**Ward rounds fit for the future**

**Good practice for multidisciplinary inpatient review**

# Contents

[Foreword 3](#_Toc24982172)

[Executive summary 4](#_Toc24982173)

[Preparation 4](#_Toc24982174)

[The ward round process and team 5](#_Toc24982175)

[Improving ward rounds 6](#_Toc24982176)

[Introduction 7](#_Toc24982177)

[A. Background 8](#_Toc24982178)

[What patients should expect 9](#_Toc24982179)

[The modern multidisciplinary team 9](#_Toc24982180)

[The purpose of ward rounds 11](#_Toc24982181)

[Communicating with patients, relatives, and carers 11](#_Toc24982182)

[B. The process 12](#_Toc24982183)

[Scheduling of ward rounds 12](#_Toc24982184)

[Ward rounds and allied activities 14](#_Toc24982185)

[Before the ward round 14](#_Toc24982186)

[During the ward round 16](#_Toc24982187)

[Documentation and clinical records 20](#_Toc24982189)

[After the ward round 22](#_Toc24982190)

[Outside the ward round 23](#_Toc24982191)

[Education and training 25](#_Toc24982192)

[C. The environment 26](#_Toc24982194)

[Physical environment 26](#_Toc24982195)

[Dignity, privacy and confidentiality 26](#_Toc24982196)

[Protecting vulnerable patients 27](#_Toc24982197)

[The role of technology 27](#_Toc24982198)

[Different inpatient settings and scenarios 30](#_Toc24982199)

[D. Quality management, research and innovation 32](#_Toc24982200)

[Case studies 34](#_Toc24982201)

[Working party 37](#_Toc24982202)

[Appendix 1: Surveys of professions 39](#_Toc24982203)

[Appendix 2: Team planning template 40](#_Toc24982204)

[Appendix 3: Self assessment template 41](#_Toc24982205)

# Foreword

**By PRCP and CEO RCN**

**Endorsements by professional leads**

# Executive summary

Ward rounds are the focal point for assessment and care planning by multi-disciplinary teams with patients when in hospital. Coordination of assessments, plans and communication is essential for effective and efficient care. Current delivery of ward rounds in hospitals in the UK is consistently constrained by competing priorities of clinical staff in the setting of workforce gaps, inadequate planning, unwarranted variation in practice and an absence of training in the skills required to deliver complex multi-disciplinary care as a team. This leads to frustration for staff and patients, and can lead to errors in care, longer stays in hospital and readmissions.

This document aims to bring together good practice that is being delivered within the NHS. It enables clinical teams to self assess against this practice and identify their priorities for improvement. It gives organisational leaders a template for a standardised approach to multi-disciplinary inpatient assessment which can only be achieved by hospital wide improvement programmes. For patients, families and carers it describes how partnership in care can be delivered in hospital. It reiterates most of our previous guidance from 2012 and updates this. Whilst that guidance was welcomed it has not been widely implemented. The guidance has been developed by UK healthcare professional leaders with patients and has the potential to revitalise care to improve outcomes.

## Preparation

The purpose of ward rounds is for the clinical team with patients to clarify diagnoses and relevant problems, monitor the patient’s progress, and coordinate, document and communicate a management plan which includes goals and discharge plans. They should also incorporate clinical safety checks, and education.

Effective ward rounds can only be delivered in a well organised ward and team. Ward teams are much more diverse in their clinical roles than previously with new and extended roles of healthcare professionals and other staff. Ward teams must agree roles and responsibilities, and equipment must be available and maintained. Key to this organisation is scheduling of ward activities including ward rounds so that staff and patients are available to participate in a calm environment.

Patients and families must be prepared for ward rounds. They need to understanding when they will happen, who will be involved and how they can maximise the opportunity. This will include written and verbal information for patients. Mechanisms for patients, families and carers to develop questions and communicate their priorities and needs must be in place.

Ward rounds should happen daily in acute hospitals, though all patients will not require this review each day.

Before the ward round the shift handover should gather information on the patient’s condition that feeds into multidisciplinary planning. The team should all participate in a Board Round or huddle that provides an overview of patients, prioritises patients who require early review, and identifies actions for team members to take. It should particularly highlight delays in care that can be addressed and discharge planning.

Information to inform decision making on the ward round should be collated before bedside review by the ward round. This may effect the planned timing of ward activities including the rounds.

## The ward round process and team

The ward round should review the most unwell patients first, followed by those who could be discharged that day before more routine reviews. For each ward round the ward round lead should clarify team members roles, and set the tone for participation and learning. Commencing at the agreed time is particularly important for efficiency and team working. Mechanisms for input from all professional staff to ward round discussions and decisions must be agreed. The continual presence on the ward round by all multi-disciplinary team members is not necessary, but input and involvement from the staff who know the patient best – usually the nurse directly caring for the patient is essential. Without this it is unlikely that the best clinical decisions will be made. Pharmacy input is also essential for most patients, and where resources allow the ward pharmacist being part of the ward round has demonstrated considerable benefits.

Ward round team members should be introduced to patients. Communication with the patient should be at eye level, in as private environment as possible, particularly at the start and end of the assessment.

The review and decision making process during the ward round collates all relevant information to inform discussion on the patients condition and progress. Clear roles to provide and assimilate this information is needed. Dialogue scripts for the leader and professional members provide structure and have demonstrated benefit. Clinical reasoning and decision making should be documented. Structured documentation incorporating safety check lists and key elements of plans such as escalation plans and what has been communicated with patients should be used. Medication and monitoring chart review must be incorporated. Written summaries for patients are helpful.

More detailed discussions with patients, families and carers around difficult decisions should take place outside the ward round to allow adequate time and an appropriate environment. Other more complex assessments should also take place outside the ward round.

Currently interruptions of doctors, nurses and pharmacists during the ward rounds are frequent. This can be minimised by careful scheduling of activities and staff roles. Ward coordination is a key role, and it should be planned that this individual does not have other responsibilities, particularly during times when many ward activities are happening. The coordinator does not have to attend the whole round, as input should be from the staff directly caring for the patient. The coordinator is likely to be interrupted. However their leadership or input to pre and post ward round board rounds /huddles is vital as well as regular updates during the round so that care can be progressed.

Ward rounds should not last longer than 120 - 150 minutes because of cognitive fatigue. If however the number of patients requiring review requires longer than this breaks must be planned. Dividing team roles so that certain tasks can be completed during the ward round and are not delayed until the end should be planned whenever possible.

After the ward round an update of the multi-disciplinary team is necessary to ensure plans are agreed and actioned within agreed time frames. This should ideally be led by the ward round lead. Updating patients of progress on the plans during the day is also important and it must be agreed who will do this.

Education is an important part of ward rounds and should be across professions. Key learning points should be summarised at the end of the round, with actions for further learning. Training of staff in ward round practice and functions should be part of professional training including simulation.

Electronic patient records bring together patient information and help with structured documentation and decision support. However they can change the focus from people to screens. Mobile devices can help the sharing of information between staff and patients. Training in their use, and hardware availability and maintenance must be planned,

## Improving ward rounds

There is considerable improvement required in the way ward rounds are done in the UK. Research and quality improvement to inform effective practice is required. Whilst some elements of best practice will be impeded until staffing deficiencies have been addressed, this should not prevent teams and hospitals developing improvement plans for ward rounds guided by this document. Ward leads should meet regularly to review quality measures, and adapt approaches where needed using both this guidance and emergent new evidence.

### Key principles of ward rounds

* Ward rounds are the focal point for assessment, decision making, care planning and communication by multi-disciplinary teams with patients when in hospital.
* Patient involvement in decision making on ward rounds
* Multi-disciplinary inputs and involvement in decisions from the staff directly caring for the patients
* Scheduling and timing of ward rounds and other activities to ensure participation and the right environment.
* Structured documentation incorporating checklists
* A physical environment that creates privacy with available equipment and information
* Leadership of ward rounds includes coordination of reasoning, decision making, documentation, communication and task allocation.
* Education and learning is a core function
* Support effective team working

Introduction

Multi-disciplinary assessment for care planning is essential for safe, effective and personalised care of patients admitted to hospital. Care and decisions are coordinated on ward rounds[[1]](#footnote-1) and aligned activities. These activities must be planned and coordinated by the whole care team alongside other components of inpatient care. Patient, carer and family involvement must be central. Their effectiveness should be monitored, benefits maximised, and the processes, behaviours and skills required should be continuously improved.

This report provides updated guidance to multi-disciplinary teams and clinical and operational leaders caring for or supporting patients in hospital wards. It can also be used by patients, their families and carers to know what good care looks like and should be expected. It outlines key elements of patient and family centred multi-disciplinary review and care planning, and how this can be facilitated through the focus that ward rounds provide for staff and patients.

*Ward Rounds in Medicine. Principles for best practice* was published in 2012 by the Royal College of Physicians (RCP) and Royal College of Nursing (RCN). Whilst widely referenced there is continued frustration amongst clinicians that multidisciplinary care planning and communication for patients in hospital is far from optimal. This creates inefficiencies, increased risk, and care plans that are not appropriately agreed with patients, carers and families.

Ward rounds are a fundamental function of clinical practice. Acute care capacity pressures within hospitals across the UK, and demand and capacity pressures across the wider health and social care system, has led to a renewed focus on the importance of ward rounds for safe, effective and efficient communication and clinical decision making.

The hospital working environment has continued to change since our 2012 guidance was published. Key elements that have changed include:

* Significant staffing shortages in doctors and nurses[[2]](#footnote-2),[[3]](#footnote-3)
* Clinical professionals undertaking extended roles
* Royal College of Physicians *Safe Medical Staffing* guidance [[4]](#footnote-4), and staffing guidance for other clinical professions3
* Increasing use of multiple electronic record systems
* Increasing numbers of frail older people with potential cognitive impairment in hospitals
* Hospital occupancy pressures including patients being cared for by teams across multiple wards, sometimes called “outliers” or “borders”.
* National guidance on patient flow from the NHS Emergency Care Improvement Programme endorsed by RCP and Society for Acute Medicine[[5]](#footnote-5)
* Other national guidance on care delivery for example acute clinical deterioration or discharge[[6]](#footnote-6),[[7]](#footnote-7)
* A better understanding of human factors that influence decision making and team working
* A greater emphasis on shared decision making and patient and family/carer involvement
* The need for better advance care planning and end of life decisions[[8]](#footnote-8)

Whilst many of the recommendations may appear basic, our evidence[[9]](#footnote-9) suggests that a consistent approach as described is uncommon, and whilst some of the elements may be undertaken by teams, it is rare for all components to be employed. The report draws from and highlights good practice examples. Current constraints do make it challenging to deliver care as described, but all teams will find areas where they can improve their practice. The recommendations are not proscriptive as local context will determine how these principles can be applied.

Teams should self-assess their current practices against this guidance and identify priorities for change. Hospitals should set up improvement programmes to support these across teams. We will be running implementation programmes to enable service changes by teams and hospitals.

### RCP Patient and Carer Network members

‘*It’s so important to see the clinical team focus on me or my families care and progress’*

*‘Involve me and my family in discussions and decisions’*

*‘Give me confidence that you are an effective and efficient team’*

*‘Explain and agree the plan, and let me know how it’s going*’

# 

# A. Background

The ward round first noted in the seventeenth century, was when the visiting Physician would “round” patients on a ward, or in a hospital, in the same way as they would “round” patients in their homes. This became the focus of care planning, medical teaching and decision making. It has subsequently evolved to a multi-disciplinary approach for communication, monitoring progress and planning. It should optimise care within the complexities of the modern hospital environment.

Despite the necessity for organised, regular, clinical reviews of hospital inpatients, defined quality indicators and evidence to guide best practice for ward rounds was lacking until our 2012 guidance. There remains considerable variability in the organisation, efficiency, quality, delivery and patient experience of ward rounds. A summary of results from our surveys is shown in appendix 1.

Ward rounds are critical to developing relationships and building trust with patients, while discharging a duty of care. They can empower patients in their own care planning. They build and maintain effective teams.

## What patients should expect

Ward rounds present a focal point for sharing information between the patient[[10]](#footnote-10) and care team. Healthcare professionals must not underestimate the importance of interactions on the ward round from the perspective of patients, relatives and carers. Dedicating time by the bedside or in another private location to provide clear explanations about symptoms, diagnoses and disease severity, and to answer questions, can reduce a patient’s fear and anxiety, and aid recovery. First and foremost, healthcare professionals must take time to carefully listen to the patient, to understand what they wish to know and what is important to them. This maximises appropriate and successful information sharing and decision making.

## The modern multidisciplinary team

Care in hospitals is delivered by multi-disciplinary teams. The members and functions of these teams have evolved over recent years and differ between clinical environments. Individual clinical assessments by team members all contribute to care planning and decision making, so must be coordinated. Care delivered through an agreed team function and structure will ensure timely and well-planned care, and will enable effective ward rounds. The RCP has summarised many key aspects of how modern teams should function, develop and learn, and the evidence of the impact of effective teams [[11]](#footnote-11).These include clear roles, good communication, common goals, a flattened hierarchy, and team based education and development. These are dependent on many factors including how invitational a workplace is to all of these themes [[12]](#footnote-12). Keeping consistent team members at the ward or unit level helps team functions, and should be planned across professional groups.

Ward team members will include consultants, doctors in training or non-training grades, advanced practitioners (nursing and AHP), nurses, physician associates, pharmacists, physiotherapists, occupational therapists, speech and language therapists, dieticians, social workers and healthcare students. Non-medical professionals commonly take advanced roles extending beyond what is seen as their traditional role, and may be part of the tiers described in *Safe medical staffing*. For example nurse or therapy consultants may lead and coordinate clinical decision making, advanced nurse practitioners’ roles may include many elements traditionally performed by doctors. Many professional groups now also have assistants or technicians who perform key functions on wards and might work across professions e.g. therapy or pharmacy assistants/technicians. Some areas have also developed administrative assistants to support clinical roles*.*

The role of other ward staff should not be underestimated. Healthcare assistants are often most involved with patients, and know their needs and concerns. Clerical and administrative staff such as ward clerks offer support to the functionality of ward rounds. Additional roles to help the smooth running of hospitals such as clinical flow facilitators, must be seen as part of the team and their role clearly defined. Links to key clinical professionals outside the hospital e.g. case managers also need to be clearly defined with agreed communication mechanisms.



**Figure 1. One possible healthcare team. Taken from *Improving Teams in Healthcare,* RCP, 2017.**

Three tiers of decision-making skills by clinical professionals are described in the RCP’s Safe medical staffing.1 This should be included in planning and coordinating the ward team.

**Table 1: Tiers of clinicians**

|  |  |
| --- | --- |
| **Tier 1: Competent clinical decision makers** | Clinicians who are capable of making an initial assessment of a patient |
| **Tier 2: Senior clinical decision makers** | The ‘medical registrars’ – clinicians who are capable of making a prompt clinical diagnosis and deciding the need for specific investigations and treatment |
| **Tier 3: Expert clinical decision makers** | Clinicians who have overall responsibility for patient care. |

From: *Guidance on safe medical staffing*, Royal College of Physicians, 2018.

The expansion of modern teams has an impact on the patient and their perspective of ward rounds. The purpose, identity and make-up of the ward round team can be difficult to understand. What is consistent and clear to professionals, may not always be so to patients.

Stein et al have developed the concept of Accountable Care Units and Structured Interdisciplinary Bedside Reviews[[13]](#footnote-13) . This approach describes key patient care and assessment roles that are coordinated through ward ‘team huddles’ and interdisciplinary bedside reviews.

### Recommendations: multidisciplinary teams

* Agree principles, standards, functions and structure for local ward team working
* Clarify each team members role
* Include each tier of decision makers as per *RCP Safe medical staffing1*
* Agree methods and times of communication
* Keep consistent members of multidisciplinary team for the ward wherever possible.
* Ensure opportunities for team education and development
* Regularly review team performance

### Case studies: Modern multidisciplinary team

Case Study MDT1: East Lancashire Hospitals Model Ward Programme, and Dedicated Ward Pharmacist. Ward team roles.

Case Study MDT2: Nurse consultant, ANP leading ward round

Case Study MDT3: Junior doctors assistants Southampton

Case Study MDT4: Accountable Care Units and SIBR.

## The purpose of ward rounds

Ward rounds are a focus of multidisciplinary care planning and review with each individual patient on a ward or unit under the care of a particular team. Traditionally this occurred in a processional manner for all patients under one consultant’s care, but with the emergence of allied activities that assist care planning this will not always be appropriate. The purpose of ward rounds is to ensure:

* clarity of diagnosis(es) and relevant problems
* prioritisation of problems and treatments, and use of resources e.g. medication, investigations
* coordination of a management plan, including goal setting and discharge planning
* monitoring of the patient’s progress, including medical, functional, emotional and cognitive state
* management of clinical risk eg VTE prophylaxis, severity of illness, drug interactions, level of care required
* clear documentation of clinical assessment, reasoning and plans
* communication with patient and between staff
* opportunities for education and training.

For patients the review and care planning that happens on ward rounds is a demonstration of the care team focusing on them and their condition and needs. When this occurs in an effective manner it builds confidence in the care they receive.

The ward round reviews must be informed by patient, family/carer and multi-disciplinary inputs. With the complexity of modern ward teams, individual professional inputs for care planning may not be possible at the same time i.e. whole multidisciplinary team at the bedside, but the process for these to happen must be planned for each ward, and for each patient. The questions, concerns and goals of the patient and family/carer are essential inputs.

## Communicating with patients, relatives, and carers[[14]](#footnote-14)

Effective information sharing enhances self-management in hospital and following discharge. Although there are pockets of good practice in the UK the lack of structured communication causes frustration and confusion for patients and those important to them.

### Information considered the most important for patients and relatives

While in hospital:

* What is wrong with me?
* Am I getting better or worse?
* What treatment am I having, and what are its benefits and disbenefits?
* What is going to happen today?
* When can I expect to be going home?
* Is there anything that I or my family/friends/carers can do to help?

On discharge:

* What will happen when I leave hospital or will I need further treatment/support?
* How will this be organised?
* Is there anything my family/friends/carers can do to help?

*Compiled from RCP Patient and Carer Network, Ask me 3 [[15]](#footnote-15) , and ECIST best practice[[16]](#footnote-16)*

# B. The process

## Scheduling of ward rounds

Scheduling of effective ward rounds that require joint multi-disciplinary and profession-specific assessments, care and plans is pivotal to enabling the input of all team members. Coordinated timing with other activities such as medication rounds, mealtimes, visiting hours, or ward rounds by other teams must ensure clashes do not occur. Maximising the use of handovers, huddles and board rounds as well as ward rounds ensures consistent communication but must not create duplication. It is not uncommon for a single ward round to involve visits to several wards, this should be minimised. Different medical teams conducting simultaneous ward rounds in the same ward creates difficulties for many members of the team, and if it could occur timing should be agreed to minimise conflicting requirements. Scheduled planning of ward rounds should consider the before, during and after phases aligned with internal and external activities to deliver the agreed care, and the team’s other professional duties.

Ward rounds and aligned activities such as board rounds must commence at an agreed time that supports updating plans of care, ensures timely delivery of the plan and is not disruptive to multi- disciplinary team members. An agreed schedule optimises attendance, communication and effective planning. It also enables flow of care delivery.

Activities should have an estimated length to enable work prioritisation. The start times should maximise multidisciplinary attendance at the agreed sections. Timings should allow preparatory. work to take place before the ward round. This may require adjustment or alignment of shift times. Recognition that some team members work across a number of wards may influence agreed times. Timing is also important for patients to know when they can expect an update and input to their care plans. It must also consider the impact of multidisciplinary decisions, so that discharge plans, involvement of other teams, or further treatments and investigations can flow smoothly from these.

Interruptions to the ward round should be avoided as they prolong the process and disturb the flow and concentration of the multi-disciplinary team. Mechanisms for non-urgent messages to be ‘held’ until the end of the ward round should be in place. For prolonged ward rounds regular ‘pauses’ might be required to ensure adequate input and delivery of actions e.g. at the end or beginning of each bay of patients, as well as preventing cognitive fatigue. Cognitive and physical fatigue will occur after 120–150 minutes[[17]](#footnote-17)[[18]](#footnote-18). Ward rounds should be planned to be completed within this time. If the number of patients requiring review means that more time is required, there must be agreed or breaks. The ward round lead must ensure that commencement and completion schedules are followed. Debriefing and multidisciplinary feedback should be used to prevent delays or disruptions for team members in the future.

The implementation of a dialogue script supports the timely delivery of the ward round with a structure and schedule that all team members are aligned to. (See SIBR case study).

The SAFER flow bundle[[19]](#footnote-19) has been developed as a structured approach to reduce delays for patients in adult in-patient wards (excluding maternity). It’s a guiding set of principles (similar to a care bundle) to help reduce variation by standardising ward and board round processes to ensure that all patients receive an effective senior clinical review and have a clinical plan that is agreed by the multi-disciplinary team, including clinical criteria and an expected date of discharge.

The five core components are:

S - Senior Review. All patients will have a senior review before midday by a clinician able to make

management and discharge decisions.

A – All patients will have an Expected Discharge Date (EDD) and Clinical Criteria for Discharge (CCD), set by assuming ideal recovery and assuming no unnecessary waiting.

F - Flow of patients to commence at the earliest opportunity from assessment units to inpatient wards. Wards routinely receiving patients from assessment units will ensure the first patient arrives on the ward by 10am.

E – Early discharge. 33% of patients will be discharged from base inpatient wards before midday.

R – Review. A systematic multi-disciplinary team (MDT) review of patients with extended lengths of stay with a clear ‘home first’ mind set.

### Recommendations: scheduling

* Scheduling of ward rounds, board round and associated activities to prevent conflicts is essential
* Scheduling should include before, during and after ward round activities.
* Scheduling should maximise patient flow
* Shift times may need adjusting to accommodate this
* The ward round lead should ensure scheduling is adhered to
* Ward rounds should not last more than 120–150 minutes or have agreed breaks to prevent fatigue.
* Dialogue scripts can help a correct pace of ward rounds
* Mechanisms to prevent unnecessary interruptions should be agreed

### Case studies: Scheduling

Case Study S1:

Case Study S2:

## Ward rounds and allied activities

There are multiple activities that require multidisciplinary input to care planning on wards. Key elements include:

* Shift handover
* Handover on patient transfer of location
* Initial clinical patient assessment
* Medicines reconciliation
* Board rounds/ huddles
* MDT care planning meetings
* Discharge communications
* Daily clinical assessments, including multidisciplinary bedside review.

Once again the key to successful care planning and communication is that these are planned, structured and integrated. Each ward team should agree its approach to all of these components, and particularly the timing within the day when healthcare professionals need to be together for the key interactions and communications.

## Before the ward round

The common approach is that the day begins with nursing handovers. Key components that will be required from this to feed into ongoing care planning, including patient relatives and carers concerns, should be agreed, and be part of a structured handover.

As the multi-disciplinary team convenes at the start of the shift a Board Round or Huddle should take place. Board rounds provide an opportunity for multi-disciplinary teams not only to prioritise bedside reviews, but also ensure discharge planning momentum and communication, and highlight delays and actions. These rounds enable the team to rapidly review any outstanding issues, e.g. results of investigations, communications with relatives/parents/carers and advocates, input from other healthcare professionals. They can also highlight key contextual issues such as staffing gaps, operational incidents etc. They should occur around patient summary boards which may be ‘white boards’ that are increasingly electronic. This should be in a room or space which accommodates the team, ensures confidentiality, and prevents interruptions. Patients are discussed in a structured format to identify key actions and priorities for clinical team members e.g. the physiotherapist may do a mobility assessment that will then compliment medical and nursing assessments for a multidisciplinary plan.

The Sick, Out today, Rest, To come in or SORT approach[[20]](#footnote-20) to the ward round promotes review of the sickest patients first followed next by those who are likely to be discharge thus balancing individual clinical urgency and essential system flow. These patients are identified at the Board round/Huddle.

Preparing the input from each professional before the ward round should be an aim, so that the information, eg investigation results, or therapy assessment is not ‘hunted’ for at the ward round, but is readily available to share with the patient and team for decision making.

The work on Structured Interdisciplinary Bedside Review (SIBR) emphasises the importance of structured information from handovers, and from uniprofessional assessment that feeds into multidisciplinary assessment with the patient. This influences the scheduling of the SIBR review so that these uniprofessional assessments or information gathering have happened.

Office based ward rounds have been used to ensure all information is collated away from the bedside before the bedside interaction.

Of equal importance is preparing the patient, relative or carer for any exchange with the team. Providing adequate information about the purpose of the ward round, and if appropriate, leaflets on diagnostic tests, medicines[[21]](#footnote-21) and other procedures can help prepare patients for ward round discussions. This gives them time to consider questions and reflect on information that the round team may need to agree the right management plan. If the patient is not going to be seen on this particular ward round, that too should be explained to them. Patients should be informed of who will be seeing them on the ward round, and provided with a point of contact (eg a specific named member of the ward team), with whom they can raise questions afterwards. Expectations may be different for individual patients and families about family/carer presence for the ward round and the sharing of information. Formal arrangements for these communications will help.

Pre-ward round discussions with relatives or carers are particularly important for patients with learning disabilities or cognitive impairment to establish changes in behavioural traits which otherwise might be put down to their underlying condition. The additional support required for patients with specific needs, eg translation, communication difficulties, those experiencing confusion, patients with mental health issues, should be arranged.

### Recommendations: Before the ward round

* Ensure patient status, questions and concerns are gathered
* Results of investigations should be available and prepared
* Structured information from shift handover should be available
* Board round or huddle to prioritise patients and highlight issues by the whole team
* Individual professional reviews take place to inform multi- disciplinary bedside review
* Arrangements for patients with translation needs or other communication difficulties should be in place

### Case studies: Before the ward round

Case Study B1: Board round

Case Study B2: SIBR

Case Study B3: Office prep

Case Study B4: Patient prep

Case Study B5: White board

**Figure 2. The ward round and associated processes**

## During the ward round

The ward round should begin with a briefing. During this briefing a nominated ward round lead, usually the senior clinician, should:

* Brief the team on the purpose and context of the round
* Allocate roles and tasks to team members
* Create the environment for an open forum for the team to discuss and familiarise themselves with patients’ case and issues that need to be raised during the round
* Set expectations about learning

If the pre ward round board round or huddle has taken place then priorities, who needs review and daily context i.e. staffing, etc will have already been set. If not this should happen at the briefing.

With current staffing levels and multiple priorities, the ‘presence’ on the ward round of MDT members is less important than the inputs, joint discussions when needed, and agreed action being well communicated by the whole team. Essential however is bedside input to discussions and decisions by the staff who know the patient best. This is most commonly the bay nurse or named nurse. Their input is also essential in any discussion or information gathering that happens away from the bedside, and in ongoing communication. Additional staff members whose presence in discussions will be particularly beneficial are pharmacists, particularly in medical wards. This has been shown to double the number of impactful interventions[[22]](#footnote-22). Therapists should be present when rehabilitation is a component of care. Any of these inputs being second or third hand reduces their accuracy, and any discussions that might be needed. Team members being physically together at these times not only increases the quality of decision making, but also builds team working, and displays this to the patient.

Ward coordinators are key to effective care, they should be protected from other duties during peak activity times of the ward. The role of the ward coordinator and their interactions with ward rounds needs careful planning. If input to the patient’s care plan is by the person who knows the patient best i.e. the nurse directly looking after the patient, the coordinator attending the ward round may not be the most effective use of their time. They are also likely to be interrupted. Ensuring regular updates to the coordinator at intervals can be more efficient. Also agreeing which team member will deal with emergent issues to prevent delay or full interruptions will help.

Core roles are shown in Table 2. Some will be undertaken by the same individual. Additional team members will have key roles in inputting their professional assessments as previously agreed in the team functions for that ward. If any of these team members are absent, their role should be assigned to another team member.

**Table 2. Ward round core roles**

|  |  |
| --- | --- |
| **Ward round lead** | * Coordinates and takes responsibility for decision making * Sets the culture of collective input to decision making * Agrees roles of other team members * Ensures the correct priorities and pace of the ward round * Checks accuracy of documentation * Facilitates and/or delivers multidisciplinary education |
| **Summariser** | * Summarises key elements of the input for decisions and the agreed decisions for documentation and communication |
| **Note keeper** | * Completes structured ward round documentation |
| **Patient and family advocate** | * Ensures input of patient family and carer questions, goals and priorities * Summarises the answers to the patients questions and decision for the patientensuing their agreement * Ensures follow up communication around progress of plans to the patient |
| **Safety checker** | * Ensures completion of safety checklist |
| **Staff who knows the patient best – normally nurse directly caring for patient** | * Updates the team on patient’s current state, including relevant physiological observations and monitoring * Updates the team on any changes in the patient’s condition since the last review |
| **Other MDT members e.g doctor, physician associate, Pharmacist, therapist etc** | * Ensures medication review * Ensures update on functional status in hospital and at home * Manages emergent issues to prevent delays |

A dialogue script can be used to provide opportunity for all multidisciplinary team members to contribute to the ward round. The ward round leader should follow this ensuring contributions from all members, patients, carers and families as necessary.

**Key components to individual patient review are shown in Figure 3.**

There are many components that require review with input from agreed members of the team. With planning much of the information should be available or summarised by team members. Office based assimilation and review of this information can be helpful, and might then happen before seeing the patient. Structured documentation improves outcomes.[[23]](#footnote-23) Agreeing follow up including communication of actions and time of next review is essential.

Introduction and explanation to the patient is key. Patients, carers and relatives experience ward rounds in a very different way to healthcare professionals. It is not always clear to them who is leading the ward round, who all the team members are and what their roles are. The sheer number of people, particularly on a student or junior doctor teaching round can be a barrier or deterrent to engaging or asking questions. Healthcare professionals should try to make the experience as reassuring as possible for the patient. Using ‘**Hello: My name is…**’ as pioneered by Dr Kate Grainger will help, as will briefly introducing the team. Having someone at eye level with the patient will prevent patients feeling that they are being ‘talked over’. Asking the patient whom they would wish to share the information about their care with should happen in advance of the visit, and staff should be aware of cultural differences in expectations of involvement and sharing of information.

If a physical examination of the patient is required, this should be done by the examining clinician with appropriate assistance, and other members of the team should be outside the room or curtained area to preserve the patient’s dignity and privacy, unless they are being taught with the patient’s consent.

Medication review is a key component of ward rounds, this will include

* Reviewing and completing medication reconciliation
* Route of administration
* Dosing, Side effects and interactions
* Clinical Effectiveness
* Identify administration omissions and reasons
* Optimisation and deprescribing
* Update of prescription

The 7 steps to appropriate polypharmacy should be followed.[[24]](#footnote-24)

Cognitive and communication difficulties must be considered both as part of the assessment, and in how communication with the patient, family and carers is undertaken. Key documents including ‘This is me’ for patients with dementia or Learning Disability passports should be reviewed.

The central component of the review is the assimilation of the information on the patient’s condition and progress as described above and in figure 3 that leads to clinical reasoning around active diagnoses and problems, prioritisation of interventions (including which to start and which to stop), the day’s goals, and planning the next stage of care towards discharge. Ensuring all team members have a common understanding of this is vital. Clinical criteria for discharge must be agreed and documented, so that these can be followed by the appropriate team member, and may not need to wait until the next ward round if met.

Involving the patient in the decisions is fundamental practice, and the approach outlined in shared decision[[25]](#footnote-25) making including Ask me 316 should be used. When confirming the information and plan in communication with patients, the teachback[[26]](#footnote-26) technique can be used to ensure understanding.

Opportunities for recognising patients who may be in their last year of life, and to commence conversations around advance planning should be identified, but the more detailed conversations should take place after or outside the ward round. Escalation plans and Do Not Resuscitate orders should be reviewed and documented and shared as appropriate with patients.

### Recommendations: During the ward round

* Begin by assigning roles and setting expectation of learning
* Confirm diagnosis and problems
* Address patients’ questions and concerns
* Review progress against plan
* Confirm or revise escalation plans
* Check safety measures, including medication review
* Summarise a revised plan, goals and actions with the team
* Progress actions during ward round when possible
* Teach and learn
* Revise plan with patient
* Communicate and document the review and plan, assigning key actions

### Case studies During the ward round

Case Study D1: Ward rounds.net

Case Study D2: SIBR script

Case Study D3: North London medication questions

Case Study D4: Criteria led discharge

Case Study D5: Alternating summarising role

## Documentation and clinical records

Clear documentation of diagnosis, problems, assessments, goals, progress and plans is essential. Clinical reasoning behind these should be included. Good record keeping underpins communication and aids clear thinking about the clinical situation. Ward rounds provide an opportunity to pull together the different strands of documentation from paper or electronic records into a summary of the patient’s current state and plan.

**Figure 3. Individual patient review during ward round**

\* Many of these items should have been reviewed by team members before the ward round, so that only those that require attention can be highlighted

Structured record keeping helps to organise documentation and act as prompts to ensure that no important part is missed. Evidence based structured approaches such as SBARR (Situation, Background, Assessment, Recommendation, Review)[[27]](#footnote-27) or SOAP (Subjective, Objective, Assessment, Plan)[[28]](#footnote-28) should be incorporated. A consistent core format within an organisation is necessary (and ideally within the NHS) given the movement of staff and patients across wards and specialty boundaries. Checklists are effective particularly when incorporated into structured records23. They should be structured so that they do not “take over”, create duplication, or obscure the core clinical information. As more documentation becomes electronic, the use of cut-and-paste (or automated carrying forward of information) will bring its opportunities but also hazards of replicating inaccuracies.

Prescribing and administration charts, as well as documentation of observations and notes from nursing and other colleagues, are an essential part of ward round review and documentation. Care should be taken to ensure high standards of documentation. Ward rounds are an opportunity for teaching and role modelling on this, as well as providing assurance by review of records. Drug chart reviews and reviews of observations can be noted, either electronically or otherwise, without the need to copy every item of information into every ward round note. Particular items of interest that are copied are thus able to attract the attention they deserve.

A high priority is clear documentation of discussion with patients, families and colleagues. Authorship of ward round entries must be clear, and any entry overseen by the accountable ward round lead. i.e. the scribe is documenting on behalf of the team, and the lead takes responsibility for what is written and its accuracy. The composition of the team constituting the ward round, and allocation of tasks following the round also should be documented.

Ward round entries should be designed and made with their future utility in mind. A key recipient is a clinician reviewing the patient later who has not been on the ward round. Records also form the basis for clinical coding, clinical audit and the production of the discharge summaries.

A written summary of important information discussed on the ward round for the patient, family or carer to read and revisit at a later point will support the verbal communication. It will also be helpful to relatives and carers not present at the time. This can reduce the time spent by ward staff answering questions from relatives and is particularly helpful for relatives and carers of patients who find communicating difficult.

### Recommendations: documentation and clinical records

* Clear documentation of diagnosis, problems, assessments, goals, progress and plans is essential.
* Structured records help to organise documentation to act as prompts to ensure that no important component is missed.
* Checklists help when incorporated into structured records and should be used for key safety risks
* Information recorded at the ward round should make clear the thinking around the clinical decisions, and include clinical criteria for discharge
* Records form the basis for clinical coding, clinical audit and for the production of the discharge summaries, and should be structured to aid this.
* A high priority is clear documentation of discussion with patients, families and colleagues.
* A written summary for patients and relatives is encouraged.

### Case studies: Clinical documentation

Case Study CD1: Ward round proforma with check list

Case Study CD2: Patient summary

Case Study CD3: Coding

Case Study CD4: Building the discharge summary

## After the ward round

At the end of the ward rounds there should be a debrief. This should cover what went well, what could have been improved, and important areas of learning that the team have encountered. Prioritisation of arising tasks should occur.

Careful consideration is required as to which tasks can wait until after the ward round, and which should occur immediately at the same time as the ward round. This will be partly determined by the number of team members in the round and should be clarified by the lead. One example is where tier 1 staff take the lead on summarising and documenting information on alternate patients, and then completing tasks whilst the next patient is being reviewed. Another is where patient summaries and plans are shared with the ward coordinator after every few patients, perhaps a bay, and certainly after priority patients have been reviewed, so that elements of care can be progressed by the wider team while the ward round continues.

Board rounds or MDT huddles conducted at the end of the ward round provide an opportunity for the team to summarise all issues relating to patients’ care, identify and prioritise tasks, confirm plans with the wider team, and assign responsibilities appropriately. Further whiteboard meetings should be held later in the day to ensure progress, and identify any challenges or delays. This is particularly important on a Friday so up to date plans are handed over. Patient status at a glance boards should be continually updated by the whole team.

Priority should be given to what is required for patients being discharged that day or the next day, as well as the sicker patients. This ensures that patients who would benefit from the care of that team can be admitted to the ward in a timely manner and not be waiting in a less appropriate area or team for their care.

Continuing to update the patient around progress with plans is important, and this task should be assigned.

### Recommendations: After the ward round

* Debrief the team for how it went and for learning points
* MDT board round should confirm plans, actions and prioritisation
* Continue to update the patient on progress
* White boards should be updated with progress and goals
* Afternoon huddle to check progress and people who can be discharged before that day and the next day. Includes weekend handover plans on a Friday.

### Case studies: After the ward round

Case Study A1: Patient goals and white board

Case Study A2: Updating patient

Case Study A3: Afternoon huddle

## Outside the ward round

There are multiple processes of care that occur outside the ward round but that will inform the ward rounds, or be informed by the assessment and plans of the ward round. These are shown in Figure 4.

Assessment of patients who are new to that team or ward should ideally take place outside the ward round. This is so that this important assessment for care planning and prioritisation does not wait for a ward round time, and also as these assessments are likely to take longer, involve examination, review of previous records etc they lengthen the more predictable timing of a ward round. The work on SIBR rounds recommends that this happens between the board round and multidisciplinary ward round, alongside any other uniprofessional reviews. In receiving units or acute admission wards this might be difficult, depending on the level of senior staffing. Patients should have received an initial assessment before the ward round, however there will be times where further delays in a patient’s assessment until after the ward round is not warranted as it would further delay their care. This must be decided on an individual basis, but can be planned at the board round. The standard for all patients to receive consultant review within 14 hours of admission to hospital should be noted in prioritisation.

Discussions with the patient and family around end of life care planning, or escalation plans should not happen on the ward round, as this requires both a suitable environment and adequate time. The need for this to happen should be highlighted on the ward round.

Opportunities should be provided to discuss the patient’s care (with consent) with relatives or carers in a confidential setting, away from the bedside. Enabling relatives and carers to ‘book’ to see consultants or other team members at a mutually convenient time facilitates good communications. It also mitigates potential disputes particularly when they are unable to attend the ward round.

**Figure 4. Activities outside the ward round**

### Recommendations: communicating with patients, relatives, and carers

**In advance of the ward round**

* Healthcare professionals should ensure that patients have a clear understanding of the purpose of the ward round, when it is likely to take place and what is likely to happen
* Anyone identified by the patient as being important to them who is there at the time of the ward round should also be included in the conversation and communication.
* Wards should have an explanatory leaflet to give to patients and those identified as being important to them that includes details of ward rounds.
* Arrangements should be made for patients with translation needs of or other communication difficulties

**During the ward round**

* At least one healthcare professional, preferably the person leading the round, should be at eye level with the patient
* While healthcare professionals may be sharing more complex information between the team, they should ensure that the patient and any relatives or carers present have understood the situation and have been able to ask questions before moving on to the next patient
* The patient should be left with a short note explaining the outcome of the ward round, providing the information most important to patients
* The information should be available to people identified by the patient as important to them and with whom they want to share information.

**Outside the ward round**

* More complex discussions around escalation and end of life plans should happen outside the ward round
* Carers and family members should have the opportunity to “book” to see relevant team members at an agreed time

## Education and training

Ward rounds present a major opportunity for education and training. The Royal College of Physicians *Acute care toolkit 5: Teaching on the acute medical unit[[29]](#footnote-29)* and *Never too busy to learn*[[30]](#footnote-30) provides guidance and best practice. Creating a culture of learning during board rounds and ward rounds is a key role for both senior and junior staff of all professions. The Board round or briefing enables the expectation of the learning experience to be emphasised, and key learning opportunities to be identified. During the ward round the following techniques can be used20

* thinking aloud
* demonstrating
* generating questions and getting some of the team to research the answer
* swapping senior and junior roles for part of the ward round
* getting trainees to review a patient first, think about the problem(s), then present their management plan to the team
* giving feedback
* telling clinical stories to illustrate an evidence-based point
* encouraging ‘noticing’ (eg of clinical signs or consultation skills)
* having clinical conversations (eg explaining the rationale of a management plan when reviewing a case)
* at the end of a ward round, asking what three things people learned
* encouraging trainees to write up interesting cases or present cases at meetings
* recommending specific further reading

This learning should be multi-disciplinary, and each professional who may be present on the ward round should share their knowledge and experience to educate others. Debriefing should confirm learning points, and other educational activities that can occur relating to these.

Reverse role ward rounds can be employed to educate and train senior trainees. This is where a senior trainee takes the consultant role, normally to lead the ward round. Debriefing is essential periodically and at the end. Without this experience senior trainees are unlikely to get adequate exposure to develop these skills.

Explaining to patients the educational role of ward rounds for staff is essential both in pre-read materials, and during the process. This is particularly important when reverse roles are employed.

The increasing use of simulation for education and training of clinical professionals and teams should be employed for ward rounds. This involves simulating the different roles, and how the team interacts between themselves and surrogate patients. Different scenarios can be used to challenge the team.

### Recommendations: Education and learning

* Education and learning should be across professions on the ward round
* Simulation of ward rounds should be used in training staff these important skills
* Learning points should be summarised at the end of ward rounds with opportunities for further learning
* Patients should be informed that teaching and learning are part of ward rounds and consent requested when appropriate.

# 

### Case studies: Education and learning

Case Study EL1: SASH

Case Study EL2: Nottingham

Case Study EL3: Reverse role ward round

# C. The environment

## Physical environment

The physical environment being conducive to ward rounds is important. The following key elements should be considered.

* A quiet environment to aid communication and cognition by the care team and patient.
* Other activities in the vicinity should be minimised to prevent interruptions or distractions.
* Seating at the bedside should be available to enable the team member communicating with the patient to be at the patient’s eye level.
* Charts that need reviewing as part of the care process should be available, and preferably at the bed side, or taken to the office if an office-based discussion is incorporated into the process.
* Hand washing materials must be available for infection and prevention purposes.
* Patients case records must be available either in paper of electronic format.
* Paper records should be prepared before the ward round with relevant documents being available.
* If computerised information is used then the equipment to review that information must be maintained, appropriate and available (see later)
* Patient Status at a glance boards in an area that preserves the patient’s confidential information should be in each ward area to enable board rounds, a communication focus and progress updates for all team members.
* Places for confidential conversations, and uninterrupted work of staff preparing or following up actions from the ward round must be available.

Scheduling of activities on a ward (see above) will enable many of these to be achieved.

Teams in Sweden have developed a ward round process that is away from the bedside for 80% of patients on a general medical ward[[31]](#footnote-31). This created a calm uninterrupted environment with all the information available for good communication and decision making. The patient is brought from the bedside to this place.

In wards with multiple teams “zoning” patients so that those under one team are next to each other can increase efficiency and improve communication.

Any planned changes to the physical environment must consider their effect on ward rounds and other key activities.

## Dignity, privacy and confidentiality

Confidentiality and dignity are very much influenced by the ward layout and available space, but should be considered at all times. Bedside discussions with patients behind curtains do not always preserve confidentiality, particularly when ward-round times coincide with visiting hours.Similarly, discussing patient information in open spaces, such as by the nurses’ station, the middle of a bay or next to the ward board if near to patients, may result in breaches in confidentiality**.** The use of private rooms or areas for this must be considered. The volume of conversations and discussions should be monitored by the team to try and keep confidentiality as much as possible.

It is important that consent be sought from patient before allowing their relatives/parents/carers/ advocates to be present during ward rounds.

All members of the ward-round team should be aware of the immediate environment when discussing patient information. Displays of electronic information must also be considered for confidentiality**.**

Patient dignity is maximised by inclusion in discussions, and seeking of consent. Ensuring only those who need to be present for physical examination also secures this.

## Protecting vulnerable patients

Inpatient populations include an increasing proportion of frail older patients, with estimates of the prevalence of dementia as high as 25% in this cohort. Healthcare professionals should be aware that capacity is context specific. Patients with cognitive impairment, mental health problems, dementia and learning disabilities should be supported to make decisions about their care, with dedicated time provided to communicate information to carers/advocates and relatives/parents.This is likely to be necessary before and after the ward round, to give adequate time. If a patient lacks capacity to make specific decisions about his or her care, multi-disciplinary team meetings and careful discussions with carers/advocates and relatives/parents should guide the team to make decisions in the patient’s best interests. All clinical professionals must ensure that their patients’ needs are identified and articulated.

Agreed team members should gain as much information as possible about the patient before the ward round, including background history from the patient’s usual residence and key worker, care passport or disability assessment.

## The role of technology

Computers and electronic patient records are increasingly a core part of the functioning of hospital wards. The extent to which they are mobilised for use on ward rounds will increase significantly in the next few years. How to use them for this central activity needs to be tested, learned and improved. Electronic patient records have the potential to allow ward rounds to proceed more smoothly with readily accessible notes and results. They also offer the availability of patient data from other healthcare locations and sources, with big benefits of the integration and availability of this information into one place. In many hospitals use of systems is in transition from a number of stand-alone systems for monitoring, investigations, external and internal records to one integrated system. During this transition the use of multiple systems and logins can be time consuming. Checking patient identification for the correct record remains paramount.

Structured records with quick links to the tasks required during clinical decision making and care planning can increase efficiency and reliability if linked to good role allocation. Integrated clinical decision support and safety checks are good, but alert fatigue and too extensive checklists for the time available can be problematic a. The ability to show trends in clinical data is an important function to be included.

Audit and information trails of requests and progress of investigations can reduce missed investigations. A good example of where better availability of information has improved clinical care linked to good practice guidance is AKI alerts.[[32]](#footnote-32)

Although electronic patient records promise to improve safety and efficiency through advancing data connectivity, it is also important to consider how the use of technology during ward rounds reshapes working practices, particularly regarding communication, documentation, and the effect of mobile computers. Computer keyboard entry will take longer than written notes for some, increasing the length of time of a review. Newer technologies for handwriting or voice recognition may help to reduce this. Some organisations have employed scribes as additional team members to increase efficiency[[33]](#footnote-33). The common finding that ward rounds take longer with electronic information systems may be partly due to training, and how tasks are performed.

Ensuring adequate hardware and its maintenance is key, but is not commonly done well. People have preferences for different types of hardware and may have training needs. Ethnographic studies should be done during EPR deployment to understand hardware requirements, particularly during times of peak and competing activities. Mobile devices are obviously needed, but maintenance of Wi-Fi, charging and IT support need to be planned into job roles at the ward or unit level 24/7. There is a tendency for staff to use their own hardware for associated tasks i.e. mobile phones for task lists, decision tools. The risks, benefits and policy around this should examined, agreed and supported.

Electronic patient records allow ward rounds to be conducted with greater locational freedom. This can be of benefit in enabling teams to find quiet spaces with adequate computer access to review patient records and information. However the reduced visibility of the ward round can make it harder for ward staff to coordinate work, and needs explaining to patients. If the ward round is less visible because notes are being accessed remotely, face-to-face communication opportunities such as board-rounds and debriefings can ensure the multi-disciplinary team is fully aware of the plan for the day and any key decisions. Remote use of information away from the patient and if used in isolation can create inappropriate biases in clinical decision making. More detailed information on the impact of EPR on communication is available.[[34]](#footnote-34),[[35]](#footnote-35)

EPR providers have varying ways of allowing information to be copied or pulled through from one ward round to the next. Where this feature is used, it is important that the information is regularly and carefully reviewed, as outdated and potentially incorrect data can accumulate with potential risk to patient safety.[[36]](#footnote-36)

The use of mobile computers on ward rounds is common. Where multiple mobile computers are being used to access different elements of the electronic record (for example, the prescription chart, investigation results, the ward round note), it is harder to get an ‘at-a-glance’ idea of who is doing what. The principles of good communication practice on ward rounds, including pauses for verbal summaries and decision making should be employed. The ward round lead in confirming team members roles must including who will use the electronic systems and when to focus on human interactions. The importance of maintaining confidentiality has been highlighted.

White boards to show overviews of a patient or a ward can help with prioritisation and communication. Commonly used at board rounds and huddles with continuous updating. Task planning and ‘glide slopes’ to ensure complex processes are followed are becoming available.

The use of computers to share information with patients should be maximised, particularly if tablet devices or other bedside access is available. These can also be used to capture patient’s questions. The EPR may also facilitate summaries for patients of agreed diagnoses and plans.

Electronic information systems and the use of hardware on ward rounds changes human interactions. People can be focused on screens and keyboards, rather than interacting with each other and the patient. Printed information can increase biases in decision making, and reduce questioning. The height of ‘kit’ can influence human interactions. Sharing electronic information with patients is important and while this has been developed well in office practice setting, it requires more research and exploration in inpatient settings. Electronic recording of plans and tasks, shouldn't stop verbal communications. Organising the team with the use of technology in mind is vital.

Training of individuals and teams in ward rounds includes the integration of the use of digital systems.

### Recommendations: using technology

**The basics**

* Adequate hardware must be available on the ward for all tasks requiring computer records, particularly at peak times
* Training of staff in the use of hardware and software with single sign on if there are multiple systems
* Accessible secure Wi-Fi for mobile devices
* Maintenance and housekeeping of hardware and software at a ward level needs to be agreed in ward staff roles.

**Maximise the benefits**

* Computerised records and information systems should be used to maximise availability of information for decision making, and remote communication.
* Connectivity of individual systems with agreed methods of use will increase efficiency.
* Computers on wheels, mobile or bedside devices should be used when possible to increase visibility and decision making with patients

**Minimise the risks**

* Vigilance is required on the accuracy of electronic record**.**
* Methods of recording in electronic records should be agreed and tested that reduce recording times
* Bedside computer etiquette should be used so that they do not detract from human interactions

### Case studies: Technology

Case Study T1: Greenwich

Case Study T2: Sunderland

Case Study T3: Lancashire Integrated record

Case Study T4: Scribes

Case Study T5: Tablets

## Different inpatient settings and scenarios

Although the purpose and principles of good practice on ward rounds outlined apply to ward rounds wherever they are undertaken in hospitals, it is important to recognise that ward rounds at different stages of a patient’s admission to hospital may have different requirements.

An admission unit’s ward rounds will be seeing a significant proportion of patients by the consultant for the first time. Dependent of the function of the unit there will also be follow up reviews. Whilst the information should have been prepared the patient is at a very active stage of management, more information is likely to be required to be gathered, and examination of the patient may be required during the ward round. The issues of privacy and dignity as information is assimilated and during examination remain pertinent. More time for communication and history checking will be needed. It is possible that some of the multidisciplinary team will not have completed their review at this stage. The RCP guidance on safe medical staffing recommended from the tasks required that a consultant could safely review 10 new patients over a 4.5-hour period on an acute medical admissions unit. It is important to note that this includes time during and after the ward round, including follow up and communication. Many assessment units employ the concept of the “rolling ward round” or reviews, where bedside team review happens when the information is ready during the day or night and not at a set time of the day. This is likely to be needed to consistently ensure patients receive consultant review as early as possible and within 14 hours of admission.

Most patients on wards after assessment units, will already have their initial plan in place, and are undergoing ongoing review. Variation here will depend on the number of consultants with responsibility for patients on the ward or unit at any one time, and the complexity of patients’ conditions. Scheduling of each consultant round to ensure the ability of multi-disciplinary input and other ongoing care is essential in this situation.

Continuity is important and if consultants spend periods of time with and without ward patient responsibilities, the period of ward responsibility should consider the length of stay of patients to try and reduce the number of consultants during a single patient’s stay. A handover round is best practice when consultants rotate duties. The frequency of consultant led rounds will depend on the availability of tier 2 staff. *Safe Medical Staffing* recommends daily consultant presence for board rounds, assessment of sick and new patients and important communication with patients, families and other staff. Tier 2 staff should lead the ward round in the absence of consultant, but arrangements should be in place to brief the consultant after the round.

Commonly patients under the care of a clinical team may not be on the ward where the team is based. These patients are often called outliers or borders. Clear arrangements for timing of reviews of these patients must be in place so that their care is not disadvantaged, and the principles outlined in this report all apply. Clarity of the members of the care team for these patients is most important. Most must be on the ward the patient is on. Buddy wards[[37]](#footnote-37) i.e pairing medical and surgical wards, so that medical patients on the surgical ward are cared for by a consistent team who know the staff, have been shown to help. This should be considered from a multidisciplinary perspective. Continuity of care for these patients is potentially of greater importance. They must not feel disadvantaged by language used in communications, e.g referred to as “outliers” or “not on the right ward”.

Patients are likely to stay longer on rehabilitation wards and will have slower changes in their condition. Ward rounds will be less frequent. Specialist input to ward rounds can be by video consultation.

Medical staffing at weekends is reduced in the UK, with the exception of admission wards. The guidance on safe medical staffing suggested that for the best practicable care, one consultant was needed for 2 hours on every ward on each day of the weekend or public holiday, even with up to 40% of patients identified as not requiring a review at the weekend. This would permit a board round, review of new patients admitted to the ward, patients who had deteriorated and patients who could potentially be discharged. While inevitably not the same standard of ward round care as during the week, this was felt to be the best practicable care to maintain safe ward round practice and timely discharge of patients at weekends and during public holidays. Commonly other members of the multidisciplinary team will be fewer at weekends, or will be less familiar with the patients. Again clarity and consistency of staff is important, and all should be present at the Board rounds. Excellent Friday handover is important to highlight those patients who need review by each profession over the weekend and/or public holidays. Therefore Friday ward round should be consultant led when daily consultant rounds are not possible, and are likely to require a longer scheduled time period for weekend plans. Structured documentation for Friday rounds with weekend plans linked to handover lists is beneficial. These should be reviewed on the Friday afternoon and updated.

Certain clinical specialties will not be ward based, or may have a role in contributing to the care of patients across a hospital. These rounds should again be multidisciplinary, and assessments should be done jointly with the ward based team. If timing of visiting wards can be agreed that helps with scheduling. Many of the principles around team working, patient involvement and the elements of review remain pertinent. Good examples are diabetes inpatient rounds, pain teams, rheumatology and nutrition.

### Recommendations: Other settings

* Friday ward rounds should be led by the senior staff, take longer, and include clear documented plans for the weekend
* “Outliers” should be minimised but should not be disadvantaged. Continuity of team and timing will help.
* Senior handover should occur if consultant responsibility rotates.
* Speciality rounds should involve the ward based team

### Case studies: Other ward rounds

Case Study O1: Southampton Diabetes

Case Study O2: Blackburn Rheumatology

Case Study O3: Handover round

# D. Quality management, research and innovation

Quality management requires three components: quality planning, quality assurance and control, and quality improvement. This approach should be applied to ward rounds.

There are many elements of quality planning outlined in this report. These include:

* Scheduling
* Consistent staffing and shift patterns
* Structured documentation
* Availability and maintenance of technology
* Rooms for confidential discussions

Quality assurance and control requires agreed measures for ward rounds. Currently there is no agreed measurement set for this but this should include elements around the key quality domains of Safety, Timeliness, Effective, Efficient, Equitable and Person centred. Key ward performance measures can be contributed by ward rounds. These include:

* Hospital Length of Stay
* Readmission Rate
* Prescribing errors
* Antibiotic stewardship
* VTE prophylaxis rates
* Incident reporting rates
* Discharge times (within the day)
* Patient experience measures
* Staff experience measures

Elements such as reliability of start time, attendance on ward round, and duration of ward round could be used.

Staff and patient experience will be major measure of the effectiveness, as ward rounds and associated activities are the major function where multidisciplinary staff work together. This should include effective team working, and educational experience. Patient experience is key, and should include measures of effective communication and confidence, including the key patient questions outlined earlier. The use of realtime electronic patient experience measurement can give immediate feedback at the end of a session or ward round to the team.

Many hospitals have ward accreditation or quality schemes, the functioning and effectiveness of ward rounds should be included in these. Specific ward rounds accreditation schemes should be considered.

The implementation of all of the good practice features of ward rounds outlined in this report is rare. Ward rounds are therefore a very applicable area for quality improvement programmes and projects. This should be within a hospital wide improvement programme, though individual projects should happen at an individual ward/team level and the successful elements spread across the hospital. We recommend that teams and hospitals self assess themselves against this guidance and develop quality improvement initiatives to address or improve areas identified.

There is considerable scope for research and innovation related to ward rounds. These would include:

* Roles of individual team members in ward rounds, maximising the use of new roles.
* Patient involvement
* Use of technology – particularly voice or handwriting recognition, and remote involvement.
* The role of Artificial Intelligence to identify key trends, or risks
* Mechanisms for increasing confidentiality

### Case studies: Quality management

Case Study QM1: Warrington accreditation

Case Study QM2: Glasgow programme

Case Study QM2: Northumberland real time patient experience

Case Study QM4: Bangor patient partnership

# Case studies

### Case studies: Modern multidisciplinary team

Case Study 1: East Lancashire Hospitals Model Ward Programme, and Dedicated Ward Pharmacist. Ward team roles.

Case Study 2: Nurse consultant, ANP leading ward round

Case Study 3: Junior doctors assistants Southampton

Case Study 4: Accountable Care Units and SIBR.

### Case studies: Scheduling

Case Study S1:

Case Study S2:

### Case studies: Before the ward round

Case Study B1: Board round

Case Study B2: SIBR

Case Study B3: Office prep

Case Study B4: Patient prep

Case Study B5: White board

### Case studies: During the ward round

Case Study D1: Ward rounds.net

Case Study D2: SIBR script

Case Study D3: North London medication questions

Case Study D4: Criteria led discharge

Case Study D5: Alternating summarising role

### Case studies: Clinical documentation

Case Study CD1: Ward round proforma with check list

Case Study CD2: Patient summary

Case Study CD3: Coding

Case Study CD4: Building the discharge summary

### Case studies: After the ward round

Case Study A1: Patient goals and white board

Case Study A2: Updating patient

Case Study A3: Afternoon huddle

### Case studies: Education and learning

Case Study EL1: SASH

Case Study EL2: Nottingham

Case Study EL3: Reverse role ward round

### Case studies: Technology

Case Study T1: Greenwich

Case Study T2: Sunderland

Case Study T3: Lancashire Integrated record

Case Study T4: Scribes

Case Study T5: Tablets

### Case studies: Other ward rounds

Case Study O1: Southampton Diabetes

Case Study O2: Blackburn Rheumatology

Case Study O3: Handover round

### 

### Case studies: Patient Partnership

**PP1 Emerson’s Green** is an independent elective surgery treatment centre in Bristol run by Care UK. It specialises in planned NHS and private surgery for NHS, private and insured patients. The services cover a wide range of treatments and also provides diagnostic services.

**Good practice:**

On admission, patients are provided with a folder and sheets of paper to write down any questions that they may have, and are then given an opportunity to ask the questions during the ward round. The ward manager ensures that all members of the MDT have enough time for this, and has reassured patients that they can also ask questions outside of the ward round.

**PP2 Norfolk Community Health and Care NHS Trust** serves a population of nearly 900,000 people in Norfolk with community health and care services, as well as providing a specialist Early Supported Discharge service to stroke patients in Norfolk and Suffolk. On the amputee rehabilitation ward round the team were unable to maintain confidentiality due to shared bays, and elderly patients felt intimidated when surrounded by the team that could include a consultant, junior doctor, nurse, physiotherapist, occupational therapist and occasionally students.

**Good practice:**

The team found a room dedicated for the ward rounds and all team members sat in the room – patients were brought to the room for review and a confidential discussion. Patients felt more in control as those in wheelchairs were able to leave when they wished. Patients were enabled to bring a family member with them, which gave them the opportunity to ask questions to the team and reduced the need for separate family meetings. Confidentiality was maintained.

**PP3 George Eliot Hospital NHS Trust**, based on the outskirts of Nuneaton, provides a range of elective, non-elective, surgical, medical, women’s, children’s, diagnostic and therapeutic services to a population of more than 300,000 people. On Mary Garth Ward, an 18-bed ward focusing on gastroenterology, the team wanted to improve communications between doctors, nurses, auxiliary staff and patients.

**Good practice:**

The team set up a Shared Decision Making Council to make ward improvements for staff, patients and visitors’ wellbeing. As part of this, they developed a communication tool to give a brief overview of the patient’s clinical plan and care. Staff complete a form with open sections for Monday-Friday based on the answers to three simple questions:

* What is going to happen to me today?
* What are we waiting for?
* What is my discharge plan?

Encouraging staff to complete the tool took time, but it has proved successful - the number of complaints has reduced significantly, friends and family feedback has improved, staff retention and morale has improved and staff feel more invested in the service and empowered to make changes.

# Working party

**Dr John Dean.** Co Chair. Clinical Director for Quality Improvement and Patient Safety. Royal College of Physicians. Consultant Physician and Deputy Medical Director East Lancashire Hospitals NHS Trust

**Professor Nichola Ashby**. Co Chair. Head of Learning and Practice Development. The Royal College of Nursing

**Dr Hussain Basheer.** Education Fellow. Royal College of Physicians. Specialist Registrar in Respiratory Medicine

**Nina Barnett**, Consultant Pharmacist, Northwick Park Hospital, Royal Pharmaceutical Society

**Dr Lisa Waters.** Chief Registrar, Warrington and Halton Hospitals NHS Foundation Trust

**Jayne Black**, Joint Head of Policy, Royal College of Physicians

**Dr Druin Burch**. Consultant Geriatrician. Oxford Hospitals NHS Foundation Trust

**Sarah Campbell**. Operations Director, Quality Improvement and Patient Safety, Royal College of Physicians

**Dr Sarah Clarke**. Clinical Vice President. Royal College of Physicians, Consultant Cardiologist Royal Papworth Hospital.

**Dr Alex Crowe**. Deputy Medical Director, Warrington and Halton Hospitals NHS Foundation Trust

**Linda Cuthbertson.** Head of PR and Public Affairs, Royal College of Physicians

**Dr Alistair Gilmore**. Chair New Consultant Committee, Royal College of Physicians. Consultant Physician in Acute Medicine, Wirral University Hospitals NHS Trust

**Deirdre McClelland**. Patient and member of Royal Collage of Physicians Patient and Carer Network

**Adele Mott**. Clinical Fellow, Royal Pharmaceutical Society

**Prof David Oliver**. Clinical Vice-President, Royal College of Physicians. Consultant Geriatrician Royal Berkshire Hospitals NHS Trust

**Lynne Quinney**. Patient and Carer. Representative of Patient and Carer Network, Royal College of Physicians

**Dr Andrew Rochford**. Consultant Gastroenterologist, Barts Health NHS Trust, Advisor Emergency Care Intensive Support Team (ECIST)

**Helen Sharma**. Head of Practice Improvement. Chartered Society of Physiotherapy

**Suman Shrestha**. Professional Lead Acute, Emergency and Critical Care, Royal College of Nursing

**Kate Straunton**. President of Faculty of Physician Associates, Royal College of Physicians

**Dr Nigel Trudgill**. Director, Medical Workforce Unit, Royal College of Physicians. Consultant Gastroenterologist Sandwell and West Birmingham NHS Trust

The RCP’s Patient and Carer Network workshop identified variable practice on successful two-way communication with patients, relatives and carers leading to frustration and confusion. Specific reported issues included:

Patients are not always given information about whether there will be a ward round, the purpose of the ward round, who will be leading it, how long they will be seen and by whom, and whether there will be an opportunity to ask questions. Patients often feel they are talked over or down to, literally as well as psychologically. They are not always included in the conversation and are unsure if they can ask questions or are reluctant to do so.

Confidentiality is a major concern as curtains or screens do not block sound and patients would like to have more confidential options to discuss their care. The concentration of the MDT on the medical aspects of care sometimes left out the issues important to patients – quality/quantity of sleep, eating and drinking, general wellbeing etc. Using simple and clear language was felt to be extremely important and currently lacking.

Following the ward round, patients are not usually given any written information on what the next steps of their care will be, to share with relatives and carers if they are not present. Many ward rounds take place when visitors are not present so relatives and carers do not have any information and have to then approach the ward staff with questions when they arrive.

Thanks are also due for direct advice and input from:

Dr Vicky Reay. PhD student, Associate Lecturer. Lancaster University

Dr Gordon Caldwell. Consultant Physician NHS Highlands

Claire Merriman, Head of Professional Practice Skills. Dept Nursing Oxford Brookes University

James Maguire, Clinical Advisor NHS X NHS England, Geriatric Medicine Registrar

# Appendix 1: Surveys of professions

# Appendix 2: Team planning template

# Appendix 3: Self assessment template

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Not in place** | **In development** | **In place but incomplete** | **In place but not consistently followed** | **In place and reliably followed** |
| **Ward team members roles and functions agreed, documented and understood** |  |  |  |  |  |
| **Ward leadership team has regular meetings to review quality** |  |  |  |  |  |
| **Ward rounds and other activities are scheduled to prevent conflicts** |  |  |  |  |  |
| **Shift handover is structured to feed information into ward round** |  |  |  |  |  |
| **Pre ward round board round is scheduled, structured, attended by all MDT staff and well led** |  |  |  |  |  |
| **Patients are reviewed in priority order on ward rounds** |  |  |  |  |  |
| **Ward round roles are clear and followed** |  |  |  |  |  |
| **Patients, families and carers are actively involved in ward round decisions** |  |  |  |  |  |
| **Structured documentation including safety checklists are used** |  |  |  |  |  |
| **Medication and monitoring charts are reviewed** |  |  |  |  |  |
| **The staff who directly care for the patient input to the ward round** |  |  |  |  |  |
| **The ward round leader creates an environment for active participation and involvement in care planning** |  |  |  |  |  |
| **Communication with patients during the ward round is at eye level** |  |  |  |  |  |
| **Interprofessional education occurs during the ward round** |  |  |  |  |  |
| **Learning points are summarised and planned at the end of the ward round** |  |  |  |  |  |
| **Debriefing and multidisciplinary agreement and handover of plans occurs after the ward round** |  |  |  |  |  |
| **Follow up communication with the patient on progress of plans is agreed,** |  |  |  |  |  |
| **Complex conversations and assessments with patients and families are planned outside the ward round** |  |  |  |  |  |
| **IT equipment is maintained and adequately available for ward rounds** |  |  |  |  |  |
| **Staff are trained in how to conduct ward rounds and use relevant software** |  |  |  |  |  |
| **Quality improvement projects are in place for ward rounds.** |  |  |  |  |  |

**Priorities for Improvement Agreed next steps**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

1. . *We use the terms Ward and Ward round extensively. In the UK a ward is a physical space where a group of patients are cared for, by a common nursing team. It can sometimes be called a unit. Ideally the other members of the Multidisciplinary team will also be common to that ward’s patients, but often have responsibilities across a number of wards. The processes described should occur in each ward or unit, and be replicated wherever possible within the organisation. Some members of the team may therefore be participating in multiple ward rounds in multiple wards or units.*  [↑](#footnote-ref-1)
2. Royal College of Physicians 2019. Focus on Physicians: 2018–19 census of consultant physicians and higher specialty trainees in the UK[https://www.rcplondon.ac.uk/projects/outputs/focus-physicians-2018-19-census-uk-consultants-and-higher-specialty-trainees](https://protect-eu.mimecast.com/s/jxx2CoY76F0MwLi1cgJw?domain=rcplondon.ac.uk) [↑](#footnote-ref-2)
3. The Royal College of Nursing (2017) Safe and effective staffing: nursing against all odds. [↑](#footnote-ref-3)
4. . Royal College of Physicians. Guidance on safe medical staffing. Report of a working party. London: RCP, 2018 [↑](#footnote-ref-4)
5. . NHS Improvement. Good practice guide: Focus on improving patient flow. https:// improvement.nhs.uk/resources/good-practice-guide-focus-on-improving-patient-flow/ [↑](#footnote-ref-5)
6. . Royal College of Physicians (2017) <https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2> [↑](#footnote-ref-6)
7. . The Scottish Government (2016) The Daily Dynamic Discharge Approach [online] http://www.gov.scot/Resource/0050/00503010.pdf [↑](#footnote-ref-7)
8. . RCP Talking about dying: How to begin honest conversations about what lies ahead 2018 [↑](#footnote-ref-8)
9. *Evidence was gathered through member surveys across the UK, and through the committees, networks and forums of the participating professional and patient groups.* [↑](#footnote-ref-9)
10. *When we refer to patients, we include family members, carers and significant people the patient wishes to be involved.* [↑](#footnote-ref-10)
11. .RCP Improving teams in healthcare. <https://www.rcplondon.ac.uk/projects/improving-teams-healthcare> [↑](#footnote-ref-11)
12. Basheer H, Allwood B, Lindsell CM, Freeth D, Vaux E. Never too busy to learn: how the

    modern team can learn together in the busy workplace. Royal College of Physicians,

    Health Education England. 2018. www.rcplondon.ac.uk/projects/outputs/never-too-busylearn- [↑](#footnote-ref-12)
13. Stein J, Payne C, Methvin A, et al. Reorganizing a hospital ward as an accountable care unit. J Hosp Med. 2015;10(1):36–40. [↑](#footnote-ref-13)
14. *In the previous report, barriers to communication with patients were briefly acknowledged, and three recommendations made to support better communication. In updating this report, the RCP’s Patient and Carer Network held a workshop on communication between healthcare professionals, patients and relatives/carers to draw out key issues relating to ward rounds and to make positive recommendations for change.* [↑](#footnote-ref-14)
15. <https://improvement.nhs.uk/documents/2898/Guide_to_reducing_long_hospital_stays_FINAL_v2.pdf> [↑](#footnote-ref-15)
16. <http://www.healthliteracyplace.org.uk/tools-and-techniques/encouraging-patient-questions/> [↑](#footnote-ref-16)
17. Rosenberg, K. (2014) 'The Joint Commission Addresses Health Care Worker Fatigue', AJN The American Journal of Nursing, 114(7), p. 17 [↑](#footnote-ref-17)
18. Vohs, K. D., Baumeister, R. F., Schmeichel, B. J., Twenge, J. M., Nelson, N. M. and Tice, D. M. (2008) ‘Making choices impairs subsequent self-control: a limited-resource account of decision making, self-regulation, and active initiative’. J pers Soc Psychol., 94(5), pp. 883-898. [↑](#footnote-ref-18)
19. https://improvement.nhs.uk/resources/safer-patient-flow-bundle-implement/ [↑](#footnote-ref-19)
20. <http://safergloshospitals.co.uk/ward-round> [↑](#footnote-ref-20)
21. Royal Pharmaceutical Society. Making the most of your medicines. https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Hub/Medicines%20optimisation/patients---making-the-most-of-medicines.pdf [↑](#footnote-ref-21)
22. PROTECT- UK study [↑](#footnote-ref-22)
23. NICE (2018) <https://www.nice.org.uk/guidance/ng94/evidence/28.structured-ward-rounds-pdf-172397464641> [↑](#footnote-ref-23)
24. http://www.polypharmacy.scot.nhs.uk/polypharmacy-guidance-medicines-review/for-healthcare-professionals/7-steps/ [↑](#footnote-ref-24)
25. <https://www.rcplondon.ac.uk/projects/outputs/shared-decision-making-information-and-resources> [↑](#footnote-ref-25)
26. <http://www.healthliteracyplace.org.uk/tools-and-techniques/techniques/teach-back> [↑](#footnote-ref-26)
27. <https://improvement.nhs.uk/documents/2162/sbar-communication-tool.pdf> [↑](#footnote-ref-27)
28. [Pearce PF](https://www.ncbi.nlm.nih.gov/pubmed/?term=Pearce%20PF%5BAuthor%5D&cauthor=true&cauthor_uid=26795838), [Ferguson LA](https://www.ncbi.nlm.nih.gov/pubmed/?term=Ferguson%20LA%5BAuthor%5D&cauthor=true&cauthor_uid=26795838), [George GS](https://www.ncbi.nlm.nih.gov/pubmed/?term=George%20GS%5BAuthor%5D&cauthor=true&cauthor_uid=26795838), [Langford CA](https://www.ncbi.nlm.nih.gov/pubmed/?term=Langford%20CA%5BAuthor%5D&cauthor=true&cauthor_uid=26795838) The essential SOAP note in an EHR age.

    [Nurse Pract.](https://www.ncbi.nlm.nih.gov/pubmed/26795838) 2016 Feb 18;41(2):29-36 [↑](#footnote-ref-28)
29. Royal College of Physicians. *Acute care toolkit 5. Teaching on the acute medical unit.* RCP, 2012. [↑](#footnote-ref-29)
30. *Never too busy to learn.* London: RCP, 2018. [↑](#footnote-ref-30)
31. <http://wardround.net/network-2/> [↑](#footnote-ref-31)
32. [Sawhney](https://www.ncbi.nlm.nih.gov/pubmed/?term=Sawhney%20S%5BAuthor%5D&cauthor=true&cauthor_uid=25925702) S,  [Fluck](https://www.ncbi.nlm.nih.gov/pubmed/?term=Fluck%20N%5BAuthor%5D&cauthor=true&cauthor_uid=25925702) N et al. Acute kidney injury—how does automated detection perform?

    [Nephrol Dial Transplant](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4617372/). 2015 Nov; 30(11): 1853–1861. [↑](#footnote-ref-32)
33. Walker K, Ben-Meir M, et al. Impact of scribes on emergency medicine doctors' productivity and patient throughput: multicentre randomised trial. BMJ. 2019 Jan 30;364:l121. [↑](#footnote-ref-33)
34. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5171576/> [↑](#footnote-ref-34)
35. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5171576/> [↑](#footnote-ref-35)
36. [https://www.ecri.org/Resources/HIT/CP\_Toolkit/](https://www.ecri.org/Resources/HIT/CP_Toolkit/CopyPaste_Literature_final.pdf?utm_medium=referral&utm_source=r360) [↑](#footnote-ref-36)
37. [↑](#footnote-ref-37)