Education and Training

Technical Series on Safer Primary Care

World Health Organization

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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

The health workforce is an essential component of safer primary care. To provide safe, high quality primary care, necessary educational qualifications, good training and ongoing professional development are paramount.

There is an increasing recognition of the importance of improving safety, but health care education may lag behind. Health care workers do their best to provide safe care, but they need the skills and resources to identify risk and reduce harm. This is why it is important to take a systematic approach to providing education about improving safety in primary care.

This monograph describes key characteristics for consideration by the World Health Organization (WHO) Member States to support safer primary care when developing or reviewing the education and training of health care workers.

After outlining the approach taken to compile information, the monograph describes why examining provider education is important. It then identifies key issues that may hinder education and offers potential solutions with examples of content that could be included in the curricula of education courses. The term "education" is used throughout to include education and training. The term "provider" is used to mean various categories of health care workers.

1.2 Approach

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

International experts in delivering safe primary care provided feedback, examples of strategies that have worked well around the world and practical suggestions about potential priorities for countries for improving the safety of primary care services.

2 Education and training

There are many reasons why it is essential to examine education when striving for safer primary care. Key reasons include:

- providing education about the core principles of primary care to all health care providers creates a foundation of values upon which to develop a positive safety culture;
- having an adequate and well-trained primary care health workforce is essential for providing safe, high quality care;
- educating the workforce about safety skills has the potential to further improve patient outcomes.

Primary care is guided by eight core principles: access or first-contact care; comprehensiveness; continuity of care; coordination; prevention; family orientation; community orientation; and person-centredness *(1).* WHO has identified that applying these principles is key to providing high quality health care globally *(2).* Ensuring that the core characteristics of primary care are included in the education process of all health care workers will help to build a health care culture where safety and quality are valued because they are central to patient well-being.

Efforts to improve safety must include educating the workforce. The composition of the primary care workforce varies substantially by setting. However, regardless of the structure of the primary care workforce, pre-service and in-service education enhances the safety and quality of care by ensuring that individuals are well prepared to perform their required duties, thereby reducing errors due to gaps in knowledge or skills.

3 Types of education

This section briefly outlines various types of education for providers and why they are important. It is important to review what type of education is available and identify any gaps in provision.

The main types of education that may support safer primary care include:

- undergraduate and postgraduate pre-service education for trainee providers;
- in-service education programmes for practising providers;
- patient education and awareness raising.

This monograph covers the education of providers, but it acknowledges that the education and awareness raising of patients as key members of care teams are equally important.

3.1 Pre-service education

Pre-service education for professionals occurs before they are qualified as health care providers. The safety of primary care can be strengthened by ensuring good quality pre-service education in technical skills, preventive care, diagnostics, therapeutics and palliative care.

Infusing primary care principles into pre-service education for all health professionals would provide a shared cultural background and promote a coordinated team-based approach toward achieving safety for all. Interactions with trained primary care providers early in pre-service education would give exposure to trainees and allow for on-the-job training in a conducive learning environment.

Equally important are postgraduate level education courses and training programmes, including those leading to a qualification as a specialist in primary care. In some areas, basic primary care services are delivered without a postgraduate trained primary care specialist. However, educating a cadre of postgraduate level trained specialists, such as family doctors, should be seen as essential to provide the advanced diagnostic and assessment services needed in primary care.

3.2 In-service training

Professional development through in-service training is another way to build and maintain high quality primary care. For health systems that have yet to develop a robust specialty workforce in primary care, in-service training can be targeted towards upskilling or retraining existing health professionals to provide the health system with competent primary care providers.

Continuing professional development programmes can help to maintain competency in a wide range of skills and ensure familiarity with the latest guidelines and evidence-based initiatives. In-service training also has the benefit of teaching techniques that may be immediately relevant to providers, meaning that they can make changes to their practice straight away.

Adult learning principles suggest that it is important to offer incentives, both financial and professional, to providers already in practice in order to encourage them to take part in in-service training. Incentives might include a qualification equivalent to a specialty degree, an increase in monetary compensation upon completion of the programme or the ability to maintain a license to practice.

Upskilling programmes may be more successful if implemented in settings as close as possible to the trainees' existing place of work so as to limit geographic barriers and encourage retention in rural and remote areas. Running programmes in close proximity to the trainees also increases the likelihood that the training will reflect and address the issues most commonly encountered in local practice.

Training a local team in safe primary care practice, although resource intensive, is highly effective. Practicing emergency response together as a primary care team instils confidence in the team members and creates a positive safety culture.

4 Key issues

There are a number of issues and challenges facing authorities involved in planning for education for safer primary care. Key issues to consider include:

- variations in the level of education providers have before beginning clinical practice;
- insufficient inclusion of safety topics into pre-service curricula;
- limited education about safety specifically targeting primary care;
- limited evidence about the most effective educational techniques.

This section describes these issues and challenges and the following section considers potential solutions.

4.1 Limited pre-service education

In an absolute sense, patient safety is most compromised when patients lack basic access to a competent primary care provider. In some settings, health workers at grassroots level may not have received adequate clinical training before entering service and perhaps none specific to primary care. This may mean that they are at higher risk of unfavourable patient outcomes. These issues are compounded when providers are placed in remote settings with little access to learning resources.

4.2 Limited education about safety

The process and duration of education for health care workers varies widely depending on the level of professional qualification and health system setting. Regardless of the length of training, safety education remains largely absent from pre-service education in many settings. For instance, a survey of 125 medical schools in one high-income country found that only 10% had safety content in elective or required courses and only half of recently published medical textbook editions contained safety information *(3).*

4.3 Limited targeted training

There is also a lack of training about improving safety that specifically targets the primary care context. Even when health systems provide education to improve safety, it often has a general focus or an emphasis on the hospital context. The most common evidence-based medicine approaches for safety in primary care depend on narrow research, offer only marginal gains when applied in practice or do not account for the multimorbidity commonly seen in primary care *(4).*

Safety improvement strategies developed in academia may not result in a change in clinical practice *(5,6).* There is even a danger of introducing new harms by using protocol-driven approaches rather than respecting the judgement of clinicians *(7).* Therefore, educational initiatives need to explicitly address these challenges in translating improvement initiatives to the primary care setting.

4.4 Limited evidence about approaches

Another issue is that there is limited evidence about which educational approaches are most effective in the pre-service and in-service settings. A review of professional curricula for safety education found that a variety of methods have been used to teach safety skills. These include lectures, workshops, objective structured clinical examinations, "standardized" patients, simulation exercises, root cause analysis, quality assurance projects and other interactive learning methods *(8).* However, there is limited evidence about which of these methods is the most successful or how outcomes vary depending on the type of learner or setting. This is true in general and is a particular issue in primary care *(9).*

Most research related to educational interventions for improving safety suggests that education improves knowledge and attitudes, but this may not necessarily translate into improvements in clinical outcomes *(10-12).*

5 Potential solutions

There are a number of strategies that may help address the issues related to education about safer primary care. These include:

- using practical educational approaches;
- developing educational content targeted at primary care;
- integrating safety education early into pre-service curricula;
- ensuring that an infrastructure is in place to support education;
- monitoring the impact of educational initiatives.

5.1 Practical approaches

Designing core training around the actual primary workplace setting helps primary care providers learn the practical skills needed for the competent day-to-day management of patients.

Health care workers may also be likely to gain new knowledge using applied methods, such as case discussions, practical simulations and learning from reflecting on real-life examples. These practical approaches could be incorporated into any educational initiatives.

Patient safety themes need to be reinforced through various methods recurring in the curriculum, with opportunities for trainees to learn to get and give feedback on safe practices.

5.2 Content

Diagnosis, prescribing, communication and organizational change are the key areas associated with harm in primary care *(13).* This may vary across countries and areas. Based on expert feedback, WHO has stratified the main causes of safety issues in primary care according to the country income level (Box 1). It is important to develop educational systems to address the issues that are most relevant to the national or local context.

Box 1. Main causes of safety incidents in primary care *(14)*

Low-income settings

- Counterfeit drugs
- Errors when performing clinical tasks due to inadequate knowledge or skills
- High workload
- Poor communication between health workers and patients

Middle-income settings

- Poor communication between health workers and patients
- Counterfeit drugs
- Errors when performing clinical tasks due to lack of knowledge or skills
- Gaps in systems management, such as human resources
- Information technology and tools

High-income settings

- Poor communication between health workers and patients
- Errors in diagnostic imaging
- Gaps in systems management, such as human resources
- Errors from information technology and tools
- Low staff morale

Education should focus on issues that have the greatest burden of harm. Diagnostic and clinical task errors are common in most health systems, so there is a need for all primary care workers to have a comprehensive, quality education about these aspects.

In systems with higher levels of communication errors and issues with information technology or tools, there is a need to educate leaders and managers to restructure health systems and develop a broader culture of safety.

WHO Multi-professional Patient Safety Curriculum Guide suggests that 11 topics about safety should be included in all health care education (Box 2).

In addition, education could focus on building leadership that recognizes the importance of patient safety and creates an environment where individuals can report errors to facilitate learning and prevent recurrence without fear of retribution.

Other key topic areas may include culture, handoffs and transitions and workforce safety, such as strategies to prevent burnout and increase resilience. Worker safety and adequate working conditions may be the preconditions to patient safety.

Many organizations have made their curricula or tools available online *(16-19).*

Box 2. Eleven patient safety topics for inclusion in education *(15)*

1. What is patient safety?
2. Why applying human factors is important for patient safety
3. Understanding systems and the effect of complexity of care
4. Being an effective team player
5. Learning from errors to prevent harm
6. Understanding and managing clinical risk
7. Using quality improvement methods to improve care
8. Engaging with patients and caregivers
9. Infection prevention and control
10. Patient safety and invasive procedures
11. Improving medication safety

5.3 Integrating safety education

As well as considering how education is provided and what type of content to cover, it is also important to think about when education on safety should be provided. Early compulsory pre-service education, as well as in-service education, is needed to close the safety gap. This education is important for all professional disciplines, not only doctors.

There is little evidence that education programmes focused on improving processes for people with particular conditions result in improved patient outcomes, particularly at a population level. Instead, it may be preferable to teach general safety principles that can be tailored to a variety of clinical settings and a range of health problems.

Pre-service education may be specific to an individual professional discipline, such as nursing, medicine or pharmacy, but safety concepts should be introduced early in the curriculum for all.

In some settings, much of the pre-service education involves practical learning using a hierarchical apprenticeship model. Therefore, it is also important to consider the role of clinical supervision and the curriculum that may help shape ideas about safety behaviour. Supervision offers an opportunity to model good safety processes in practice. Providing effective clinical rotations with high quality supervision, role modelling and feedback may be core to improving safety *(20).*

Discipline-specific in-service education can help to build a uniform base of general knowledge while emphasizing safety topics that are relevant to the specific profession. However, in-service education should also take into account the team-based nature of primary care, which requires disciplines to work together to coordinate care. Studies suggest that multi-professional, inter-professional team-

based education about safety can improve practice in primary care *(21).* Whilst workers may initially feel uncomfortable learning alongside other disciplines, multidisciplinary learning helps workers consider patient safety within the context of teamwork (*22*). Multi-professional education could contain basic elements relevant to all involved disciplines, such as information sharing, recording risk assessments and handover procedures.

For pre-service and in-service education to be effective, the learning environment must be open and accepting of identifying and discussing errors.

Creating a more open learning environment can be achieved in a number of ways, such as:

- supporting providers to lead by example and preparing them to discuss their own errors;
- scheduling regular discussions to review errors and near misses designed not to blame, rather to reward those who bring forward issues for the group to learn from;
- recognizing that communication between health care providers is a critical element of patient safety. In addition to ensuring that practitioners are educated to have effective communication skills with patients, they also need education to ensure effective communication between practitioners of the same and different professional disciplines. This can be done by role modelling and communication skills' assessments;
- providing education about handling uncertainty, which is prevalent in primary care.

5.4 Infrastructure support

As with any intervention intended to bring about change, using an integrated, system-based approach provides the best opportunity for sustainable improvement. Incorporating both primary care training and safety training into the health care education system is an important step towards building ongoing sustainability and ensuring a future workforce competent in these areas. Health systems may need to develop more robust ways to support the implementation of safety principles because educational programmes alone will not be sufficient to provide safer primary care.

A whole systems approach is needed. A system-wide commitment to establishing and supporting primary care as a foundation for health systems is needed to ensure adequate training, resources and incentives for high quality care at the grassroots level.

Professional societies within primary care could show a commitment to patient safety by developing patient safety curricula, disseminating information at professional conferences, recognizing patient safety in guidelines and standards, advocating for adequate human and financial resources and establishing broader safety reporting mechanisms *(23).*

Accreditation programmes could be established to assess the quality of primary care training and assure adherence to recognized international standards. The World Organization of Family Doctors (WONCA) has developed standards and a checklist for assessing primary care education programmes based upon standards from the World Federation of Medical Education *(24).*

Professional organizations could develop a consensus about a core set of competencies relevant to safety. Patient safety topics could be included in examinations as a requirement for certification in medical professions. This would help to ensure that professionals possess the necessary knowledge and skills to practice safely as well as fostering a culture of safer primary care *(25).* Some organizations have online courses and resource materials for supporting providers to become certified in patient safety *(26).*

5.5 Monitoring outcomes

It is important to put in place systems and indicators to measure the effectiveness of education. This would help to understand which educational approaches are most effective and their impact on patient outcomes over time.

As well as helping to monitor improvement, measurement can serve as a catalyst for change. Providing practitioners with the skills to measure safety and quality offers the opportunity for providers to lead change through continuous quality improvement.

However, developing accurate and effective methods to measure the overall quality of primary care and specific aspects of patient safety can be challenging and it is important to be realistic. It will likely take years to see changes in population-based outcomes resulting from comprehensive primary care education. Process and output indicators, such as the number of providers trained, may be useful intermediate measures of improvement, but information needs to be collected for a purpose and not seen as a "tick box" exercise.

Examples of potential indicators that could be tracked at each organization or at national level over time include:

- number of patient safety incidents reported;
- number of professionals of different cadres trained in patient safety;
- number of patient safety educational workshops provided;
- proportion of staff receiving continuing safety training in the last year;
- change in performance on patient safety knowledge tests;
- change in patient safety culture questionnaire.

Outcome measures focused on particular conditions could be used, but this runs the risk of over-emphasizing specific conditions rather than general safety principles and can distort the focus on comprehensive care that is so essential in primary care settings. It may be more relevant to observe and score training participants to measure changes in clinical practice.

6 Practical next steps

Educating and training the health workforce is a key foundation for improving the safety of primary care. Strategies that WHO Member States could consider prioritizing to build sufficient health workforce capacity for improving safety in primary care include:

1. Recognizing the infrastructure needed to support education

- identifying safer primary care as a goal in national strategic plans to ensure that decision-makers allocate resources for education;
- building leadership capacity in safety through engaging those at governance level, encouraging external accreditation and incorporating safety elements in regulatory and licensing requirements;
- linking safer primary care with existing donor initiatives to secure more resources;
- linking with professional societies, networks, patient organizations and other key stakeholders to emphasize the importance of education in patient safety.

2. Developing education specifically about safety in primary care

- making education about safety in primary care mandatory and part of assessment procedures;
- drawing on existing curricula about patient safety in primary care and adapting using locally-relevant examples;
- incorporating a wide range of topics in safety education, such as human factors, leadership, intra- and inter-professional communication, incident reporting, how to measure safety and quality in primary care, and how to learn from errors;
- providing education about quality improvement approaches so that workers are not only able to identify incidents, but also know how to minimize them in the future. This may include education about reminder systems, clinical audits, outreach visits and continuous quality improvement;
- providing generalist education that can be adapted to many contexts rather than disease-specific interventions;
- starting training in safety early, preferably at the pre-service phase, where there is better opportunity to capture whole cohorts and lay solid foundations.

3. Thinking creatively about how to provide education

- educating workers using a mix of pre-service and in-service education. General training in safety could be provided for all workers with more specific training targeted as needed;

- offering practical education, perhaps in a workplace context, by using direct observation, feedback, videos and rotations;
- providing opportunities to learn about and practice safer primary care in a local, team-based setting;
- evaluating the effectiveness of different education methods;
- monitoring improvements in learner and patient outcomes so that changes in practices and patient safety can be tracked over time;
- giving incentives for providers to take part in education, such as protected learning time, financial support and certificates.

4. Developing trainers and educational resources

- accrediting courses and learners;
- sharing resources between smaller and larger organizations so that all can access expertise and educational materials;
- developing shared resources, such as educational tools and measures, and drawing on existing online materials;
- increasing opportunities for supervision and role modelling;
- identifying champions for patient safety in primary care and training them as trainers to support peer-to-peer learning;
- developing links with international bodies to help implement best practices;
- providing platforms where primary care services and providers can celebrate success and share ideas.

5. Widening the range of professionals trained

- ensuring that an appropriate number of primary care workers of different disciplines are educated, such as healthcare assistants, nurses, doctors and administrative support roles;
- educating all health professions about the principles of primary care to build shared understanding;
- offering opportunities for inter-professional team education;
- developing training at different levels to lower the initial hurdle for the majority and allow those interested to continue learning at higher levels;
- educating providers about the patient's role in improving safety because patients are key members of care teams.

Countries have varying levels of resources and it is recognized that increasing the number of primary care providers, whether fully trained or not, is of primacy to some. Far more people are harmed on a global scale by lack of access to primary care than are actively harmed by the provision of services within primary care clinics. In low- and middle-income settings, the focus of education might be on building a cadre of sufficiently resourced primary care centres staffed with health care teams competent in the provision of primary care services. This means that safety principles should be incorporated as early as possible in the education

of all providers. The focus should not be only on those who may eventually work in primary care, because the workforce is fluid and people move between organizations and roles.

Safer primary care is a need for health care systems in countries across the world. All providers in all health care systems have the potential to make errors. It is critical to educate providers to expect errors and to know how to deal with them appropriately. Providers need to be able to recognize errors, learn from them and work towards system changes to prevent future occurrences. To achieve this, the learning environment for both trainees and practitioners must be open to ensure that it is safe and acceptable to discuss errors.

Education is essential, but not sufficient alone to improve safety in primary care. Other monographs in this technical series consider some of the other aspects of systems design that are crucial for safer primary care.

7 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 in building sufficient health workforce through ongoing education and training in order to improve patient safety in primary care. However, interventions to implement strategies for appropriate education and training 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 *(27).*

Checklists are also available to help identify potential patient safety issues such as environmental risks in primary care services *(28).*

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 *(29,30).*

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 *(31,32).*

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 *(33).*

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 *(34,35).*

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 *(36-39).*

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 *(40-42)*. 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 *(43-47).*

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.

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