neurological examination: bilateral motor weakness of knee extension, foot dorsiflexion and plantarflexion. Decreased sensation of dermatomes L4 to S2.
- DRE: saddle anaesthesia and no anal tone.

Investigations

- Observations: GCS 15, HR 75, BP 131/83, RR 16, Sp02 95% on air, T 37.1.
- Bloods: CRP 55, WCC 9, ALP 154, Ca 2.5.

Request

Situation

- Hi, my name is David, the on-call surgical SHO. Can I confirm that I'm speaking to the radiology registrar on-call?
- I would like to organise an MRI scan for one of my patients overnight to rule out cauda equina or malignant spinal cord compression.
- The patient's details are.. (name, date of birth, hospital/NHS number, ward, bed space).

Background

- 72-year-old female presented to ED with severe thoracic/lumber back pain, associated with acute onset bilateral leg weakness and urinary incontinence.
- PMH: HTN, AF and previous breast cancer (mastectomy).
- Treatment escalation plan = for resuscitation.

Assessment

- Neurological examination shows bilateral motor weakness of knee extension, foot dorsiflexion and plantarflexion. Decreased sensation of dermatomes L4 to S2.
- DRE: saddle anaesthesia and no anal tone.

Recommendation

- Complete MRI checklist - ask the patient about metal fragments and cardiac pacemaker.
- Check that cannula in situ.
- Update senior and consider intravenous steroids.
- Referral to oncology and neurosurgery.

Conclusion

This is a surgical emergency. Any concerns about cauda equina or spinal cord compression need to be investigated immediately to prevent long term neurological disturbance. Your concerns have been 'top loaded' in your request and the radiologist will identify the clear urgency and need for the investigation. You have provided all of the key information and the radiologist will organise the scan.

Scenario 4: Overnight Escalation to Consultant

Vignette

It is 0200 and you are the plastic surgery registrar on call. A 48-year-old gentleman has been brought into ED by his girlfriend, confused with a painful leg. He is critically unwell and you are concerned about necrotising fasciitis. You want to take him to theatre immediately and will need your consultant to come in to help you.

History

- HPC: bitten by insect 3 days ago on left foot. Spreading redness over last 6 hours and become generally unwell, feverish and confused.
- PMH: T2DM.
- DH: metformin. No allergies.
- SH: lives with girlfriend. Non smoker.

Examination

- Redness spreading up to groin. 10/10 pain on palpation. Crepitus. Evidence of necrosis of the skin.
- Patient lethargic.

Investigations

- Observations: GCS 14, HR 140, BP 80/40, RR 28, SPO2 94%.
- Bloods: CRP 300, WCC 20, lactate 4.8.

Call to Consultant

Situation

- Hello, my name is David Stark, I am the plastic surgery registrar on call.
- I have seen a critically unwell patient who I believe has necrotising fasciitis and needs to go to theatre immediately. Could you please come in to help me in theatre?
- The patient's details are.. (name, date of birth, hospital/NHS number, ward, bed space).

Background

- This is a 48-year-old man who was bitten by an insect on his foot 3 days ago and has since developed spreading redness and has become generally unwell.
- He has a background of T2DM.

Assessment

- General:

- – Assessed A-E according to CCRISP. Airway patent, breathing normal.
- – He is in septic shock: tachycardic, hypotensive, febrile.

- Specific:

  - – Erythema spread to his groin with necrosis and bullae.
  - – Crepitus and 10/10 pain.

- Investigations

  - – Bloods: CRP 300, WCC 20, lactate 4.8.
  - – Imaging: Not done as do not want to delay patient going to theatre.

Recommendations

- Immediate

  - – Systemic resuscitation according to CCRISP: O2, IV access and fluids.
  - – Broad spectrum IV antibiotics according to trust protocol and discussion with microbiology.
  - – Discuss with ICU for organ support.
  - – NBM.

- Definitive: operative

  - – Inform on call anaesthetist, inform theatre co-ordinator.
  - – Consent the patient for extensive debridement and counsel regarding limb threatening condition.

- Ongoing: this patient will require post-op ICU bed and review in theatre in 24–48 h.

Conclusions

This is a critically unwell patient with necrotising fasciitis. The patient needs to go to theatre immediately for life-saving surgery, with ICU input for organ support. You as a registrar should not be undertaking this operation alone; you need consultant input. You have called your consultant and provided the salient information. You have shown you understand the gravity of the situation and demonstrate competency in arranging the broader management of this patient. Your consultant will come in and help with the debridement.

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Chapter 13
Communicating in Theatre

Rabeet Khan

Abstract

- To discuss how improved communication in an operating theatre can reduce surgical morbidity and mortality
- To describe the role of the World Health Organisation's (WHO) Surgical Safety Checklist in optimising communication in theatre
- To describe the individual components of the WHO Surgical Safety Checklist and its protocol.

Keywords Surgery · Theatre · Communication · Teamwork

Introduction

Communication between healthcare professionals working within the operating theatre has an essential role in information transfer and patient safety. It has been demonstrated that the majority of surgical errors leading to poor surgical outcomes arise from a lack of effective communication [1]. This is because the technical demands of an operation are most effectively met by the surgeon through collaborative work with theatre staff. This requires both non-verbal communication e.g. anticipating the actions of the surgeon through observation of body movements, and direct verbal communication e.g. voicing concerns regarding an observed complication. The World Health Organisation (WHO) has developed a range of protocols that increase patient safety through improving team communication and structure [2]. These protocols include the surgical briefing/debriefing and the WHO checklist which has been adapted in various formats in different health centres around the world to minimise surgical error related morbidity and mortality. An international study assessing the impact of the WHO checklist on morbidity and mortality in a global population showed that the checklist reduced non-cardiac surgery related death rate by 0.7% and inpatient complications by 4% [3].

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Surgical Brief

A surgical brief is a daily pre-operative meeting involving all members of the surgical team including doctors, scrub nurses and other associate theatre staff [4]. The meeting involves identification of all staff members and planning of the day's operating list. It ensures that all members of the team are well informed of the surgical cases, anaesthetic details and any anticipated complications or contingencies.

The surgical brief is required for both elective and emergency operating lists and should be led by the member of staff who is most familiar with the patient; most commonly the lead surgeon. The brief initiates with the introduction of all members of staff within the theatre along with their individual roles and skill levels [4, 5]. Staff members with specific learning goals e.g. junior trainees and medical students are identified to ensure individual learning objectives are met when possible [5]. This is followed by discussion and clarification regarding the type and order of operations during the day [4, 5]. The lead surgeon is required to provide a general overview of what each operation will involve, the estimated time duration and any anticipated problems. Any additional requirements such as the need for specific instruments, pathology or radiology are documented and organised. Subsequently, the theatre anaesthetist discusses anaesthetic particulars e.g., the type of anaesthetic to be used, anaesthetic optimisation issues or the potential need for ICU transfer.

The pre-operative brief is an important opportunity for any staff members to raise concerns regarding factors that may affect surgical efficacy e.g., staff shortages, equipment problems, and other clinical or logistical issues. This encourages an atmosphere of open communication which in turn facilitates effective teamwork. Its introduction has therefore led to a decrease in communication failures by 66% and surgeon reported delays by 82% [6].

WHO Checklist

The WHO surgical safety checklist (Fig. 13.1) [7] originated in 2008 from the WHO's 'Safe Surgery Saves Lives' program [2]. This program sought to develop a strategy to minimise adverse outcomes in patient care which are estimated to cost the NHS £1 billion per year [8]. The aim of this program was to utilise a peri-operative checklist to achieve the WHO's ten core objectives for safe surgery [2] which are:

1. The team will operate on the correct patient at the correct site.
2. The team will use methods known to prevent harm from administration of anaesthetics, while protecting the patient from pain.
3. The team will recognise and effectively prepare for life-threatening loss of airway
4. The team will recognise and effectively prepare for risk of high blood loss
5. The team will avoid inducing an allergic or adverse drug reaction for which the patient is known to be at significant risk.
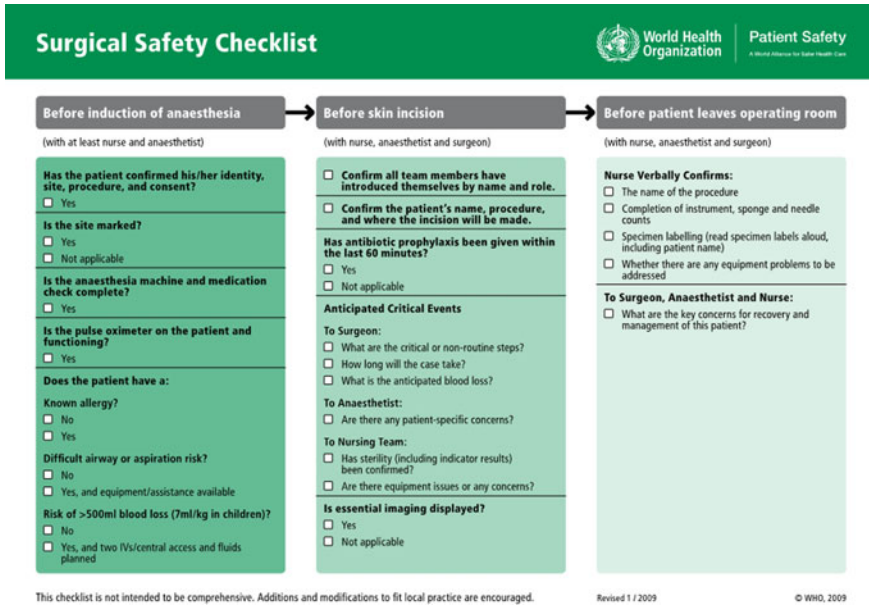
Fig. 13.1. The WHO surgical safety checklist [7]. Reproduced from—The WHO Surgical Safety Checklist. Produced by the World Health Organisation (WHO). Copyright WHO (2009)

6. The team will consistently use methods known to minimise the risk for surgical site infection
7. The team will prevent inadvertent retention of instruments and sponges in surgical wounds
8. The team will secure and accurately identify all surgical specimens
9. The team will effectively communicate and exchange critical information for the safe conduct of the operation.
10. Hospitals and public health systems will establish routine surveillance of surgical capacity, volume and results.

Checklists are widely used in several professions and have been shown to support memory recall and improve teamwork through improved communication of the minimum expected steps in a complex process [2]. This is particularly useful in an operating room setting where several key patient details can be overlooked in a stressful environment.

The WHO surgical safety checklist has 3 phases, with each phase corresponding to a specific time period during the operation as shown in (Fig. 13.1); specifically the period prior to anaesthetic induction, the period post-anaesthetic induction but before surgical incision and the period immediately after surgical site closure [7]. In the UK, these phases are also referred to as sign in, time out and sign out respectively. It is key that a single coordinator is nominated to conduct the checklist to prevent oversights. The checklist coordinator is required to ensure that all components of each phase

are completed before progression onto the next phase. The checklist requires the coordinator to verbally and visually check that each step has been completed with the relevant team member; this includes visually checking that the surgical site has been marked appropriately and verbally confirming patient details with the team and the patient before the induction of anaesthesia.

Prior to the start of surgical intervention, all team members are introduced, patient identity and type of procedure is confirmed and anticipated critical events are discussed with the surgeon, anaesthetist and scrub nurse. Team members will confirm that prophylactic antibiotics has been administered within the last 1 h to minimise the risk of surgical site infections and that any relevant imaging is on display for surgical planning.

Following completion of the operation but prior to departing the theatre, the team is required to review the operation conducted, ensure that instrument and swab counts are accurately recorded and that any specimens taken during the procedure have been labelled. Surgical equipment problems identified during the procedure are reported and post operative care plans are documented following discussion with the surgeon and anaesthetist.

A standardised approach to peri-operative checks minimises the risk of errors created by the conduction of procedures in different hospital settings with different team members in an area of high patient turnover [2]. The use of a checklist system has reduced morbidity by 36% and overall mortality by 47%, with a 62% reduction in mortality related to emergency procedures [5]. It is therefore crucial that all junior surgical trainees and theatre staff are well informed on these protocols.

De-brief

A surgical debrief is a short meeting conducted at the end of the procedure after the time-out period of the WHO checklist [5]. The concept of a debrief was first introduced as a self-improvement tool in the military during World War II and is now commonly utilised by the surgical team to discuss in retrospect, various aspects of team performance in a constructive and supportive environment with an aim to improve the functioning of the surgical team [9].

Debriefing in the operating room can be challenging as minimising costs and the duration of anaesthesia needs to be balanced with the need for an effective debrief. It is therefore important that debriefs are structured and involve all team members for optimal efficiency. Debriefs can be led by any team member and should ideally be conducted immediately after a procedure when information recall is optimum. The 'London Handbook for Debriefing' created by Imperial College London introduced the acronym SHARP, which acts as a reminder for the 5 key components of an effective clinical debrief [10]:

Before the case

1. **S**et learning objectives—which skills require further development?

After the case

2. **H**ow did it go?—What aspects of the procedure went well?
3. **A**ddress concerns—What aspects of the procedure could be improved?
4. **R**eview learning points—Were the assigned learning objectives met during the procedure?
5. **P**lan ahead—Future goals to improve surgical practice.

Actions required to resolve issues surrounding the operation should be documented and a specific team member assigned to deal with this. Any issues compromising patient safety should be reported formally through the local incident reporting system.

Debriefing promotes reflective practice through open communication, allowing all members of staff to receive immediate feedback and develop their skillsets over time. It allows identification of errors during the operation that can be addressed in a timely fashion hence reducing patient morbidity and mortality [9]. From an individual perspective, successful implementation of the debrief creates a sense of unity within the team and therefore promotes communication and improves work satisfaction [9].

The WHO Surgical Safety checklist is now an integral part of safe surgical practice in several healthcare centres around the world and its role in reducing surgical morbidity and mortality has been demonstrated on a global level. The checklist provides a structured approach to communicating in theatre by formalising pre and post-operative checks, ensuring that all team members are aware of potential complications and that key post operative care plans are documented. On a personal level, the checklist encourages participation of all members of the surgical team and creates an opportunity for learning and formal feedback that allows for identification of areas of improvement and continual improvement in surgical practice.

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Chapter 14
Responding to Significant Events

Benjamin Lin

Abstract

- Defining what constitutes a significant event
- Strategies on prevention of significant events
- Tactics for good communication in high pressure scenarios
- How to manage significant events once identified.

Keywords Surgery · Never event · Patient safety · Complications

Introduction

A significant event is defined by the General Medical Council as any unintended or unexpected event, which could or did lead to harm of one or more patients [1]. As Florence Nightingale famously said, "the first requirement in a hospital is that it should do the sick no harm", but humans make errors, not only in surgery but in all areas of life. Whilst many failures and misjudgements can often be remedied by an apology or a cheque, in medicine mistakes can have more severe consequences.

Surgery, by the very nature of being an interventional specialty, is prone to incidents. Surgical complications are inevitable—around 50% of all medical errors in UK hospitals are related to surgical procedures [2].

It is important to deal with adverse events both in prevention as well as in the aftermath of the incident. Whilst the chapter before looked broadly at systematic changes that can be made through protocol such as briefing, debriefing and the WHO checklist, this chapter will examine some more of the interpersonal skills required to manage adverse events.

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Prevention of Significant Events

In surgery, as in all of medicine, building a good team and department relies on building a culture that encourages transparency, teamwork and accountability. A review by Pattni et al. found that broadly the inability to speak up in the operating theatre could be boiled down to three themes [3]:

1. poor intercommunication skills
2. hierarchical challenges
3. power differentials between specialties.

Inadequate communication in the operating room has also been identified as the most common behavioural factor contributing to "never events" such as wrong site/side procedure, wrong implant, retained foreign object, or wrong procedure [4, 5].

Typically, efforts to facilitate communication in the operating room have involved three main strategies:

- Standardization of communication via checklist (e.g., preoperative checklist/briefings) or closed-loop communication
- Assertive language
- Education.

Closed Loop Communication (CLC)

Of all available healthcare communication strategies, Closed-Loop Communication is perhaps the most amenable to the operating room environment. The sender gives a message (the call-out), the receiver repeats it back (the check-back), and the sender confirms the message is correct (closing the loop). An example of CLC is as follows:

Surgeon: *John, please administer 1.2 g of Co-amoxiclav now.*
Anaesthetist: *Definitely. Administering 1.2 g of Co-amoxiclav now.*
Surgeon: *Great, thank you John.*

The efficiency, accuracy, and precision of CLC complements the requirements of the operating room by ensuring efficient information transfer in a dynamic environment. Evidence from other high-stake industries, such as aviation and the military, as well as simulated healthcare studies suggests CLC may improve safety [6].

Assertive communication

In theatres it can often be daunting to speak up, especially when providing a challenge. Assertive communication involves stating your thoughts/feelings without causing offence or being aggressive. It is important to be firm, but non-inflammatory. Example phrases that may facilitate this include, "I am concerned that…" or "I do not feel comfortable with…".

A particular technique that can also be used to help with assertive communication is the two-challenge rule, adopted from the aviation industry.

The two-challenge rule is an advocacy-inquiry process—suggesting a question and expecting a genuine, specific answer. In aviation, failure to respond to 2 consecutive challenges allows another team member to take over the duties of another. In the operating room, it should alert the team and empower the advocate to seek further help from other team members [7].

Trainee:	*I can see that this patient is on Warfarin with an INR of 2.5. I understand that this is a low risk procedure, but given that it is not an emergency, should we not wait to reverse this before operating?*
Consultant:	*No/No reply/Nonsensical answer.*
Trainee:	*I worry that the blood is too thin to do this operation safely. I am worried that it is unsafe and that we should consider if this operation is the right thing to do at this time.*
Consultant:	*No/No reply/Nonsensical answer.*

Trainee should now seek additional help to resolve the disagreement and to ensure patient safety.

Responding to Significant Events

Despite our best efforts however, some significant events are unavoidable or slip through the 'swiss cheese' model. A significant recent example of this is the public inquiry into serious failings at the Mid Staffordshire NHS trust, for which the Francis Report was commissioned in 2013 [8]. The report found that primarily, patients were routinely neglected by the trust which was preoccupied with cost cutting, targets and processes and in doing so lost sight of its fundamental responsibility to put the patient first and to provide safe care. The report made a total of 290 recommendations, one of the largest being the introduction of a statutory "Duty of Candour", which acknowledges 3 key characteristics:

1. Openness:

    a. In order to enable concerns to be raised and disclosed freely without fear.

2. Transparency:

    a. To allow accurate information concerning outcomes and performance to be shared.

3. Candour:

    a. So that regardless of whether an official complaint has been raised, if a patient has been harmed by a healthcare provider, they are informed of the fact and appropriate remedy offered.

Formally, the General Medical Council (UK) professional Duty of Candour states that [9]:

- "Every healthcare professional must be open and honest with patients when something that goes wrong with their treatment or care causes, or has the potential to cause harm or distress. This means that healthcare professionals must:
- Tell the patient
- Apologise to the patient
- Offer an appropriate remedy or support to put matters right where possible
- Explain fully to the patient the short and long term effects of what has happened.
- Healthcare professionals must also be open and honest with their colleagues, employers and relevant organisations, and take part in review and investigations when requested.
- They must also be open and honest with their regulators, raising concerns where appropriate. They must support and encourage each other to be open and honest, and not stop someone from raising concerns.

It is also important to have personal frameworks that can be applied to challenging scenarios, and in this respect managing significant events. A commonly used framework is SPIES:

- Seek Information
- Patient Safety
- Initiative
- Escalate
- Support.

An example scenario of how the above could be used in a significant event is as follows:

Case: You are a surgical registrar training a junior colleague through a diagnostic laparoscopy to visualise any peritoneal disease as part of the routine work-up for a Gastrointestinal cancer patient. All is well when all of a sudden the trainee moves the instrument too fast and injures the spleen which bleeds profusely.

Seek Information

It is important in the short term to find out what has happened and what has been injured. This is an appropriate time to employ good communication skills to let the team know the situation, to stay calm and to investigate the cause of bleeding.

Patient Safety/Initiative

In the immediate period, it is important to take the lead to ensure the bleeding is controlled and appropriate actions taken to ensure the physiological safety of the patient, liaising with the anaesthetic team.

Escalate

It is important to escalate both to all theatre staff about the situation, but also to make senior colleagues aware of the situation. This allows everyone in theatres to be aware of the issue and therefore to have a common goal in managing the patient further. This will include peers and seniors not only of your own team, but those of other specialties within theatres such as the nursing, anaesthetic and theatre teams.

Case: The decision is made to perform a splenectomy in the patient due to the injury. The patient remains haemodynamically stable and the remainder of the operation proceeds without complication. The patient is transferred to recovery and later the ward.

Support

Once the patient has been managed and is safe, it is important to offer support not only to the patient through Duty of Candour, but also to your colleagues. This would involve telling the patient at the soonest appropriate opportunity about the complications intraoperatively, and to apologise for the splenic injury. It is then important to support the patient by explaining the consequences of having a splenectomy and what the future may entail, giving the patient time to process the information and to ask any questions they may have.

Following this it is important to support colleagues involved in the case and to debrief with the team. In this scenario, it would be important to ensure that the trainee in particular is adequately supported.

From a systematic standpoint it is important through clinical governance to then flag the case through reporting. The aim of the incident reporting and investigation procedure is not to apportion blame but rather to identify and address the underlying causes and prevent incidents recurring. Incident reporting is the foundation of effective risk management. Each trust at time of writing will have a reporting system such as the DATIX system.

Any adverse incident which has the potential to produce unexpected or unwanted effects, or has a consequence or learning point should be reported. This may include any issue, be it clinical, environmental or professional in nature. By reporting an event, an official record of the event is created which can be recalled and referred to in the future. Once created, this report is assigned a case manager, usually the line manager of the department, and requires response within 2 days of the incident being reported with timely investigation started depending on level of risk. The investigation involves a root cause analysis, which identifies the timeline of events and works to identify contributing factors to generate solutions. The investigation will then be presented to relevant teams at the individual, clinical and divisional level through meetings such as Morbidity and Mortality meetings.

Supporting Colleagues

With all errors, particularly where patient harm is involved, there will always be staff who, rightly or wrongly, feel or are seen as responsible for the outcome. This has led to healthcare professionals being termed the second victims of adverse events in healthcare [10]. Nothing matters more to healthcare professionals than providing good safe care to their patients, but in a complex, pressurised, changeable environment it can be difficult to consistently provide the level of compassionate care we would like to. Even in a perfect system, working in healthcare can be mentally, emotionally and physically demanding and research shows there is a strong link between the wellbeing of staff and the outcome of their patients. Unfortunately, there is often inadequate organisational support, but informal support mechanisms will often boil down to heavy reliance on peers and family [11]. It is therefore imperative to support colleagues following a significant event to look after wellbeing and ultimately contribute to better patient care.

Conclusion

Adverse events are an unavoidable part of working in healthcare. Studies have shown that an estimate of between 4 and 17% of hospital admissions are associated with an adverse event with a significant proportion of these (one- to two-thirds) being preventable [12]. It is therefore important to manage and minimise these risks as best as possible. Risk management is one of the 7 pillars of clinical governance and is achieved through openness, analysis and education in order to provide the safest possible patient care.

Adverse events are not only often preventable, but can be incredibly stressful and harming to both patients and healthcare workers. It is important therefore to have strategies to fall back on in times of crisis, in order to maintain good communication and support. Rather than hiding away when significant events occur, whether through embarrassment or fear of blame, it is this openness, honesty and clarity which ultimately allows surgeons to prevent future reoccurrence and become better clinicians.

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Chapter 15
Surgical Training and Feedback

Chandra Shekhar Biyani, James Tomlinson, and James Thornton

Abstract

- Understand the importance of feedback
- Identify the key requirements for delivering good feedback
- Explore the pros and cons of different feedback models
- Understand some of the barriers to effective feedback, and relate these to your own practice.

Keywords Surgery · Training · Feedback

Introduction

The focus in medical training has moved towards competency-based from knowledge acquisition and time-based training. It is therefore essential for a learner to reach specific expected milestones. Timely and meticulous feedback on performance would certainly help them to achieve these targets [1]. Although a relatively new research area, we are beginning to understand the significance of structured and well-timed feedback in surgical training [2–4], especially the role of trainee-trainer interaction episodes and the importance of the nontechnical skills of a trainer [5]. The role of practice and feedback in developing expertise has been well described but is often misquoted as the '10,000-h rule' [6]. The role of expert guidance, targeted

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practice and feedback are undisputed in the development of expertise in technically demanding fields.

Feedback is a dynamic process and is a crucial aspect of any method of training. Suboptimal or failure to offer feedback could be dire because "…mistakes go uncorrected, good performance is not reinforced, and clinical competence is achieved empirically or not at all" [7]. This risks poor quality patient care.

The objective of feedback is to accomplish a positive and constructive enhancement in the attainment of a particular skill. Appropriate feedback helps to build trust, and a sense of psychological safety that allows trainees to develop, engage, and promotes patient safety, improves clinical performance and confidence in skills [8, 9]. A specialised form of feedback "debriefing" is the developmental conversations that take place after a real or simulated experience and one can say that feedback and debriefing are two sides of the same coin [10]. Skills required to practice surgery safely cannot be taught without planned feedback [11] and even the best trainees require timely feedback to learn and develop critical thinking, decision-making, teamwork, technical and communication skills [12, 13].

The most meaningful associations in our lives are built upon trust, and the relationship between trainer and trainee or between colleagues is no different: without a sense of trust, enthusiasm and commitment become suboptimal and finally, the performance ends up suffering. The key to giving feedback that builds trust rather than destroys it. It would be sensible to have a strategy in place and a process to follow. You want the trainee to leave the feedback discussion thinking about how they can improve their performance, not fixated on how you conducted the discussion or made them feel.

Any learning encounter should include pre-exercise preparation by trainee and trainer, live surgery/scenario or simulated surgical skills/scenario and post-exercise feedback (debriefing). A 25% improvement in both simulation and real work situations was reported by a meta-analysis after debriefing [14]. In this chapter, we discuss various components of feedback and its role in surgical training.

How Do You Define Feedback?

A useful working definition of feedback is "Information describing performance in a given activity that is intended to guide future performance in that same or related activity" [7]. In the context of medical education, feedback has been defined as "Specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance" [15]. A more recent literature review recommended a more comprehensive description, "A supportive conversation that clarifies the trainee's awareness of their developing competencies, enhances their self-efficacy for making progress, challenges them to set objectives for improvement, and facilitates their development of strategies to enable that improvement to occur" [16].

Neurophysiology of Feedback

Neuroimaging has thrown some light on the process of feedback and its effect on learning [17]. Recent studies have reported that theta power (4–8 Hz) increases in the mid-frontal area after an error or negative feedback. The mid-frontal theta oscillations represent a range of executive cognitive processes, which are essential for learning and these oscillations are predictive of corrective actions during the duration of learning. There is some indication that theta oscillations are associated with improved learning. In contrast, positive feedback is correlated with an upsurge in the beta frequency range oscillations [18, 19]. A study on 27 volunteers using their electroencephalogram data showed that high-utility future-focused directive feedback improved overall accuracy and speed of learning. It was also observed that easy-to-decode information provided larger beneficial effects as compared to when information is hard-to-decode. This is in support of the attentional load theory, as high perceptual load in the hard-to-translate information would limit the attentional processing [20]. Another study reported significant instructor-learner neural synchronization in mutual frontoparietal brain regions during elaborated feedback, (clinical scenarios for example), particularly during the provision of specific expanded information and anticipated the transfer of conceptual knowledge to innovative settings [21].

Who Can Give Feedback?

It is argued that by involving multiple sources of feedback, the information received is much richer and, therefore, more informative for behavioural change. In a healthcare setting, patients and anyone working with you (nursing staff, peers, supervisors, administrative team) can provide feedback.

Educational and clinical supervisors should be the central source of feedback. Both are responsible to mentor and monitoring clinical and educational development, and co-ordinate feedback from other colleagues. The staff of all types and grades should be asked for feedback, via both formal and informal methods.

Patients' feedback is also important as it gives a direct understanding of approaches, performance, and social skills. Patient feedback can be difficult for trainees to collate. Formal tools exist for feedback from trainers and peers but there aren't any widely available tools for trainees to obtain patient feedback.

The trainee's feedback about their time within the department allows a review of what is working well and what needs improvement within the department to improve the learning experience. It is important that trainers seek feedback from trainees so they can develop as trainers, although trainees may be reluctant to give negative feedback to trainers.

Types of Feedback

Feedback to trainees can be summative or formative assessment and a formal or informal process. The practice of formative feedback between trainers and trainees is comprehensive and covers most areas of clinical practice (clinical skills, communication and professionalism). Trainees find immediate formative feedback (on interactions and observations in the clinical environment) more relevant due to the focus on recently performed procedures and behaviours. In addition, it may offer a deliberation of real-world practice and contribute a different viewpoint to that of formal assessment. Summative feedback typically takes place at the end of a course of study and provides a final assessment or judgment on the learner's performance. There are varied and frequent opportunities for feedback in a training environment, however, observation of trainees' skills and feedback during their clinical placement is suboptimal [22].

Effective feedback requires paying attention to the entire process, not just the content of the message. It is important to consider potential barriers at different stages that can make feedback suboptimal. The trainee-centred feedback process should include (a) eliciting and understanding trainees' perspectives (needs, expectations, concerns, ideas) (b) reaching shared objectives and setting common goals (c) understanding the trainee within his or her unique psychosocial and cultural contexts and (d) highlighting strengths and providing guidance to overcome deficiencies. To achieve the best outcome from the process is to consider both trainee-specific and trainer-specific agendas. Poorly delivered feedback has a substantial damaging impact on trainee wellbeing, interpersonal relationships, and patient care [9].

Feedback Models

Giving and receiving feedback has become an important part of the industry, schools and healthcare sector [23]. A number of models have been suggested to help structure feedback. The most important thing is that feedback is relevant and accessible to the learner and gives clear advice on how to develop and what to focus on.

Situation-Behaviour-Impact (SBI) feedback model

The model [24] supports feedback solely on facts so the trainee can understand the effects of their actions.

Situation: Explain the situation with specifics.

Behaviour: Describe the behaviour witnessed; avoid guessing at motivation or causes of the behaviour.

Impact: Depict the influence the observed behaviour had. It's important to reserve judgment when using this feedback model; otherwise, it will undermine the feedback you're giving.

Other feedback models use similar steps, such as BEEF (Behaviour, Example, Effect, Future) and AID (Action, Impact, Development or Desired Behaviour). The BIFF model (Behaviour, Impact, Future, Feelings) inserts an additional step at the end to measure how the individual feels after receiving the feedback.

Pendleton feedback model

Pendleton's feedback model [25] encourages the trainee receiving the feedback to be an active participant. The advantage of the model is self-reflection during the process not after the feedback. The important steps are (a) highlighting positive behaviours (b) reinforcing these behaviours and (c) discussing what could be improved. Areas of improvement are first identified by the trainee and then discussion on the approaches to enhance the performance. The Pendleton Feedback Model keeps all things in the open. The trainee feels that they are valued, and their opinion is heard. The feedback is more trainee-led.

STAR feedback model

This model [26] includes dividing feedback into four categories: (a) Situation/Task: Describe a particular situation or task the trainee was involved in, being as specific as possible. (b) Action: Write down the positive or negative action the trainee took. (c) Result: Categorise the result of the action so the trainee understands what they did wrong or right. If the action was negative, you should also include an alternative action and result to show what could have been done and how it would have been more effective. The STAR model ensures that the trainee is aware of the positive or negative actions and how it impacted the outcomes.

The "feedback sandwich"

This model [27] consists of 3 components (a) the feedback sandwich starts with positive feedback (b) then incorporate constructive or negative feedback (c) close it with specific feedback that builds up the trainee's trust and confidence [trainee and trainer perception]. The sandwich method may be more comfortable for the trainer, and they will not initially appear as harsh or critical. However, the sandwich method ultimately comes across as sugar coating over a bitter pill. Like any model, the Feedback Sandwich is not proposed for all occasions. When it comes to integrity or policy violations, safety issues, or recurring problems, of course, you are not going to "sandwich" your feedback; you are going, to be frank, and direct. Softening your interaction here would be completely unnecessary, inappropriate, and ineffective. This model is not popular anymore.

Curriculum Assessment Tools

Assessment tools are available within training programmes to allow feedback to be structured. They allow rating of specific parts of a case/procedure as well as global ratings and specific points for improvement. They can be used as a written record

of a feedback conversation, allowing trainees to revisit feedback at a later stage. It is often useful to ask trainees to self-rate before completing written feedback [22]. Any differences between trainee and trainer perceptions are then highlighted. This provides an opportunity for a useful discussion around the difference in perspectives, and why the trainer and trainee hold different views.

Factors Responsible for Effective Feedback

Trainer-specific

The starting place for effective feedback is active listening (Fig. 15.1). The International Listening Association [29] defines listening as, "the process of receiving, constructing meaning from and responding to spoken and/or nonverbal messages". Initial interaction should focus on assessing the needs, knowledge, difficulties, goals and current level of competency. Diversity in age, sex and ethnicity or race adds to the communication challenge, as do different training levels. Individuals from diverse cultures may assign very different meanings to facial expressions, use of space and gestures. An excellent trainer would create an appropriate learning environment ("safe container") to help the trainee feel welcome, be approachable, shows confidence in the trainee, respectful and honest with the trainee. There is a need to consider the language and professional approach especially if a trainee is new to the healthcare system.
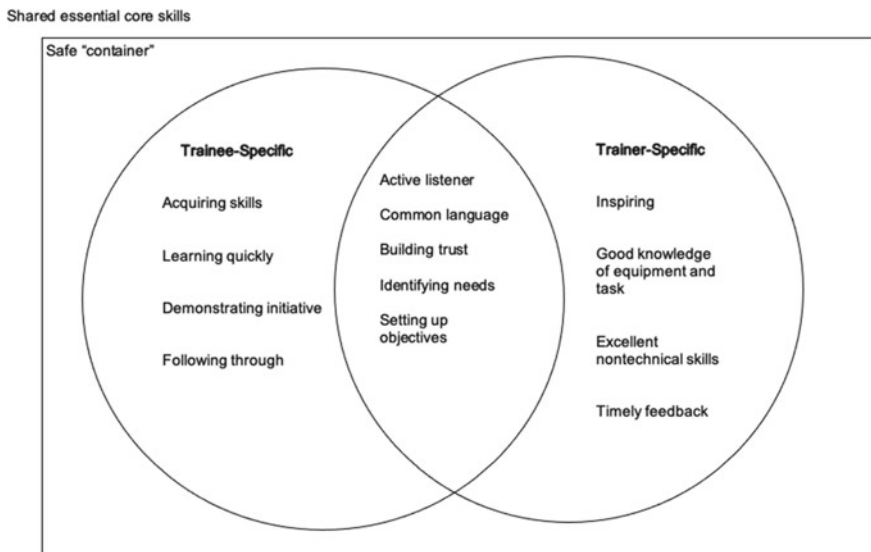

Fig. 15.1 Training and Feedback

Learning environment

Gruppen et al. [30] identified core components (personal, social, organisation, physical and virtual) can have an impact on the learning process and its outcomes. The educational learning environment dramatically affects the way participants think, feel, engage and train. A supportive learning atmosphere acts as an important facilitator in engaging in feedback. To achieve sustainable and meaningful feedback the focus should be shifted from providing feedback to the design of the learning environment that encourages the facilitation of feedback [31]. It is important to think about where feedback is delivered, and who else may be listening in—privacy can sometimes be difficult to achieve in the healthcare environment. Challenging feedback may have a reduced impact or even lead to harm if delivered in the wrong setting.

Trainee-specific

Receiving feedback requires active participation. It involves truthful self-reflection and commitment to practice and the development of clinical skills. A lack of enthusiasm to receive feedback and accept feedback has been noted in learners. Furthermore, there may be circumstantial and interpersonal aspects regarding the feedback [32]. Engaging the trainee to assess their own performance promotes reflective learning [33]. It is also important to explore trainees' previous experience of feedback.

Trainees' motivation to transfer is a key variable in shaping the level of transfer of training because to transfer newly learned knowledge and skills to the workplace, trainees first must also be committed to using what they have learned [34]. The odds of skill use after learning can be greatly reduced if the motivation to do so is low [35]. According to the Hackman and Oldham [36] model of work motivation, feedback is one of the five characteristics of a job that can enhance employee motivation and improve performance. Approximately 40% of people disengage when they receive no or little feedback.

A seven-step feedback model was suggested through metacognition research and included feedback that should define desired performance; assist the learner's self-assessment; deliver beneficially, quality, information; support dialogue between trainer and learner; be motivational; leave avenues open to address any gaps, and be useful in improving teaching [37].

Different trainees will respond to feedback in different ways, and it is critical to build trust and rapport with trainees before trying to give challenging feedback. Negative feedback can be challenging and difficult to receive, and it is critical that this is delivered sensitively and personalised to the individual trainee, rather than a 'one sits fits all' methodology.

Feedback timing

To offer feedback, it is important to select the "right time, right person, right place", there is no recommended frequency for feedback delivery [38]. There are several ways to provide formative feedback (Table 15.1). Short informal feedback can be provided after the observation of a skill or behaviour when both trainees and trainers

Table 15.1 Feedback components

Feedback initiator	Trainer-led	After any procedure
	Self-reflection	Observing a video
	Peer-led	Asking peer to critique
Feedback timing	During live or simulation session	
	After live or simulation session	
Feedback practice	Individual	
	Group	To the group after a scenario
	Team	Theatre team
Feedback method	Structured	NOTSS, GRS, OSAT
	Unstructured	
Feedback type	Verbal	Face to face, remotely using a video link
	Verbal with media	Using video of an operation or scenario
	Written	Paper, electronically
	Simulator generated	

NOTSS: Nontechnical Skills for Surgeons
GRS: Global rating scale
OSAT: Objective skills assessment test

can remember the episode precisely and the trainee can make adjustments in performance prior to the next assessment [39]. At the mid-point of the rotation, longer formative feedback can be delivered [40]. This can be used to define overarching medium- and longer-term development goals.

Barriers to Effective Feedback

There are barriers to giving effective feedback. The practice of feedback is essential to clinical education and involves 2-way communication with clear direction. The uncertainty of a new clinical setting for a learner is exaggerated in the absence of feedback. Various factors (Table 15.2) can influence effective feedback [41] and act as barriers:

Table 15.2 Barriers to effective feedback

Environmental	Trainer	Trainee
Inadequate time	Emotions	Unspecified expectations
Single episode	Unspecified expectations	Novice
Timing of feedback	Lack of training in feedback	"Friendly" trainee
Lack of privacy/space	Personal bias	Lack of confidence
Lack of confidentiality	Feedback usefulness questionable	Poor understanding

(a) Feedback not associated with specific facts
(b) Fear of upsetting colleague
(c) Disrespectful to the source of feedback
(d) Lack of specific suggestions for improvement
(e) Risk of damaging professional association
(f) Lack of insight
(g) Defensive or resistance during feedback by the recipient
(h) Personal agendas
(i) Low confidence
(j) Physical or language barriers.

Barriers can be managed by setting clear goals and objectives. The relationship between trainee and trainer is important and this can be improved by sharing experiences, problems and encouraging positive interpersonal behaviour [42]. Stone and Heen [43] recognised 3 feedback blocker triggers (truth trigger, relationship trigger and identity trigger). Constructive suggestions acquired during direct observation may minimise truth triggers. Feedback content and delivery approaches should be educational and empowering to avert relationship and identity triggers from leading to the recipient's withdrawal from the learning experience. While these barriers exist, they can be addressed and overcome so feedback can occur.

Recommendations for Giving and Receiving Effective Feedback

Effective feedback: Albert Bandura [44], a psychologist, revealed that delivering individuals with feedback on where they can progress, as well as meaningful and credible targets for refining has the greatest influence on improving performance. Effective and regular feedback reinforces good practice, better relationships, confirms strengths, promotes self-reflection, and motivates the learner to work towards their

desired outcome. Therefore, a planned non-judgmental descriptive approach is essential, and consideration should be given to achievements, deficiencies, and suggestions for improvement. In addition, direct observation and clear objectives are also required. Poorly delivered feedback can cause deterioration in the performance, defensiveness and awkwardness to the trainee. Eva et al. [45] reported that conflicting interpretations or understandings of feedback may be centred on a number of factors including personality factors, fear, confidence, context and individual reasoning processes.

Receiving feedback: Receiving effective feedback is of value to all (trainees or trainers) however proficient we may be, we all need to make sure that we can acknowledge and learn from constructive feedback. Algiraigri [46] suggested ten tips for receiving feedback in clinical settings: (1) self-assessment (2) we all benefit from feedback (3) connect well with your trainer (4) ask for feedback (5) be confident and take positive feedback wisely (6) control your emotions (7) take an action plan (8) acknowledge the generations (9) be specific and ask general feedback (10) Be ready! Feedback is not one size that fits all and can be given at any time.

Conclusion

As alluded above, surgical education is still a progressing field of research and the educator's role continues to evolve. Current trainees in training grades belong to an era of technological innovation and we should recognise that the shape and the future of surgical education will not be the same in a few years. Effective feedback is a fundamental facet of trainee development.

The priority should be given to cultivating trusting relationships and establishing a positive culture. It is important that trainers also acknowledge their own fallibilities and areas for improvement. Without this, it will be very difficult to deliver impactful feedback. Feedback works best when it is timely, structured, considerate, regular, behaviour-focused, and properly aligned to the trainee's needs. No single feedback model will work across all clinical settings. Surgical trainers should engage in the process of delivering and receiving feedback and must take the opportunity to develop their own effective style.

Textbox Tips

- High-quality feedback is an essential requirement of learning—make it a routine part of your practice.
- Trust and mutual respect are an essential foundations of good feedback and must be developed quickly.
- Think about the environment—especially for more challenging or formal feedback conversations.

- Time feedback carefully—soon after the event but ensuring the learner is ready to receive it.
- Give small numbers (2–3) of specific things to develop going forward—what to improve and how to improve it.

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Chapter 16
Handover and Presenting Patients

Michael Foxall-Smith

Abstract

- Explain the purpose of a handover
- Explain the factors leading to a successful handover, and some of the barriers faced
- Explain how to present a patient with focus and clarity.

Keywords Communication · Handover · Surgery

Handover

What is Handover?

Handover entails the transfer of responsibility and accountability for a patient's care. Handovers are established to pass on accurate and appropriate information to healthcare professionals at important transitions throughout the working day and night. This allows for safe continuation of patient care. Each team member should leave handover with a thorough understanding of the list of priorities for the incoming shift. Performing a good handover is a vital skill to learn, practice, and develop. Although introduction of the European Working Time Directive has resulted in a reduction in attentional failures and medical errors [1], it has increased the number of handovers. Shift work also increases the number of healthcare workers a patient sees in a day and also the number of chances that vital information can be lost in the handover.

Why is handover important?

The transition away from personal continuity, of the patient seeing the same doctor or healthcare worker day to day, has highlighted a lack of structure and systems to support information transfer. The sole concept of personal continuity is archaic in

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a time when we have a multi-disciplinary approach to our patients. Whilst patients continue to value personal continuity, it may encourage a "hands-off" approach when the named doctor for a patient is not contactable. The team, not the individual, should be seen as the care provider.

Handover is the most vulnerable point in the patients journey through the healthcare system. A good handover will prevent failures associated with errors, adverse events, and avoidable patient harm. During out of hours work, doctors may not have face-to-face contact with the patients they are responsible for. A good handover can aid clinical judgement in whether patients need a review.

The handover is also viewed as a training opportunity and is essential in the development of all doctors. The benefits to doctors include: feeling more protected with more prominent accountability in patient care, having the necessary information which reduces stress, and having the ability to provide top quality care increases job satisfaction.

Handover is a vital part of clinical governance as it encompasses risk assessment, education, and patient safety. Regular review of the handover system is required and resources should include morbidity and mortality meetings and incident reports.

What is needed for a successful handover?

Introduction of handover tools improves information transfer and professional satisfaction. Electronic systems can streamline information but only one system should be used per trust to avoid duplicity and increase simplicity.

The handover should start with an update to facilitate situational awareness, and each team member should know and understand their responsibilities before there is any transfer of patient information. The handover should take place in a calm environment where all non-essential, or non-emergency, work should stop; keeping distractions and interruptions to a minimum prevents loss of vital information. These interruptions may include phones, bleeps, staff, relatives, and patients. Adequate time should be set aside within working hours, in the same location, at the same time daily. An additional handover later at the bedside may also improve patient satisfaction.

The incoming team should be briefed by the outgoing team on concerns from the previous shift. Patients that are unwell, or at risk of deterioration, must be highlighted, and a decision made as to whether they need an urgent review or referral to another specialty. From there, tasks can be prioritised appropriately. The environment in which the handover takes place should provide access to laboratory results, imaging, internet and intranet, and telecommunications.

The handover should aim to encompass a multidisciplinary team, although this is not always practical. Reduction in work hours, and increase in shift work, means that having a single responsible consultant is impracticable, therefore the consultant surgeon must provide effective leadership and delegate responsibilities. Introductions should be made, including name, specialty, grade, and role, if applicable. It is helpful to include senior nurses and therapy workers in the doctor handover to disseminate information amongst the wider team, as well as providing an opportunity to inform doctors of any changes to patients' daily activities, delays in packages of care, or obstacles in transfer to the community.

All members of the handover should conduct themselves in a professional way with welcoming mannerisms. Opportunities to ask questions and check understanding should be implemented. Fear of exclusion and derision can lead to unwillingness to engage in the handover process. This is particularly applicable to more junior members of the team, who may respond poorly to team tension with behaviours that may intensify, rather than resolve, conflict [2]. Communication may be distorted or withheld when one party is concerned about appearing incompetent [3].

The handover must be recognised as a training experience, where the most senior clinician should encourage interaction and questions from the team; the handover is not just a transfer of information. Education intervention such as practice in simulation, group discussions, and lectures improves ability and satisfaction in doctors.

It is recommended that contact details between the incoming and outgoing team be shared in case of any missed information.

Difficulties that can occur with handover

There are many barriers than can reduce the efficacy of handover. A handover is a complex and challenging environment with large numbers of patients and multiple clinicians often involved in patient care. It can be exacerbated by inexperience of those handing over and overload of inessential information.

Barriers to a smooth handover can include [4]:

- Patients may not always be easily accessible as they may be on outlied wards or on different sites, which can make mapping the ensuing ward round difficult.
- Though the multidisciplinary approach is useful in providing encompassing care, it may require a lot of information on each patient leading to a loss of focus.
- Hierarchy, interpersonal power struggles, and a lack of confidence.
- Language and ethnicity, as there are increasing numbers of international medical graduates [5]. Avoid colloquialisms and agree on abbreviations.
- Medium of communication i.e. virtual handovers or emails (particularly in handover of care between specialties). An in-person handover will include a fuller range of communication channels, including facial expression, posture, body language, and gestures. Verbal cues may raise an index of concern about the level of treatment a patient is receiving.
- Fatigue.

Presenting Patients

Communication

Non-technical skills are highly important and include leadership, decision-making, assertiveness, and team coordination. Poor communication leads to errors, patient harm, discontinuity of care, inefficient use of resources, and dissatisfied patients.

In order to maintain a dynamic thread of communication, the team should ensure that only one person speaks at a time, with one person in charge. The person in charge should give orders and allocate tasks to specific people. Handover plans should be documented either electronically or in the notes. The person presenting the patient should typically be the person who knows the patient best and this may be a surgeon at any level.

Presentation

Presentation of the patient should follow a structed format, such as the SBAR (Situation, Background, Assessment, Recommendation). This has been shown to almost halve adverse events [6], though authors suggest this to be used as an aid alongside other guidelines to handover as it is not totally encompassing.

A patient list should be prepared by the outgoing team with the following information:

- Patient locations (ward and bed number)
- Consultant responsible
- SBAR handover
- Tasks to be completed
- Involvement of other teams

  In presenting patients, you should highlight key issues including:

- Deranged observations or bloods
- Relevant comorbidities and previous operations
- Social care issues

These can more easily be recollected by using a proforma and checklists. Working from memory may mean information is shared incorrectly or not at all. Be careful of leaving patient lists around the ward or hospital as this is a breach of confidentiality. Careful note taking improves information retained, with pre-printed sheets containing patient information almost entirely eliminating data loss [7].

The Royal College of Surgeons recommends conveying the following information within the handover, or on the printed sheet [8]:

- Name
- Age
- Date of admission
- Location
- Consultant and team
- Diagnosis
- Significant investigation results/pending results
- Patient condition and National Early Warning Score
- Plan/ outstanding tasks/restrictions on treatment (i.e. fluids restrictions)
- Advanced directives.

Conclusion

Handover is a crucial opportunity for healthcare staff to transfer accurate and appropriate information about patients between shifts. As a vulnerable point in the patient's care, non-essential distraction should be kept to a minimum. Whilst providing an environment to discuss patient care, the handover should also be treated as an educational opportunity. Communication between staff should be clear, preferably in person, and maintain structure via a proforma or an agreed format.

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Chapter 17
Reflective Practice

Abigail Coe, Madhavi Natarajan, and Tharani Mahesan

Abstract

- Explore the theory of reflective practice
- Describe the key models of reflection
- Provide practical tips on how to optimise reflective practice
- Discuss the use of reflection as evidence.

Keywords Surgery · Communication · Reflection

Introduction

Experience based learning and reflection are recognised as key factors in effective medical education and leadership [1]. Reflection plays an important role for healthcare professionals for whom regular appraisal, multidisciplinary team-working and professional development are central to optimising patient care [2]. Literature shows that the development and critique of learners' reflections promotes the development of professional identity and emotional intelligence, supporting the theory that emotion and learning cannot be separately considered [3–5].

Early descriptions of reflection include that of Dewey [6], who writes that 'all genuine education comes about through experience [but]... not all experiences are genuinely or equally educative' [2]. Experience based learning, as defined by Boud

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et al., is based on the principle of experience being the foundation of learning, proposing that learning is constructed by the learner as part of a holistic process, contributed to by social and cultural constructs, and influenced by the socio-emotional context in which it occurs.

Working in medical settings involves a complex interplay between patient-centred care, resource-limited services and the hierarchy and experience of all grades and across multiple disciplines [7, 8]. Reflection has become an essential aspect of development and survival in healthcare. Embracing the art of reflection is challenging and complex but has been formalised in the revalidation of medical professionals and is used to support quantitative metrics as evidence of learning and competency.

What is Reflection?

Reflection, as defined by Schön [6], is the practice by which professionals become aware of their implicit knowledge base and learn from their experience. Schön's in-depth evaluation of reflection described the process of reflection as the core of 'professional artistry' in contrast to the more rational application of scientific methodology for problem-solving. This seminal work and the ongoing process of developing reflective practice since, has highlighted that the rigor of dissecting problems and finding issues that need solving can only be applied through reflection.

Models of Reflection

There are different approaches to reflection and each can be applied to medical practice. One approach was highlighted by Schön [6] who differentiated 'reflection-in-action', referring to thinking ahead, experiencing and critically responding, from 'reflection-on-action', where thinking happens subsequent to the action, may be guided by discussion with peers or seniors, and may be recorded. Kolb [9] created a model of experiential learning entailing a four-stage process that begins with concrete experience, or the event to be learned from. The learner makes reflective observations to gain insight into the experience. During abstract conceptualisation, the reflections are in greater depth and are compared with the pre-existing knowledge base to analyse whether change is warranted. Finally, the active experimentation phase is where new ideas guided by experiences are implemented.

Building on these descriptions of learning and reflection, frameworks that have been proposed to encourage a methodical approach to reflective practice include Gibbs reflective cycle [10]. This involves a cyclical process of assessment within the different stages of reflection: description, feelings, evaluation, analysis, conclusion, action plan. Rolfe et al. [11] described the iterative process of applying three simple questions to guide reflective practice for clinicians—'What?' 'So what?', and 'Now

what?' which provide a straightforward framework around which scenarios can be reviewed and feedback provided.

According to the Academy of Medical Royal Colleges, reflective practice is 'the process whereby an individual thinks analytically about anything relating to their professional practice with the intention of gaining insight and using the lessons learned to maintain good practice or make improvements where possible'. Reflection encourages continuous personal and professional learning through continuous self-assessment and can be both challenging and therapeutic. There is also a role for reflection in organisational learning and system improvement [7]. In Medicine, the use of reflective practice has transitioned from an informal activity that was recognised but not recorded, to the current format of workplace-based assessments and supervised learning encounters which are recorded in training portfolios. As such, reflection is key to demonstrating one's ability to learn and develop in the healthcare system and to maintaining Good Medical Practice.

Reflective Practice as a Trainee

Reflective practice is an increasing component of training across all specialties. Nearly all of us will undertake directly observed procedures, case-based discussions and clinical evaluation exercises, reflection on the procedure or patient interaction is an essential part of this.

Reflection can be broken down into three parts: the first is our approach to the procedure, i.e., the technique or non-technical skills used; the second should determine the implications; and the third reflects the success (or otherwise) of the interaction and what we might do differently next time and our emotional response [11]. All are equally important in the trainee journey, both clinically and psychologically [12].

A key part of the reflection is in choosing the right case. As a trainee, the knee-jerk reaction is to select cases where the outcome has been poorer than expected. Whilst this is useful both for learning and for emotional resilience, it is important that trainers also encourage reflection on positive outcomes, as an opportunity to emphasise what worked well and what behaviours should continue to be incorporated in the future. For trainers, reflection offers the opportunity to identify whether the trainee has insight into their clinical practice and training needs. This is particularly helpful in determining approaches to training support especially where the trainee lacks insight or is perceived to be in difficulty.

Whilst reflective practice can be viewed by both trainee and trainers as a tick box exercise, undertaking it as an opportunity to review practice and question what you will take away from reflecting [10], will undoubtedly be more rewarding. Trainers should acknowledge the very personal nature of such reflections and strive to ensure confidentiality.

Reflective Practice as a Non-training Grade Surgeon

Outside of training, the use of reflective practice whilst less prescriptive, is perhaps even more important. Engagement with the appraisal process is a formal opportunity to do this. Alongside reflecting on clinical encounters and procedures, non-training grades should be encouraged to self-audit and as per recent guidelines, use this to cite personalised complication rates to patients during the consenting process. This process can be termed self-awareness [13].

For new consultants the appointment of a mentor, a consultant grade colleague either within or outside the department, can encourage reflective practice and provide support.

Ultimately, reflection encourages change, it drives the choices we make and the agendas we drive and develop [14]. In consultant practice where we are directly involved in steering departmental policy and clinical services, reflections will have a wider reach and there will be a role for reflecting as a consultant either in the formal setting of morbidity and mortality meetings or through departmental audits.

Informal Reflective Practice

Not all reflective practice needs to be formal. Many of us will already reflect on cases with current or ex-colleagues and peers. As well as providing clinical insights, these are invaluable for acknowledging the mental and emotional impact of healthcare provision. With the increasing strain on health care service and rising incidence of burnout, this aspect is increasingly important and must be encouraged.

Schwartz rounds offer a similar, but hospital led opportunity to discuss the emotional impact of working in healthcare. These are now well established and involve groups from all backgrounds reflecting on their experiences in a supported environment. They can be invaluable for those searching for support. Each round is based on a theme and discussion is facilitated to ensure mutual understanding and normalise emotional responses.

Reflective Practice as Evidence

Reflective practice can be used to identify issues in the workplace and subsequently as evidence for individuals who raise these formally.

There are a number of tools online that are available to help healthcare staff identify if they are being bullied, advise on how to proceed and even reflect on whether their behaviours could be perceived as bullying. A key aspect of this is reflecting and documenting experiences, times and perpetrators. Where bullying is

identified, individuals are encouraged to cite facts but also reflect on how these behaviours affected them as an individual as well as the wider team.

Whilst much of the reflection previously discussed is verbal, personal or shared only with supervisors and trainers, these reflections can be used in legal settings. The use of reflective processes in this context should be approached differently and will be discussed further in this chapter.

Reflective Practice and Bawa-Garba Case

The case of Dr. Bawa-Garba rocked the medical world and sparked a huge amount of media attention. Dr. Bawa-Garba was a paediatric junior doctor (ST6) and in 2015 was convicted of manslaughter by gross negligence and stripped of her medical licence for mistakes which led to the death of Jack Adcock, a 6 year old boy with downs syndrome [15]. She has been subsequently reinstated on the register under conditions in 2019 and in 2021 she is now free to practice without restrictions [16]. Dr. Bawa-Garba's case sparked controversy around personal culpability vs systemic failures and the potential use of reflective notes in proceedings.

Whether and how Dr. Bawa-Garba's reflective notes were used during the case has been debated in the media and is of great concern to healthcare professionals. Medical Protection Society (MPS) who represented Dr. Bawa-Gaba stated that 'the e-portfolio did not form part of the documentary evidence before the court and jury' [17]. However, it has been suggested that expert witnesses had access to elements of her E-portfolio [15]. As healthcare professionals there is an expectation we reflect on our practice and this is integrated into all aspects of our work and is written in the General Medical Council's (GMC) 'Good Medical Practice'. This case left many doctors revaluating how they use reflection. One article in response from the BMJ explores how healthcare professionals felt that the handling of the case could undermine attempts to build an open culture which learns and proactively improves patient safety [18].

The GMC has since stated that they do not ask doctors to provide their reflective notes in order to investigate concerns [19]. But during this process doctors are invited to provide evidence of insight and remediation as part of their defence and what form this takes is decided by the doctor [20]. Doctors are advised to seek legal advice before sending documentation. It is also important for doctors to know that reflections are potentially disclosable in the context of litigation and there is currently no legal privilege protecting them [20].

GMC Guidelines for Reflective Practice and Suggestions, Tools and Guidance on "How to Reflect"

In response to the Dr. Bawa-Garba case, the Academy of Medical Colleges, General Medical Council, Medical Schools Council and Conference of Post Graduate Medical Deans in 2018 agreed to work together to create a single reflective practice guidance document, which is now in circulation.

This guidance recognises that the reflective process is personal and there is no single correct way to reflect. Being a reflective practitioner empowers us to gain greater self-awareness and identify opportunities to improve the quality of patient care and patient safety in the areas we work. It is important to reflect on both positive and negative experiences as both can produce meaningful outcomes. There are a large range of experiences one can choose to reflect on and this may range from a clinical error, feedback, a conversation with a colleague to reading a research article [20]. It is important to have adequate time to self-reflect and reflect with colleagues, but it also important for supervisors to provide adequate support time [20]. The way each of us decides to reflect will be influenced by our learning styles as well as our own practice. When reflecting on an experience our thoughts should be structured to help us analyse and learn and there are a number of tools that can help us. The Academy of Royal colleges have created a 'Reflective practice tool kit' which gives an informative introduction on effective reflection and also provides templates and examples. Suggested templates include: Gibbs reflective cycle, Team reflection sheet, 'Why? What? How?' and reflection based on Rolfe [21]. Exploring which template works best for you can help the reflective process be more effective.

Doctors in training are expected to have 'an ability to learn from and reflect on your professional practice and clinical outcomes' [20]. Evidence of this is required in you learning portfolio to show the ability to gain insight and change practice, as well as in the revalidation process. As part of the reflective process doctors in training should discuss these experiences with their supervisor [20]. Discussion can aid learning from the reflective process. Self-reflective logs may also be reviewed as part of Annual Review of Competence Progression.

Anonymised information should be used where possible in reflection. Information is defined as anonymised if 'it does not itself identify any individual, and if it is unlikely to allow any individual to be identified through its combination with other data. Simply removing the patient's name, age, address or other personal identifiers is unlikely to be enough to anonymise information to this standard' [20]. When documenting your reflections, the GMC says that 'a reflective note does not need to capture full details of an experience. It should capture learning outcomes and future plans' [20]. It important to note that in the case of serious incidents reflection does not 'substitute or override other processes that are needed to record and escalate the event' [20]. Factual details of a serious incident should not be included in your reflection but in a format in accordance with your trusts/organisations policies. The Academy of medical colleges advises that if a doctor is involved in a serious incident, they should 'set out the narrative on paper immediately so that the events are recorded

while still fresh in your mind, but formally documented reflection is probably better done after consideration' [20]. The GMC advises that if you feel unsure regarding the content of a reflection, you should seek advice from your supervisor [20]. It is also important that if things go wrong, all members of the multidisciplinary team have the opportunity to reflect and discuss what happened openly and honestly in a confidential setting. This in combination with personal reflection will help with improvements to systems and patient safety.

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Part IV
Communication Using Technology

Chapter 18
Communication in Telehealth

Rebecca Fisher

Abstract

- Introduce the modern concept of 'telehealth'
- Enable readers to optimise virtual interactions with patients and colleagues
- Provide legal considerations for telehealth users.

Keywords Communication · Surgery · Medicine · Technology

Introduction

Telehealth is a developing and exciting field in healthcare. It is also a source of new challenges for surgical communication as it enters mainstream practice.

Telehealth can broadly be defined as 'the provision of care at distance using digital and telecommunications technology'. It encompasses a broad range of technologies and methods, from trainees being able to watch an operation from afar, to surgeons being able to perform an operation from the other side of the world. As well as procedural skills, use of teleconsulting has rapidly grown since the COVID-19 pandemic, particularly for postoperative care. It is therefore important to discuss the main terms in telehealth and explore the communication challenges they pose (Box 18.1).

Box 18.1 Categorisation of Telehealth Modalities

- Telereferral
- Teleconsultation
- Diagnostics
- Telesurgery
- Post-operative monitoring

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Telereferral

The centralisation of specialist surgical care has led to a dramatic rise in referrals to specialist teams, from primary care givers and peripheral hospitals. This demand for specialist opinion necessitates efficiency in the referral process.

Telereferral systems are able to provide a robust referral template, clearly asking the referring team the key information that is required by the specialist. This, in turn, reduces wasted specialist time, by increasing the quality of the referral. Telereferral can also improve communication between teams by notifying the specialist team and enabling discussion, for example by providing an online messaging system that can be accessed regarding the referral. Furthermore, telereferral allows documentation and audit trail, which in turn can lead to service improvement.

Telereferral is the gold standard referral process for burns surgery in the UK and provides the specialised ability for the referrer to send images, helping the burns team estimate the burn total body surface area and depth. The telereferral system has been shown to reduce in-person assessments without affecting patient outcome [1]. We have provided some tips for creating and using a telereferral system in Box 18.2.

Box 18.2: Tips for Telereferral

- Ensure that sharing of confidential information adheres to Caldicott principles
- Ensure there is a handover process that allows other team members to access the referral information
- The system should have a notification system to ensure referrals are not missed
- A thorough and concise proforma should be used
- An outcome should be assigned to the referral
- All information should be saved, to allow an audit trail.

Teleconsultation

Since the COVID-19 pandemic, limits on travel have encouraged a blooming industry in telemedicine, where patients can have clinic appointments from home via telephone or video feed.

Given that medical education has always focused on consulting skills for face-to-face meetings, it has posed a challenge for clinicians worldwide. The skills required have been dubbed "webside manner" rather than traditional "bedside manner" of the pre-COVID-19 era. Rural areas in North America have been leaders in this field for some time, for example by allowing patients to travel to a local telemedicine clinic to have a consultation with their tertiary specialist who is hundreds of miles away. One qualitative study asked patients in Colorado how they felt about these consultations, and it was apparent that there are specific areas that can be focused on to improve communication in telemedicine, and some areas that are more difficult to address (Box 18.3).

Box 18.3: Pros and Cons of Telemedicine Clinics According to Patients in Colorado, USA 12]

Strengths of telemedicine appointments

- Less travel for patients, meaning less time and expense
- Lower infection risk for immunocompromised patients
- Better access to clinics for those too unwell to travel.

Weaknesses of telemedicine appointments

- Difficulty establishing a rapport between patient and clinician
- Perception that clinicians pay less attention to them, because of awkward communication and cameras being focused on examination rather than faces
- Being unable to examine patients fully—leading to concerns about the clinician not seeing the full picture
- Less holistic assessment—some patients said their clinician would usually advise about other issues when face-to-face.

Tips for Teleconsulting

Given these experiences, it is important to consciously consider your approach to communication before starting a consultation.

Information gathering

Are there any cues in this consultation that I would usually see that I'll need to ask specifically about?

Consider:

- Nutritional status
- Body habitus
- Exercise tolerance
- Frailty

- Use of walking aids
- Changes in appearance e.g. pallor or jaundice.

Building a rapport

Consider how you will replicate your usual first 30 s of a consultation. If you usually have some small-talk while they enter the clinic, could you ask them a few questions before beginning the consultation?

Slow down

A common complaint with telemedicine is that patients are more passive in the experience. Give cues for them to speak in a more obvious way than usually. Be aware that you may miss cues because of lag on video calls.

Safeguarding concerns

Consider safety issues that you would otherwise see face-to-face. Do you have any safeguarding concerns, such as safety at home? If you have any concerns, have a low threshold for video or face-to-face appointments.

Checking information

Use closed-loop communication: check a patient has understood your advice and plan before finishing the consultation.

Diagnostics

Historically, clinical examination has been the gold standard tool for diagnosing pathology, aided by investigations such as bloods tests and imaging. Telehealth has also been successfully implemented in the field of diagnostics. For example, one orthopaedic centre compared the diagnostic accuracy of telehealth clinical examination to that of traditional shoulder examination and found no discernible difference [2]. While virtual examination has several advantages, the examiner must consider their patient population. Patients need to be able to follow clear instructions, in order for the technology to be successful.

Mobile health applications ('mHealth apps') are also being used to aid assessment. For example, in burns surgery, the 'Mersey Burns' app is commonly used to assess the total body surface area (TBSA) of a burn and thus inform resuscitation fluid requirements [3]. For Mhealth Apps to be used successfully, they should follow several key principles:

- Widely available on app stores
- Evidence base demonstrating efficacy
- Training available for users
- Appropriate regulation.

Telesurgery

One of the most exciting possibilities in this area is 'telesurgery' in its truest sense—i.e. surgery performed in one place with the operating surgeon at a distance.

In the early 2000s, the world's eyes were on the rising deaths in Iraq and Afghanistan, with soldiers and civilians suffering severe trauma from explosives that required expert surgeons to be available in remote areas for life-saving care. The US Army invested heavily in developing robotic surgery, hoping they could use surgical robots to perform surgery, operated by expert surgeons at army hubs in the nearby area [4]. It soon became apparent that surgical technology was able to support robotic surgery, but having a sufficiently fast internet connection in a warzone to reliably perform surgery remained unfeasible. The military's focus shifted to rapid repatriation of trauma patients for life-saving surgery. Although robotic technology was never used in battle, it became clear that robotics could be the future for minimally invasive surgery, and so the surgeons and engineers involved went on to commercial ventures that ultimately led to the production of the da Vinci surgical system by Intuitive Surgical [5, 6].

For settings outside of the military, telesurgery showed great promise. The world's first intercontinental telesurgery was a laparoscopic cholecystectomy performed between New York and Strasbourg in Marescaux et al. [7]. However, in the two decades since then, telesurgery has remained experimental, and only a handful of operations have been completed. The main limitations to this have been problems with latency (time-lag), and the need for high-speed reliable internet connections. It is only in recent years with the introduction of 5G that telesurgery is beginning to become a realistic possibility for clinical use [8].

Post-operative Monitoring

The use of telehealth in the post-operative phase has gained significant attention for its potential to facilitate early discharge, empower patients and ensure early identification of complications.

With the evolution in technology, various modalities are available to facilitate post-operative monitoring. At the basic end, these include telephone or video consultations to enquire about symptoms and recovery. Mhealth Apps have been introduced to educate and remind patients to undertake physiotherapy exercises. Wearable technologies can feed directly into post-operative monitoring systems, picking up on changes in vital signs.

Patient satisfaction and willingness to engage in remote post-operative care is generally reported to be high [9]. There are specific scenarios where virtual monitoring is inappropriate: high risk cases or unreliable patients. However, in the lower risk cases, empowering patients to take an active role in their rehabilitation and recovery from surgery using telehealth technologies may even improve outcomes.

Telementoring and Teleproctorship

Telementoring and teleproctorship are the processes by which surgeons are trained at a distance from their trainer. There are many different versions of this, which are summarized below.

Telementoring for operative skills in its most basic form usually entails a surgeon operating in one location, and the trainee being able to watch the procedure and listen to a tutorial from afar. This of course can be in the form of pre-recorded cases, but in recent years has become more interactive, where trainees can ask questions to their mentor via text or audio, and with some AI technologies can also use annotation and pointing tools to overlay images on the trainer's monitor in the operating theatre [10]. The images received by trainees are often in the form of video feed from a laparoscopic or robotic camera stack, but sometimes innovative technologies are used: many teams have attempted to integrate "surgeon's-eye" views using hardware such as Google Glass and VR headsets [11].

A more involved form of telementoring is when a surgeon is being mentored intra-operatively by a surgeon in another location. Use of high-speed internet connections are essential in this technology, and so they are only just starting to become part of clinical practise. In most surgical training cases, having a trainer physically available to help is essential for patient safety. However, having a remote trainer has potential to be very useful for trainees nearing the end of the learning curve, i.e. surgeons who are competent but may need occasional advice or supervision. Indeed, telementoring in this form can be useful for experts, to allow another expert to collaborate on a difficult case despite them being far away in their own centre.

Communication in Telementoring

Telementoring for live surgical procedures comes with a new set of communication challenges: local and remote participants need to be able to communicate safely and be certain they are talking about the same structures and tools. Proximie (London, UK), a telementoring platform company, have previously summarised their tips for communicating during these cases:

Tips for telementoring developed by Proximie:

1. Wear audio headsets
2. Test audiovisual, lag and annotations before the WHO Time Out
3. Check in with the remote surgeon: "Can you hear me? Can you introduce yourself?"
4. Safety: "Are you happy to proceed if telementoring stops?"
5. Agree the objectives of the mentoring session
6. Confirm technology: anatomical orientation and unusual names for tools
7. Ask the operating surgeon whether they're ready to listen before asking a question
8. Pause for latency: "Can you stop there? Yes, that structure"

9. Be sensitive—emotional cues are missing.

Legal Considerations in Telehealth

Having distance between patient and clinician has been a source of many ethical and legal questions and has been a significant barrier in the adoption of telesurgery.

For cases where there is distance between the surgeon and patient, a clear issue here is patient safety, for example what happens to a patient if the feed becomes too slow or breaks down. It would of course then be essential to have a competent surgeon on site to be able to take over a case and keep a patient safe, and if they are competent then there may be little benefit to telesurgery in the first place.

Legal questions are a major consideration in telementoring and telesurgery: in normal practice, it is the operating surgeon who takes responsibility for the case and outcomes. However, this becomes more complex if a surgeon in another location is influencing decisions during the operation as part of their teaching. It is the norm for the operating surgeon to take full legal responsibility in these situations, but nonetheless the suggestion of telementoring can raise concerns about legal responsibility.

For cases that involve live streaming or recording of surgery, issues of data security and data protection are also relevant. Usually, images such as this would be kept within the standard systems in a hospital, but streaming creates need for data protection compliance that many hospitals may not be so familiar with.

Finally, financial considerations are a key limitation to telesurgery. If one surgeon in one institution is spending time training a surgeon at another site, or even operating remotely, decisions need to be made about how the surgeons are paid for their time. Funding usually goes to the hospital where the patient is admitted, so paying a surgeon operating from another institution could be complex.

Conclusion

Telemedicine and telesurgery are exciting options that have the potential to allow clinicians to offer care to more people with less travel. It is important to be aware that communication is different remotely, and to take additional steps to ensure communication is clear and safe.

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Chapter 19
Communicating with Social Media

Benjamin Patel

Abstract

- Describe the various applications of social media in surgical communication
- Highlight the potential issues associated with communication on social media
- Provide real-world tips on how to optimise communication on social media.

Keywords Communication · Surgery · Medicine · Technology · Social media

Introduction

Social media platforms are influential phenomena in modern communication that we define as '*internet-based applications used for social interaction in real time*'. Social media has itself evolved from primitive forms of virtual communication, such as Morse code, driven by the human desire to communicate and bolstered by the significant advances in information technology.

The growth of the internet fuelled the creation of early social media networks such as Six Degrees in 1997, Friendster in 2001 and Myspace in 2003. The development of the modern smartphone and launch of the iPhone in 2007 allowed users to access social media remotely, facilitating a documentation of their life, views and philosophy.

Social media now plays a fascinating role in the surgical world. It is used to carry out research, disseminate science, discuss and debate topics of interest, educate staff and the public, and market services. However, along with these beneficial applications are numerous potential pitfalls, including failures in confidentiality, spreading of misinformation or 'fake news', bullying or 'trolling, and unprofessionalism. Ultimately, social media is a powerful tool for communication if used well and in this chapter, we hope to educate the user on how to optimise their presence and communication on social media platforms.

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Social Media Classification

Social media platforms have been subcategorised into several different types (Table 19.1). The largest platform remains Facebook, which is a type of social network. While social networks are primarily used by individuals to document and share aspects of their personal life, they have a modest role in the surgical world. Facebook provides surgeons with online communities through its 'groups,' which are closed forums, commonly used to provide support with practical aspects of starting out in a specific hospital or area. Instagram on the other hand is photograph-forward and is typically used by surgeons to market their private practice. This is more common in specific specialties, such as cosmetic plastic surgery [1].

Video-sharing platforms are increasing in popularity. Youtube now has over 2.5 billion users and is a valuable source of educational content. Consumers of these videos are able to 'like' videos, increasing their popularity and reach, and 'subscribe' to creators that they find useful, thereby being notified when new content is created. TikTok is a rapidly growing platform that tends towards shorter videos, with certain crazes going 'viral'. The platform gained popularity by surgeons during the COVID-19 pandemic to help share information about COVID and disband false information. Furthermore, it has been used by patients and surgeons to show the operative journey [2].

Twitter is a form of microblog, providing a platform for users to exchange information concisely. Twitter is used either to broadcast or receive information. So-called 'tweets' are limited in character length, thus creating punchy, head-turning and often opinionated statements or comments that can be a source of debate. Twitter is perhaps the most influential social media platform in the field of surgery. At any time, users can create an account and open a conversation about any topic in surgery, bolstered by the famous 'hashtag' that links similar conversations together.

In contrast to other social media platforms, LinkedIn is built for professional networking. It is used to provide an 'online CV' that can be viewed by potential or actual colleagues and allow for virtual networking opportunities. In a sense, it fulfils part of the purpose that networking at surgical conferences once filled: building reputation, enhancing visibility and opening the door for new career opportunities.

Table 19.1 Classification of social media platforms

Type	Platforms	Users (in millions)
Social networks	Facebook	2912
	Instagram	1452
Business networks	Linkedin	830
Science networks	ResearchGate	17
Videosharing	Youtube	2562
	TikTok	1000
Microblogging	Twitter	465

Finally, ResearchGate is a research-focussed platform, that was created in 2008 to allow users to collate, promote and track their research pursuits. ResearchGate is gamified, by providing users with an 'RG score' based on interactions with other members and the quality of your publication record.

Applications of Social Media

Sharing of ideas and dissemination of science

We live in an age of translational medicine, where the public have much greater access to novel research findings. With their significant user base, social media platforms are powerful tools for the dissemination of science. Social media users have the capacity to promote their research and hence make it 'go viral,' resulting in huge reach for the article.

Metrics such as peer-reviewed citations have traditionally been accepted as measures of scientific impact. Interestingly, social media activity such as tweets have been shown to strongly predict citations [3]. Now, the 'Altmetric Attention Score' is commonly used to gauge the online impact of an article, taking into account social media activity. Common strategies leveraged by authors and journals to share surgical research include tweets, creation of hashtags, inclusion of emoticons and GIFs, Facebook groups and journal clubs.

Social media thus plays a role in public health; acting as a vector to translate health-related research to the public. Dissemination through social media may have other benefits to the surgical community. Firstly, it may help reach certain public populations that are less engaged in research, particularly younger people. Secondly, there is evidence that suggests that dissemination through social media reduces certain inequalities in the impact of research [4]. Finally, it can prevent replication and therefore waste in research as the surgical community are more aware of current research pursuits.

Education, mentorship and networking

There is a growing role for social media in surgical education. As described by the educational theory of connectivism, education is enhanced by online interactions and exposure to different perspectives. Platforms such as twitter encourage live debate which can spark critical thinking around surgical subjects. Furthermore, they have been used to host virtual conferences.

At a more practical level, video-sharing platforms are fruitful sources of information, containing a database of lectures that cover anatomy, pathophysiology and even surgical communication. Moreover, one of the great benefits of social media is the ability to ask live questions and get feedback from lecturers through the comments section. Youtube in particular boasts a large collection of surgical videos which can be used by the viewer as a revision guide before performing surgery.

Social media is a leveller; it creates a sense of informality which can help to break down the hierarchy that exists within the surgical world, thereby providing access to leading experts who can answer questions, provide feedback and even act as virtual mentors. In turn, by boosting followers, surgeons are able to build their network and get their name out into the online world.

Research

Social media platforms have a number of attributes that make them powerful tools in research. They connect to large numbers of people, helping with recruitment. They are also able to target groups that are typically under-represented in research. To maximise the efficiency in recruitment, researchers should consider their target population and identify the optimal platform that is used in this population. They should also consider their keywords and hashtags that can optimise their reach.

Social media discussions can be viewed as data, to be analysed by researchers to help us learn about the patient experience of surgery including symptoms, recovery and behaviour. Furthermore, researchers can actively utilise social media technology such as polls and chat functions to collect data from participant.

Communicating culture change

Social media has proved itself as a platform for communicating surgical culture change, given both their reach and the capacity for live debate and feedback. Certain tweets have gone viral in the 'Twittersphere' and stimulated extensive debate. A prime example of this is the *#ILookLikeASurgeon* tweet, which acted to celebrate women in surgery. Over the first 2 years since its inaugural tweet, it was included in over 150,000 tweets and highlighted the outdated stereotype of the white male surgeon, that was acting as an obstacle to women's recognition in the surgical field. Similarly, powerful conversations have been debated over Twitter and Reddit regarding racism and bullying.

Problems and Pitfalls with Communicating on Social Media

Relationships with patients

Despite social media's potential for good, there are a number of major ethical and legal pitfalls that can negatively affect surgeons' communication and relationship with their patients. Confidentiality is a core ethical pillar in medical practice and the principles upholding it do not change online.

Although it is obvious that identifiable patient information should not be broadcasted to the world, there are more subtle situations where confidentiality may be broken inadvertently. For example, when discussing complex aspects of care online and gaining input from colleagues, there is a risk of publishing specific aspects of a patient's history that could identify them. If a patient were to identify themselves in a discussion, this could feel like a failure of trust and depending on the

legal context, could have significant ramifications for the surgeon. For this reason, the Medical Defence Union (MDU) state that 'social media should not be used to discuss individual patients' [5].

Similarly, when posting any clinical photographs, all patient information should be removed and all identifying tattoos, jewellery or piercing should be blurred or deleted. This is a real issue: in a study of over 350 gastroenterologists active on Twitter, 18.5% of 956 tweets were highlighted as 'at-risk' for a breach of confidentiality [6]. Practically, before considering posting clinical images, we would strongly recommend gaining consent from the patient and discussing the action with your local Caldicott Guardian.

Another potential issue with social media is the blurring of the patient-surgeon relationship. This boundary is at risk on personal platforms such as Facebook, and Instagram, where '*friend requests*' from patients should be considered carefully. To address this issue, the surgeon should familiarise themselves with the privacy settings of their accounts. Similarly, surgeons should be mindful not to use social media in their diagnostic work up, by investigating a patient's social background such as smoking status. This is inappropriate and threatens the inherent trust placed in the relationship.

Relationships with colleagues

The GMC's guide to 'good medical practice' [7] provides clear guidance that 'doctors must treat colleagues fairly and with respect'. While social media has the capacity to connect colleagues online, there is a risk of facilitating '*cyberbullying*' and '*trolling*', which undermine respect for colleagues. Twitter is a common platform for lively, passionate debate. However, there are times where views and feelings can boil over into unsolicited attacks. These are public, embarrassing and threaten a surgeon's professionalism.

Fake news

Surgeons hold a privileged and influential position in the dissemination of information. They are viewed as experts that can understand and analyse science and eloquently translate results into a meaningful form for the public and patients. This position comes with responsibility and given the public reach of social media accounts, surgeons must be mindful in their dissemination of information.

With the rise of social media, those who are not experts and have no medical or scientific training are able to post opinion on medical matters and influence others. In particular, spread of medical misinformation is rife when the subject is relevant to political movement or financial gain. During the COVID-19 pandemic, extreme vaccination beliefs and opinions were shared as though they were fact. While the educated scientist may be able to accurately assess such posts and expose their flaws, this may be less straightforward to the public who are not trained in assessing evidence. Superimposed on fake posts is the influence of '*bots*' that help to propagate the information to large and targeted audiences by sharing or liking the content.

Success in Social Media

The world of social media can be a tricky place to navigate as a surgeon. With the ultimate aim of having the greatest positive impact on others as possible, we recommend adhering to the following three principles:

(1) Maintain integrity

This requires as understanding of ethical medical practice, legal requirements and professional responsibilities. There are a number of guides that exist to enable surgeons to make wise online decisions, such as the GMC guide entitled: '*doctors' use of social media*'.

(2) Build your online network

Increasing your impact on others requires visibility. On Twitter, this will come in the form of followers: both numbers and quality; individuals who will engage meaningfully through comments or sharing of posts. Consistency and confidence in your online presence are key.

(3) Engage your network

Influencing others means competing for their valuable attention. In a world filled with advertisements and head turning media, it can be difficult to engage your followers without positing sensationalist content. Instead, try using interactive media, Graphics Interchange Format (GIFs) and humour to balance important and poignant surgical subjects.

Conclusion

Hopefully, by the end of this chapter, you have a broader understanding of how social media can be used for the positive exchange of ideas, communication and research in surgery. With 80% of the internet-using world having a social media presence, this powerful tool is already having significant influence in the surgical world. As the role of social media escalates and evolves, future opportunities and challenges will likely appear. We in the surgical world have a responsibility to take such opportunities and temper such challenges.

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