

Administrative Errors



■ ■ ■ **Technical Series on Safer Primary Care**

Administrative Errors: Technical Series on Safer Primary Care
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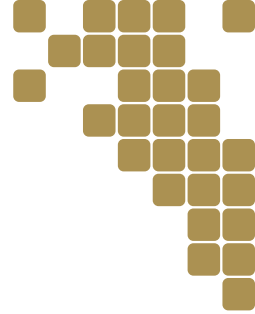
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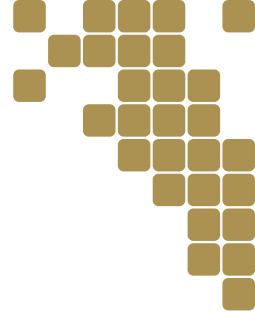
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Preface

Safer Primary Care

Health services throughout the world strive to provide care to people when they are unwell and assist them to stay well. Primary care services are increasingly at the heart of integrated people-centred health care in many countries. They provide an entry point into the health system, ongoing care coordination and a person-focused approach for people and their families. Accessible and safe primary care is essential to achieving universal health coverage and to supporting the United Nations Sustainable Development Goals, which prioritize healthy lives and promote well-being for all.

Health services work hard to provide safe and high quality care, but sometimes people are inadvertently harmed. Unsafe health care has been recognized as a global challenge and much has been done to understand the causes, consequences and potential solutions to this problem. However, the majority of this work up to now has focused on hospital care and there is, as a result, far less understanding about what can be done to improve safety in primary care.

Provision of safe primary care is a priority. Understanding the magnitude and nature of harm in primary care is important because most health care is now offered in this setting. Every day, millions of people across the world use primary care services. Therefore, the potential and necessity to reduce harm is very considerable. Good primary care may lead to fewer avoidable hospitalizations, but unsafe primary care can cause avoidable illness and injury, leading to unnecessary hospitalizations, and in some cases, disability and even death.

Implementing system changes and practices are crucial to improve safety at all levels of health care. Recognizing the paucity of accessible information on primary care, World Health Organization (WHO) set up a Safer Primary Care Expert Working Group. The Working Group reviewed the literature, prioritized areas in need of further research and compiled a set of nine monographs which cover selected priority technical topics. WHO is publishing this technical series to make the work of these distinguished experts available to everyone with an interest in *Safer Primary Care*.

The aim of this technical series is to provide a compendium of information on key issues that can impact safety in the provision of primary health care. It does not propose a “one-size-fits-all” approach, as primary care is organized in different ways across countries and also often in different ways within a given country. There can be a mix of larger primary care or group services with shared resources and small services with few staff and resources. Some countries have primary care services operating within strong national support systems, while in other



countries it consists mainly of independent private practices that are not linked or well-coordinated. The approach to improving safety in primary care, therefore, needs to consider applicability in each country and care setting.

This technical series covers the following topics:

Patients

- Patient engagement

Health workforce

- Education and training
- Human factors

Care processes

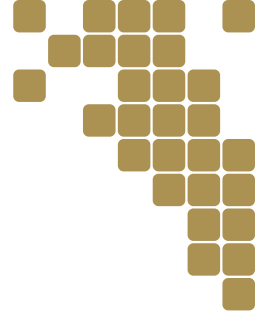
- Administrative errors
- Diagnostic errors
- Medication errors
- Multimorbidity
- Transitions of care

Tools and technology

- Electronic tools

WHO is committed to tackling the challenges of patient safety in primary care, and is looking at practical ways to address them. It is our hope that this technical series of monographs will make a valuable and timely contribution to the planning and delivery of safer primary care services in all WHO Member States.





1 Introduction

1.1 Scope

This monograph describes different types of administrative errors in primary care. It aims to raise awareness about issues that would need to be addressed to support safer primary care. After outlining the approach taken to compile information, the monograph describes the importance of examining administrative errors and the most common types of these errors encountered in primary care.

1.2 Approach

To compile information for this monograph, World Health Organization (WHO) sought the advice of experts in the field recommended by the Safer Primary Care Expert Working Group and reviewed relevant research and published literature.

International experts in delivering safe primary care provided feedback, shared examples of strategies that have worked well around the world, and gave practical suggestions about potential priorities for the WHO Member States to improve the safety of primary care services.

1.3 Defining administrative errors

Patient safety has been defined as the absence of preventable harm to a person using health care services. A patient safety incident is an event or circumstance that could have resulted, or did result, in unnecessary harm to a patient. Such incidents arise from either unintended or intended acts. Errors may thus be defined as a failure to carry out a planned action as intended or the application of an incorrect plan. Errors may manifest by doing the wrong thing (errors of commission) or by failing to do the right thing (errors of omission) at either the planning or execution phase (1).

For the purposes of this monograph, the term “administrative” is defined as relating to the systems and processes used in primary care services. The monograph focuses on failures to carry out a planned action or undertaking an incorrect action as part of the systems and processes involved in delivering primary care. This includes a broad range of errors, including those associated with records, tests and transitions of care. The purpose is not to cover all such errors in depth, rather to highlight the wide scope of administrative and process errors.

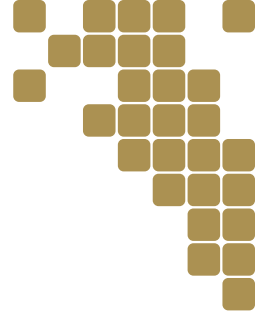
It is acknowledged that there are varying classifications and that the errors described here may sometimes be dealt with separately in other discussions.



Some researchers consider the tasks of office administration separately from other types of administrative processes (2). Communication errors, such as information management mistakes, are considered administrative errors by some, but not others (3). Other categorizations may not include the term “administrative errors” at all and instead use other terms, such as “technical errors” and “communication breakdown”, which may be considered as types of administrative errors (4).

Other monographs in this technical series provide more details on diagnostic and medication errors and, the administrative processes associated with these facets of care.





2 Administrative errors

2.1 Frequency

A review of published literature found that medical errors in primary care occurred between five and 80 times per 100,000 consultations (5). Administrative errors are the most frequently reported type of errors occurring in primary care, but it is difficult to be certain how often they occur. It is estimated that from 5% to 50% of all medical errors in primary care are administrative errors (6,7).

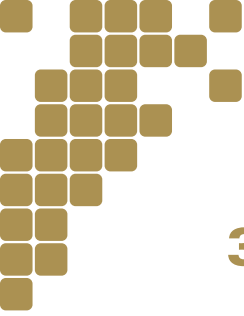
Most estimates rely on self-reporting, which may be influenced by who is reporting, whether there is sufficient time or an adequate and suitable process for reporting, and what the reporter perceives as a significant error to notify. Often reporting is not anonymous and there may be a fear of litigation or other negative consequences associated with reporting an error. This may contribute to a lower reporting of serious medical errors and issues relating to gaps in professional knowledge and skills.

A variety of error categorization systems and study methodologies have been used in primary care, thus making it difficult to directly compare one study with another. One study examined a representative stratified random sample of family practitioners and found that approximately one error was reported per 1000 consultations per year (8). Of these, about 70% were errors related to the processes of providing healthcare and 30% were associated with gaps in the knowledge and skills of health professionals. Most of the process errors in this study would fall into the definition of administrative errors. As outlined above, the actual rate of errors is likely to be higher as many may not be acknowledged as errors and may not be recorded.

2.2 Harm

Administrative errors could be perceived to be less harmful than medication or diagnostic errors. However, there is much blurring and overlap among these categories and many diagnostic or medication errors have an administrative error as their root cause. There are many examples of serious harm and death resulting from an administrative error, such as delayed and missed diagnoses due to a system failure to recall patients with abnormal test results.

However, it is difficult to judge the overall burden of harm associated with administrative errors, particularly because different types of errors are often interlinked. A study of reported errors from five family practices in a high-income country found that most reports contained administrative errors and more than three-quarters had the potential of serious harm (9). Levels of harm were even higher when administrative errors were associated with gaps in knowledge and skills as opposed to administration processes alone (10).



3 Examples of administrative errors

In order to best describe administrative errors, this section will list various types of administration errors. There is no common, internationally agreed classification or taxonomy of errors in primary care and there are many overlapping categorizations in use around the world (11). The purpose of this section is not to provide a definitive description of all administrative errors, rather to recognize the breadth of administrative errors described in published literature and to highlight overlaps with other types of errors.

3.1 Patient record errors

Inaccurate or incomplete patient medical records represent a common type of administrative error in primary care (12). Examples include filing or documenting information in the wrong patient file and improper documentation that can lead to gaps in the patient record. These gaps may be more prevalent in health care systems where handwritten records predominate over electronic records, but they also have administrative issues (13).

Lapses in patient confidentiality related to the administration of patient records have been described (14). For example, personal or medical history details may be released to others by mistake or are overheard by parties other than the patient.

There can be fragmentation of patient records, even within an individual clinical practice. Different members of a care team might record data in different places and not read each other's notes. Computerization of records can help with legibility, but the design of the electronic record system can create other problems, such as a delay in access to critical information. The sheer volume of information available in the system can also make it difficult to review patient information in a comprehensive and timely manner.

3.2 Investigation requests and results

The incorrect management of diagnostic test requests and results is another common type of error in primary care settings, although there is sometimes difficulty in determining whether the errors described are due to administrative mistakes or errors in the clinical interpretation of test results.

A number of studies have identified investigation errors associated with administrative failures in group practice systems as opposed to deficiencies in knowledge and skills (15,16). This includes problems with patient identification, the investigation request, errors when undertaking the investigation and in the reporting process and the management of investigation reports (17). Even in highly





computerized settings, the mismanagement of test results, particularly missed results, is an important contributor to other types of errors, such as diagnostic errors (18).

3.3 Follow-up system errors

Errors related to inadequate follow-up of patients after diagnostic tests can occasionally lead to serious adverse outcomes (19).

Contributing factors include the mixed use of paper and electronic health records and failure to update the patient chart with appropriate recalls and reminders. This can be especially problematic when consultations occur in different locations, such as the patient's home or a care facility for the elderly (20).

3.4 Communication during transitions of care

Errors often happen in the transfer of verbal or written information from one health care provider or setting to another. The interface between primary care and the hospital setting is a common source of error. For instance, when people leave a hospital facility and return to their home in the community, messages concerning their ongoing medical care may not be delivered to their primary care providers (21). Discharge summaries may not be written, delivered or may be misinterpreted, resulting in incidents that harm patients. Primary care providers may not even know that a patient was admitted to a hospital facility if the patient does not tell them (22).

This type of error may result in considerable costs to the health care system and may lead to readmissions. One study found that people were six times as likely to be readmitted to hospital within three months of discharge following communication mistakes (23).

Communication failure may also occur during patient transition from primary care into the hospital setting. Information in the primary care setting may not be provided by the health care providers or not requested by staff at the in-patient facility.

Box 1 shows the major sources of communication errors found between hospitals and general practices (primary care services) from one study.

Communication errors can also occur within practice teams.





Box 1. Sources of communication errors between hospitals and general practices (23)

- Lack of timely discharge summaries
- Poorly written or illegible discharge summaries
- Incorrect or incomplete information in discharge summaries
- Lack of notification to the general practitioner (primary care physician) after a patient attends an emergency department
- Inaccurate or incomplete medication list following a patient discharge from a hospital
- Difficulties related to communication between general practitioner and emergency departments about requests to assess critically ill patients
- Difficulties obtaining important clinical information from a patient's general practitioner
- Difficulties in general practitioners accessing information about investigations or procedures
- Problems with hospital staff expectations of post-discharge care, such as unrealistic instructions about pathology follow-up

3.5 Patient identification errors

Misidentifying a patient occurs when a patient is treated as if they were another patient, sometimes because records are mixed up. This can occur when two patients have a similar name, as is sometimes the case within families, or among very populous communities. It can also occur due to a lack of systems in place to appropriately link and cross-check records. It is an issue that can have a significant impact on clinical management decisions if, for example, there is an incorrect past medical history or certain medication and allergy information that unduly influences a treatment plan (24). The problem is compounded when patients do not speak the same language as their care providers or consult outside normal working hours.

There are many other examples of administrative errors in primary care, including appointment errors, errors in the maintenance of a safe physical environment, inadequate staffing, referral errors, testing errors and errors in the provision of after-hours care (25,26).





3.6 Relationship with other types of medical errors

Administrative errors often do not occur in isolation. It may be difficult to unravel the importance of administrative errors from medication and diagnostic errors.

Retrospective studies suggest that between 6% and 67% of patient safety incidents could be categorized as communication and organizational errors, yet these errors most commonly arise due to administrative failings (27).

There is a lack of uniformity in the language and definitions of patient safety errors used in the literature. For example, a transcription error in the pharmacy setting might be categorized in one study as a medication error and as an administrative error in another. A delay in receiving the results of a critical investigation due to the failure of an electronic data system may result in a serious diagnostic error. However, its major contributing factor might be an administrative error. One study found that almost 65% of diagnostic errors were contributed to by system errors, such as a patient with an abnormal test result who was lost to follow-up (28).

One of the serious types of administrative errors involves medication dispensing and delivery errors. For example, an incorrect box may be selected from the dispensary shelf and labelled incorrectly, which can result in the patient ingesting the wrong medication. Another major source of administrative medication error at the transcription stage, with health professionals labelling incorrect strengths and dosages on patient instructions, often due to poor legibility of handwritten prescriptions (29).





4 Practical next steps

Primary care needs to be safe and of high quality in order to improve patient outcomes and reduce the reliance on hospital care. Addressing errors, including administrative errors, is an important component of improving the safety of primary care.

It is a priority to reduce administrative errors, but there is little evidence about the best ways to do this. One of the first steps may be to understand the types of errors occurring and their causes. A range of methods can be used to study the causes of substandard care and harm. These include case reviews, root cause analyses and incident reporting systems. Incident reporting systems are useful for understanding trends on a larger scale, even though the small numbers may mean that local trends are overlooked.

A high quality primary care workforce and work environment, including clear communication during transitions of care, are fundamental to reducing threats to patient safety from administrative and other errors. Many countries have developed systems of primary care service accreditation in order to achieve this. Tools to improve communication, such as electronic health records, across health sectors may reduce the burden of administrative errors.

Strategies that WHO Member States could consider prioritizing in order to reduce administrative errors include:

1. Improving record systems

- reducing the burden of unnecessary administrative tasks for primary care practices to streamline processes and reduce the risk of error;
- improving any format used for medical recording by clearly indicating all the essential details to be completed;
- enhancing the use of clinical record systems with alerts to help health care professionals be aware of issues with processes and communication;
- using electronic records or paper records consistently rather than having a mix of the two;
- having a patient registration system where each patient is given a unique identifier and using work processes that link documents and test results to the right patient;
- designing record systems where important information is highlighted and easily available, such as allergies to medications;
- encouraging work processes to update patient contact information regularly;



- training health care providers about the importance of completing records consistently and accurately;
- strengthening the use of disease registries to support ongoing care and reduce the risk of recall errors;
- considering the value of patient-held records or patient access to medical records as a way to support patient involvement in identifying errors.

2. Strengthening patient safety incident reporting and learning systems

- supporting the development of a taxonomy of errors, which is consistently used to identify errors;
- supporting health care providers to access regional or national patient safety incident reporting systems so that data on threats to safety in primary care can be collected at regional or national levels;
- establishing regional or national expert panels comprising primary care providers to analyze reported incidents and develop suggestions for improvement.

3. Supporting health care professionals to find solutions

- focusing on creating a culture where the workforce feels comfortable discussing safety incidents;
- offering aggregated feedback and alerts about patient safety threats to professionals in order to raise their awareness of errors, and help them develop relevant solutions locally;
- training teams in systems thinking and quality improvement approaches so that they are able to identify and consider solutions to administrative errors;
- providing access to a centralized resource library with ideas to reduce administrative errors, and mentors and advisors to help champion awareness campaigns;
- using walkrounds and team meetings as a way to identify areas for improvement;
- connecting patient safety work in primary care to hospitals, rather than seeing primary care as a silo;
- focusing on improvements in high-risk areas, such as record keeping, use of diagnostic test results and transitions of care.

4. Linking accreditation to risk management

- considering voluntary accreditation of primary care services and training courses;
- developing and strengthening policies that encourage strong clinical governance and risk management strategies in primary care services;
- including risk management in the accreditation of primary care services.





5 Concluding remarks

Primary care services are at the heart of health care in many countries. They provide an entry point into the health system and directly impact on people's well-being and their use of other health care resources. Unsafe or ineffective primary care may increase morbidity and preventable mortality and may lead to the unnecessary use of scarce hospital and specialist resources. Thus, improving safety in primary care is essential when striving to ensure universal health coverage and the sustainability of health care. Safer primary care is fundamental to the United Nations Sustainable Development Goals, particularly to ensure healthy lives and promote well-being for all at every age.

Understanding the magnitude and nature of harm in primary care is important because a significant proportion of health care is offered in this setting, yet there is little clarity about the most effective ways to address safety issues at this level.

This monograph summarizes the evidence and experience to understand and address administrative errors in order to improve patient safety in primary care. However, interventions to prevent administrative errors would need to be implemented in conjunction with other important aspects covered in this series.

The *Technical Series on Safer Primary Care* addresses selected key areas that WHO Member States could prioritize according to local needs. This section summarizes the key messages from all of the monographs and provides a list of 10 key actions that are likely to have the most impact on improving safety in primary care. Links to online toolkits and manuals are also referenced in order to provide practical suggestions for countries and organizations committed to moving forward this agenda.

1. Set local priorities

Countries and regions differ and a strategy that works well in one area may not transfer well to another. Similarly, issues in need of improvement in some regions may not be a priority for others. In seeking to improve safety in primary care, countries could use local information about their safety issues to identify key priorities at the national or regional level. Priority setting could be accomplished by drawing on input from patients and professionals, sourcing local statistics on safety issues and comparing key themes from the literature with local circumstances (30).

Checklists are also available to help identify potential patient safety issues such as environmental risks in primary care services (31).

One practical way to move forward is creating mechanisms for bringing together key stakeholders to consider the local information available and develop strategic and operational plans for improving safety in primary care. Communicating





proposed priorities widely and amending them based on feedback from health care professionals and patients would help to obtain their buy-in, as well as raise awareness of the importance of improving patient safety in primary care.

Regular measurement of safety related performance indicators could be considered as one of the priorities. Policy-makers can use measurements to help identify local issues where performance is suboptimal and then evaluate different types of interventions for improvements. Priorities could be reviewed every few years to ensure that they remain in line with local needs and good practice.

2. Take a wider systems approach to improving safety

Although the series has described specific technical areas, each monograph refers to interlinkages with other areas. Focusing on improving just one factor may not have a large or sustainable impact on patient safety overall. It may be important to simultaneously improve communication with patients, train health care professionals and introduce new tools to support more streamlined care.

Taking a systems approach to safer primary care means looking at how different components relate to one another and considering various factors which could influence safety. These include factors such as workforce availability and capability.

A practical systems level initiative is to focus on increased communication and coordination across different types of care including primary, secondary and also social care. This may include strengthening technical systems for sharing records and communicating what is happening.

It is also important to build relationships between care professionals. At a policy level, this may involve considering how to develop supportive infrastructure, such as having a directory of services to help build networks of professionals and align resources. If hospital, primary care and social care professionals are able to meet and discuss safety issues, this could foster supportive relationships and increase understanding of each other's roles. Regional forums or meetings could be set up so that professionals from different organizations can get to know each other and share their successes and challenges in improving patient safety.

Manuals and reference lists are available with further ideas for improving coordination and reducing fragmentation across systems (32,33).

3. Communicate the importance of safety in primary care

Policy-makers, health care professionals, patients and families may not always be aware that there are important safety issues to consider in primary care. Raising awareness of this as a priority area will help stakeholders to understand why safety in primary care is essential to improve people's well-being and for safeguarding scarce health care resources.

Serious consequences due to the lack of safety in primary care, particularity relating to poor transitions of care between primary and other levels, and administrative, diagnostic and medication errors could be highlighted to raise awareness on the need to improve patient safety in primary care.





Practical ways to increase awareness include incorporating safety-related information into the training of health professionals, communicating effectively to professionals and patients through channels that would be most appropriate for them and spreading key messages through media campaigns. A communications plan could be developed in tandem with local priority setting discussed earlier.

4. Focus on building a positive safety culture

Effective leadership and supportive culture are essential for improving safety in primary care. This means creating an environment where professionals and patients feel able to speak up about safety issues that they are concerned about, without fear of blame or retribution. It means promoting an environment where people want to report risks and safety incidents in order to learn from them and reduce their recurrence, and where incidents are seen as caused largely by system failures rather than individuals. This also includes the importance of having feedback mechanisms in place to explain any improvements made after safety issues have been raised. Promoting transparency is key to building a strong safety culture.

A number of tools are available describing approaches to support the development and measurement of a positive safety culture (34,35).

Practical steps that could be taken to strengthen safety culture include: leadership walkrounds, whereby senior managerial and clinical leaders “walk the floor” (in this case, leaders visiting clinics and speaking with staff and patients about what is working well and not so well); starting team meetings with a patient story; using reflective practice to focus on safety issues, such as audits and having mechanisms for reporting safety issues, such as through regular team meetings. Such approaches may need to be adapted for use in smaller primary care clinics. Regardless of the specific method, the focus should be on raising awareness, encouraging safety discussions and taking concrete follow-up actions to build a safety culture.

5. Strengthen ways of measuring and monitoring patient safety

It is important to measure and monitor patient safety improvements over time. This may include having clear definitions of patient safety incidents and indicators to be measured annually, setting up national or local incident reporting systems where data is compiled regularly, or using tools to assess patient experiences and measure improvements in patient safety.

Using checklists in individual practices can both improve the quality of care and act as a structured form of record keeping. A number of examples of checklists to improve safety monitoring are available (36).

Data quality is fundamental to measuring improvements in patient safety. If accurate and comprehensive medical records are not kept, then errors and omissions are more likely to occur. As health systems mature, clinical governance processes tend to strengthen. This includes having processes for managing risks and identifying strategies for improvement.





A number of tools are available to measure and monitor different aspects of safety in primary care and countries could examine what is currently available and adapt materials based on local priorities (37,38).

6. Strengthen the use of electronic tools

The adoption of electronic tools will be critical to improving safety in many ways. Examples include the use of electronic health records for more accurate and complete patient records; timely and reliable sharing of health data; supporting the diagnosis, monitoring and management of diseases and conditions; effecting behaviour change and reduction of health risk, and empowering and engaging patients and families in their own care. eHealth can help structure communication between professionals in a way that reduces errors and improves coordination. It can reduce unnecessary consultations and hospitalizations and improve access to knowledge about health conditions and their management for both professionals and patients. However, to achieve their full potential, electronic tools need to be integrated with other parts of service delivery and adapted to the local context.

It takes time and resources to implement electronic tools, and requires the capacity to use and maintain them. It is therefore important to be strategic and to understand the foundations and design of systems in order to ensure the best return on investment. Linking the implementation of electronic tools in local settings to a national eHealth strategy is essential as it provides the foundation, justification and support needed to go forward in a coordinated way.

Irrespective of the status of the health system, it is important to strengthen the use of electronic systems to improve patient safety. For some countries, this may involve the introduction of electronic health records to replace paper records. For others, it may mean having integrated electronic systems between primary care and hospital and social care, or making the tools easier for professionals and patients to use. Countries could draw on lessons learned from other countries about implementing electronic health records, including the challenges faced and how these were overcome, and what best practices could be applicable to their own setting.

7. Involve patients and family members

Empowering and encouraging patients to speak up, for example when something does not seem right or when a symptom is inadequately explained, can be fundamental to improving patient safety. Family members play a key role as advocates and informal carers and therefore supporting and educating them can help to improve safety.

Proactive engagement of patients and families can help to accelerate the implementation of health care safety initiatives. When systems open themselves up to patients rather than being reactive, this is likely to improve system efficiency and the quality of care.

A number of tools have been evaluated to enhance patient and family involvement and awareness, including those with limited or low literacy skills (39-42).





8. Strengthen workforce capacity and capability to improve safety

There is a need to strengthen the primary care workforce in many settings by training a large pool of generalist workers, including doctors, nurses and those with supporting roles.

Strengthening the workforce also involves focusing on recruitment and retention, including taking steps to enhance the physical and physiological safety of health care workers. Professional burnout, fatigue and stress can all adversely affect patient safety.

The education and training of health care professionals to manage and minimize potential risks and harm that can occur in primary care are central to improving safety at all levels of care. This includes providing training on patient safety for students (including students who may not be training to work in primary care to ensure understanding across the different care pathways), multidisciplinary and inter-professional education, as well as continuing professional development. A number of free training course materials are available to help with this (43-45). As a further step, consideration could be given to making involvement in safety and quality improvement a requirement for ongoing training and professional licensure.

In addition to formal education, informal approaches could also be applied to build the capacity of health workforce to improve safety. This may include holding regional meetings and coaching sessions to review patient safety incidents and areas for improvement, and holding small team meetings to upskill staff.

9. Focus on those at higher risk of safety incidents

Some people are at greater risk of safety incidents in primary care. These include children, older people, those living in residential care or nursing homes and people with multiple health conditions. People with simultaneous mental health and physical health issues are also at increased risk of safety incidents.

Focusing on groups at higher risk may improve the quality and safety of care by providing more personalized care and ensuring smoother transitions between and within services. For instance, upskilling professionals in how to identify and treat depression may have an impact given the high rate of adverse events among those with combined mental and physical health issues.

Across the world, most systems were not designed to care for people with multiple health conditions. Systems may thus need to focus more on what can be done to improve care for people with multiple conditions, including whether social interventions would be more worthwhile than increasing medicalization.

A number of guidelines and toolkits suggest practical steps to better support people at higher risk of safety incidents (46-50).





10. Celebrate successes and share learning with others

Local teams, regions and countries should celebrate their successes and share learning with others. Hearing what has worked well can spark ideas in others and help to continue the momentum towards safer primary care.

Ongoing research plays a key role in identifying what works best to improve safety and how to implement best practices and success stories across diverse care settings. Although the technical series has drawn together a wide range of evidence and expertise, it has also highlighted a number of gaps about what works best to improve patient safety in the primary care context. By continuing to promote learning through research, and publishing and disseminating findings, countries could contribute to knowledge in this area.





Contributors

Leadership group

Aziz Sheikh

University of Edinburgh
Edinburgh, United Kingdom

Liam Donaldson

WHO Envoy for Patient Safety
World Health Organization
Geneva, Switzerland

Neelam Dhingra-Kumar

World Health Organization
Geneva, Switzerland

David Westfall Bates

Harvard University
Boston, United States of America

Edward Kelley

World Health Organization
Geneva, Switzerland

Itziar Larizgoitia

World Health Organization
Geneva, Switzerland

Project coordination and editorial support

Sukhmeet Singh Panesar

Baylor College of Medicine
Houston, United States of America

Debra de Silva

The Evidence Centre
London, United Kingdom

Chris Singh

The Evidence Centre
Wellington, New Zealand

Authors

Meredith Makeham

Macquarie University
Sydney, Australia

Susan Dovey

University of Otago
Dunedin, New Zealand

Nicholas Zwar

University of New South Wales
Sydney, Australia

Andrew Carson-Stevens

Cardiff University
Cardiff, United Kingdom

Other contributors

Carlos Aibar

University of Zaragoza
Aragon, Spain

Elzerie de Jager

World Health Organization
Geneva, Switzerland





Tejal Gandhi

National Patient Safety Foundation
Boston, United States of America

Katherine Hayes

World Health Organization
Geneva, Switzerland

Jan de Maeseneer

Ghent University
Ghent, Belgium

Chow Mun Hong

SingHealth Polyclinics
Singapore, Singapore

Ruth Wilson

Queen's University
Kingston, Canada

Nalika Gunawardena

University of Colombo
Colombo, Sri Lanka

John Hickner

University of Illinois at Chicago
Chicago, United States of America

Edward Mann

World Health Organization
Geneva, Switzerland

Paul Shekelle

University of California
Los Angeles, United States of America

Josephine Zvemusi Chiware

Ministry of Health and Child Care
Harare, Zimbabwe





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For more information, please contact:

Department of Service Delivery and Safety

World Health Organization

Avenue Appia 20

CH-1211 Geneva 27 Switzerland

Email: patientsafety@who.int

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