Diversified teaching programs for Medical and nursing schools and Continuing professional development

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Preface

This report aims to present the diversified teaching programs for medical and nursing schools and continuing professional development across the European Union. The report summarises the methodology and focus areas of CPME and EFN addressing Medical Doctors and Nurses respectively with regards to Patient Safety Education and Training. Continuing Medical Education aspects have been contributed by the GCPS while Continuing Professional Development (CPD) addressing all healthcare professionals is exemplified by the Spanish Ministry of Health. The report is structured in chapters reflecting contribution from each of these organizations.

The content of this report is not a consensus of the WP2 Guidelines for Patient Safety Education and Training but rather an interpretation of the Guidelines into these contexts. Therefore the content of the sections included within this report is under the sole responsibility of the organizations who have contributed it.

The report is divided into four chapters. The first chapter analyses the good practices in Medical Curricula, as presented by the Standing Committee of European Doctors (CPME). The systemic nature of PS, the importance of inter-disciplinary communication, cooperation and organisational learning are major values for Medical Doctors' education for Patient Safety, aiming to identify root causes and aggravators of errors. The section includes a proposed Curriculum Guide with the main focus points and their content.

The second chapter analyses the challenge for EU Nursing Education and includes broad aspects ranging from curriculum content to curriculum exchange. The section presents the experience on Patient Safety Education and Training from the nursing perspective, and the possible contribution of the EUNetPaS project towards enhancing the Patient Safety practices within the Nursing profession. In order to identify the current state of play in Nursing Education in Europe particularly on Patient Safety, EFN issued a call to the 32 Nursing leaders of Europe members of EFN, as well as to allied European organisations such as the European Federation of Nurse Educators (FINE). The results of this exercise are described in this chapter.

The third chapter presents the CME-Concept "Patient Safety", as published by the Agency for Quality in Medicine, an organization established jointly by the National Association of Statutory Health Insurance Physicians and the German Medical Council. The aim of the CME-Concept is to provide structured assistance describing topics and processes with the help of which interested professionals, laypersons and others who are active in the realm

of public health can learn about patient safety. It thus encourages the development of a "culture of error and safety awareness" with the ultimate aim of increasing patient safety. The chapter sums up the structure, modules, fundamentals, instruments and content of the CME-Concept, with additional links for further reading.

An extension of the CME-content addressing all healthcare professionals is exemplified in the fourth chapter, describing the National Patient Safety Courses in Spain. The Spanish Teaching program on Patient Safety is included in the national Strategy of PS developed since 2005 in agreement with the representative members of all the 18 Spanish Health Regions (HR). The section describes the Spanish online course for Patient Safety, the Undergraduate and Masters' module, as well as the training module for Patients.

1. Good Practices in Medical School Curricula (CPME)

Introduction

In order to integrate Patient Safety (PS) successfully into daily medical practice it is of vital importance to equip healthcare professionals with the necessary awareness and tools early on in their careers. This is best achieved when PS skills are mainstreamed into medical school programmes. Unfortunately, the issue is still rarely to be found in university curricula. By evaluating modules on PS from medical school curricula in different Member States, it was possible to identify elements which can serve as points of reference for the compilation of future programmes.

1.1 Objectives

The curricula examined pay tribute to the topic's complexity by using a multi-level approach not only concerning the module's content, but also with regard to the teaching tools that are used. In order to benefit the **skills, knowledge, and behaviour** of students the sessions combine the theoretical background to the issue with a specific focus on the practical relevance and reality of PS. Real-life case studies, field trips, team projects, and discussions with practitioners encourage students to actively confront the topic and have consequently been evaluated as the most effective and appreciated components of PS modules.

The central aims of PS curricula can thus be summarised as the following **learning objectives**:

- Students are to gain an understanding of the systemic nature of PS and be sensitised to the importance of inter-disciplinary communication and cooperation. The importance of organisational learning is referenced throughout the sessions.

- The mindset of students and consequently their behaviour is to shift from interpreting adverse events as individual failings associated with blame and guilt towards reporting and examining PS incidents with the aim of identifying root causes and aggravators of errors.

- The module is to provide students not only with awareness for the issue, but also train them to be able to apply assessment tools and problem-solving mechanisms in real-life work situations, and thus take a lead in actively contributing to the prevention of adverse events.

1.2 Curriculum Guide

Session	Focus	Possible Content
Prepa-ration	Evaluation	- Assessment of students' level of knowledge and awareness of PS *prior* to module
1.	Definitions and Terminology	- Clarification of the fundamental terms used in the context of PS - Positioning of PS in the wider debate on quality in medical treatment and clinical care
2.	Patient Safety Indicators and Measurement Tools	- Introduction to PS statistics, e.g. frequency, typology of adverse events - Development of PS indicators and examination of sets of PS indicators, e.g. SIMPATIE - Development of Root-Cause-Analyses (RCA) - Interpretation of PS indicators and practical implementation
3.	Patient Safety and Organisational Dimension	- Case studies on organisational causes of PS incidents - Introduction of concept of PS culture and indicators, cf. EUNetPaS WP 1 - Introduction of organisational mechanisms of improvement, e.g. in-house Reporting and Learning Systems (RLS) (cf. WP 3) - Comparison of Risk Management and communication mechanisms from other sectors, e.g. aviation
4.	Patient Safety and the Personal Dimension	- Overcoming personal errors: in-house and external assistance - Identification of personal aggravators of PS incidents and preventative measures - Use of personal PS skills and knowledge in the prevention of adverse events
5.	Doctor-Patient Relations	- Defining patient-centred care - Information to and communication with patients - Patients' involvement in PS

6.	Patient Safety and the Ethical Dimension	▪ Introduction of the work of medical ethics committees or comparable bodies ▪ Learning from and managing complaints
7.	Patient Safety and the Legal Dimension	▪ Legal mechanisms in case of adverse events ▪ Public disclosure and communication ▪ Labour law and health legislation
8.	Patient Safety Beyond Medical School	▪ Presentation of PS policy initiatives (local, national, European level) and contact points ▪ Presentation of PS CPD activities: university, hospitals, medical chambers, private sector ▪ Presentation of platforms for the exchange of good practice, e.g. EUNetPaS website and databases
Follow-Up	Evaluation	▪ Assessment of students' level of knowledge and awareness of Patient Safety *after* module (link to accreditation?) ▪ Assessment of course contents with a view to revision

1.3 Conclusion

One of the most striking features of the curricula examined was their dedication to remaining dynamic and relevant. Parallel to innovations from academia and practice, students' feedback on the modules is used as one of the most significant points of reference for revising the courses regularly.

The Curriculum Guide presented in this booklet should thus be interpreted as a compilation of current approaches to PS in the EU which does not represent an exhaustive or finalised paradigm of teaching and learning PS, but rather offers a basis on which to build continuously.

Given the fact that current medical school curricula rarely accommodate the topic of PS in the list of mandatory modules, it may be worth considering to what extent graduates of the course may be able to obtain a type of certification for completing this additional qualification. An acknowledgement of committing to participate in PS modules may help to increase the topic's relevance in the context of medical studies and encourage universities to mainstream it into their educational programme.

2. The Challenge for EU Nursing Education: From Curriculum Content to Curriculum Exchange

Introduction

Nursing Education has a crucial role in developing the knowledge, skills and behaviours that promote patient safety. However, when asking 32 nursing leaders of the EU and allied associations to provide examples of Patient Safety Curricula, it becomes clear that these do not exist so obviously. Patient safety is built-in across the pre- and post-registration Nursing curriculum and so consequently patient safety is revealed as an embedded model, rather than a distinct module. Furthermore, the evidence about how patient safety is addressed in nursing curricula and how nursing schools develop their curricula integrating a patient safety module is extremely limited and not researched regarding its impact on patient outcomes. Although different aspects of patient safety feature in the formal pre-registration nursing curriculum, there is no uniform approach to Patient Safety into the nursing bachelor and master curriculum, nor in the development of continuous professional development courses and events. The EUNETPAS guidelines for the development of Patient Safety Curricula are therefore essential as a starting point for change.

2.1 What the EU Directive 2005/36 has to say on Patient Safety

Directive 2005/36 requires Nurses to have sufficient training on the principles of quality Nursing Care. Nurse education needs to be comprehensive and embracing an interdisciplinary scientific basis. Nurse training supports the acquisitions of practical experience and skills, while working collaboratively within and between the health teams. Such education and training is meant to ensure patient safety and quality care at all times. Within this context of the free movement of nurses within the EU, based on their mutual recognition of professional qualifications, it is essential to harmonize the patient safety education. The EUNETPAS guidelines for the development of Patient Safety Curricula are therefore an important tool to support the implementation of Directive 2005/36 into national nursing legislation. Considering the continuous downgrading of the nursing education, as an aftermath of the 2008 financial and economic crisis (EFN, 2009), we cannot risk compromising quality and safe care since this can only be guaranteed within a supportive working environment and by adequately educated staff (Aiken et al., 2002).

2.2 How can EUNetPaS Challenge the Nursing Paradigm on Patient Safety

If nursing educational curricula were to recognise the value of basic Patient Safety principles and acknowledge the essential skills and knowledge involved, like reporting

and learning from errors, such events could become part of a wider educational resource enabling students, practitioners and teachers to prevent threats to patient safety. EUNetPaS Patient Safety guidelines should therefore serve as the foundation to developing integrated interdisciplinary patient safety modules and engraving these in healthcare professionals' education across the EU. Finally, EFN expects that the patient-centeredness of the guidelines and the engraving of key patient involvement principles would ensure patients are at the heart of such curriculum development which in turn would enable patient empowerment while also supporting patients in seizing control over their healthcare.

2.3 A familiar story

Seating in the bus on her way home from work, Maria feels a heavy burden on her shoulders and tightness on her chest. Another workday went by where despite her best efforts suboptimal care was yet again provided by her Department to patients in pain and need. Maria is a senior nurse working in a busy Emergency Department (ED) in her local hospital.

As she reflects on her day at the hospital the image of Mr Petrelli keeps coming to mind; a 47 year old man, local businessman, husband and father of two, who approached the hospital ED with high fever and an overall feeling of fatigue. On admission Mr Petrelli was diagnosed with a mere infection which should be treated with some intravenous antibiotics, nothing for his family to be concerned about – or so they thought. Maria feels upset while she recollects Mr Petrelli deteriorating with difficulty in breathing and a noticeably low blood pressure before her colleagues' eyes. Although he had reported his penicillin allergy, a tragic error meant he was faced with the prospect of anaphylactic shock. Obviously the severity of his situation was picked up and the worse was prevented, but Maria cannot stop thinking about what had gone wrong. She remembered reading in the newspaper that medication errors were the most frequent source of patient safety incidents. Maria is not surprised, in her Department patient safety is paid lip-service but without concrete actions.

Maria decides to take action and embarks on a search for material that can support her in her endeavour. After an internet search she comes across a pan-European project on patient safety, namely EUNetPaS. Within this project she uncovers guidelines for setting up patient safety educational interventions and she realises she has found exactly what she needed! Maria reads through the document quickly and charts her plan of action into leading her own localised change. Taking advantage of her practical experience as a senior nurse, her academic training and awareness of her Hospital's policies she designs a quick course for all her colleagues focussing on raising awareness about:

- the risk factors resulting to patient safety incidents;
- the importance of reporting errors and near misses;
- and the values of proper communication and teamwork.

Enthused with her newly acquired knowledge and action plans, Maria begins communicating her proposal with nursing, medical, pharmacy, and management colleagues using EUNetPaS and its documents as actively supporting her proposal. Her colleagues, clearly impressed with the quality of the material and high level significance of the issue, express their full support and together they begin to plan how Maria's proposals can be implemented in the Department.

A few months later Maria is sitting on the bus on her way home from work, smiling as she feels assured her patients are in the capable hands of her colleagues. During this period her Department has implemented information days to raise awareness of patient safety, risk factors, communication and teamwork skills, and has put in place adverse events reporting systems. Patient safety is now embedded in daily practice which has resulted in a dramatic reduction in patient safety incidents and a sharp rise in patient satisfaction.

2.4 About EFN

The European Federation of Nurses Associations (EFN) was established in 1971 and is the **independent voice** of the profession. The EFN consists of National Nurses Associations from 32 EU Member States, **working for the benefit of 6 million nurses** throughout the European Union and Europe. The mission of EFN is to strengthen the status and practice of the profession of nursing for the benefit of the **health of the citizens** and the interests of nurses in the EU & Europe. As part of its contribution to EUNetPaS, the EFN with the support of its members and allied organizations has compiled a resource reflecting the current state of play of Patient Safety education in Nursing curricula – herein referred to as the Nursing Paradigm.

The current document begins by providing a brief background on the contemporary political and educational debates on Patient Safety within Nursing to set the relevant scene within which this Paradigm takes place. This is followed by a description of the EFN exercise in identifying the reality of patient safety modules in Nursing curricula throughout the EU, while concluding with implications for future actions and examples from Member States.

2.5 Patient Safety and the Nursing Profession

Patient Safety has been an issue of paramount importance for the Nursing profession since the early work by Florence Nightingale, which included setting care and hygiene standards

in Hospitals to combat deadly healthcare associated infections and avoidable complications thus championing the safety of patients. Particularly, in 1854 during the Crimean War Florence Nightingale collected data on mortality rates of soldiers which she divided into three categories: (1) deaths caused by preventable contagious diseases, (2) deaths due to infections of patient's wounds, and (3) deaths from all other causes (Nightingale, 1858). It soon became obvious to Nightingale that soldiers were dying as patients in field hospitals from avoidable complications and infections at a faster rate than those dying on the battlefield. Consequently, she implemented actions to improve **standards of care** resulting in the death rate falling drastically and planting the seeds of the patient safety movement for the decades to come (Shell and Dunlap, 2008).

Following from this great heritage, the profession of Nursing has been at the forefront of patient safety taking special attention to the training and education of its workforce. Internationally, the International Council of Nurses (ICN) has been tackling this issue with force since it established that Patient safety is fundamental to quality health and nursing care. ICN believes that the enhancement of patient safety involves a wide range of actions in the recruitment, training and retention of health care professionals, performance improvement, environmental safety and risk management, including infection control, safe use of medicines, equipment safety, safe clinical practice, safe environment of care, and accumulating an integrated body of scientific knowledge focused on patient safety and the infrastructure to support its development (ICN, 2002).

ICN understands that Nurses address patient safety in all aspects of care including informing patients and others about risk and risk reduction, advocating for patient safety and reporting adverse events. Early identification of risk is key to preventing patient harm and so a system-wide approach is strongly supported, based on a philosophy of transparency and reporting - not on blaming and shaming the individual care provider – and incorporating measures that address human and system factors in adverse events.

Within Europe and with a focus on Nursing Education, the European Federation of Nurses (EFN) has published a series of Position Statements including the importance of a consultation mechanism as set out in Directive 2005/36/EC to allow input of the professions. One of these statements, also based on the 2005/36/EC directive, Bologna and EU Qualifications Framework describe the educational framework for nurses. These include common principles as set out by EFN, ESNA (The European Nursing Student Association), ESNO (European Specialist Nurses Organisations) and ICN (International Council of Nurses). Also included are relevant statements of EFN on the Continuing Professional Development (CPD) of nurses and for Specialist nurse education such as the EFN mapping and report on CPD in Nursing across the EU and the Civil Society Resolution on CPD.

Furthermore, EFN commissioned a study by WENR on the state of the art on Patient Safety in Europe including literature on high reliability organisations, medication errors, and hospital acquired infections (Smith et al. 2008). This work was subsequently used to inform discussions in the European Commission and Parliament regarding the proposed Council Recommendation on Patient Safety and Healthcare Associated Infections. Finally, EFN Position Statements describe general requirements for Patient Safety with particular reference to the need for education on Patient Safety (EFN, 2007).

Therefore, the cultural shift to strengthen patient safety begins with the education system and involves modifications to curricula content, facilitation of multidisciplinary processes, and inclusion of theory and practice that reflect critical inquiry into healthcare and nursing education systems to ensure patient safety. Subsequently, the integration of Patient Safety Core Curriculum guidelines for the development of Patient Safety modules in nursing education systems is welcomed.

2.6 EFN exercise

With a view of identifying the current state of play in Nursing Education in Europe particularly on the subject of Patient Safety, EFN issued a call to the 32 Nursing leaders of Europe members of EFN, as well as to allied European organisations such as the European Federation of Nurse Educators (FINE). In this call EFN asked to be advised on potential best practices and to be fed back with relevant examples. The Nursing community responded with great enthusiasm and willingness to contribute to this call, providing ample material and explaining work undertaken at National level.

The results of this effort indicate that patient safety is a **fundamental aspect** of every part of the Nursing curriculum at pre- and post-registration level. Aspects of patient safety have been identified in numerous modules including the Basics of Nursing, Medication Safety, Wound Care, Moving and Handling, Cultural Safety, Infection Control, post-surgical care, and so forth. However, a distinct module addressing solely the patient safety literature does not seem to be easily identifiable. Consequently, the EFN concludes that in Nursing education patient safety is represented as an **embedded model** built-in across the curriculum, rather than as a distinct module. Therefore, the debate the EFN would like to launch is whether such as module would in fact add value to the curricula already in existence or whether this would appear to be a duplication of work?

Arguably, although some voice concerns regarding the apparent lack of this module in Nursing there is no substantial evidence to suggest this represents an omission to existing curricula (Wakefield et al., 2005). Similarly, the literature is unclear regarding the extent to which introducing a Patient Safety module would in any way improve quality of care and patient outcomes. Even though this is an area of debate that could well continue into

years to come, it is important to recognise that Patient Safety is being addressed in the educational structure of Nurses albeit horizontally rather than vertically. Therefore the implications of the current EUNetPaS education and training guidelines need to be seen as both contributing to advancing the existing embedded model as well as setting the foundations for the development of complementary but distinct patient safety modules.

Conclusion

It is important to pay tribute to field examples of developing and implementing patient safety initiatives. The next step in these endeavours would be to voice up patients in taking a more active role to their care and to their safety. The EFN has advocated for protecting the patient-centeredness of the guidelines and ensuring that key patient involvement principles are maintained to allow patients to be at the heart of safety educational developments. This would ultimately enable patient empowerment while also supporting patients in seizing control over their care, their treatment, and their lives – to EFN, this would be particularly welcoming.

3. CME Concept "Patient Safety" (Agency for Quality in Medicine)

3.1 Foreword

The CME-Concept "Patient Safety", as published by the Agency for Quality in Medicine, an organization established jointly by the National Association of Statutory Health Insurance Physicians and the German Medical Council, is unique in Europe and demonstrates our commitment to this subject. This commitment is reinforced by further activities and measures, such as the availability of an anonymous error reporting system (CIRSmedical), which is also provided by the AQuMed to all SHI-accredited physicians.

In recent years, patient safety has attracted public attention throughout the world, and its importance has been discovered by the media and politicians. But public health professionals are rather uncertain how to deal with the subject due to a combination of ignorance, the fear of getting involved, questions of legal responsibility and probably also adverse publicity on (medical) errors in the press. The aim of the CME-Concept presented here **is to provide structured assistance**. It describes topics and processes with the help of which interested professionals, laypersons and others who are active in the realm of public health can learn about patient safety. It thus encourages the development of a "culture of error and safety awareness" with the ultimate aim of increasing patient safety. The CME-Concept also takes into account the ever more complex demands made on those who work in the field of public health. The appendix contains a glossary containing the most important terms pertaining to patient safety and serves two functions: On the one hand, it is an attempt to provide a guide for teaching content and on the other, by defining the most important terms from the field of patient safety, an attempt to provide the basis for communication between those involved - something which is vital for a culture of safety.

3.2 The CME-Concept "Patient Safety"

Confidence in medical care is extremely important for any health care system. By introducing patient safety, the CME-Concept presented here is a further step towards comprehensive quality management. This approach goes beyond the traditional understanding of patient safety by the health care professions, namely to find and apply the right treatment following a differential diagnosis. In the field of patient safety, it is essential to understand that when working with patients – despite the greatest possible caution and application of the best available medical knowledge, - adverse events and incidents will occur. Sometimes, the desired success of a therapy will not be attained because of an error. The structure of the CME-Concept "Patient Safety" is based on results from high risk industries such as petrochemistry, nuclear power and aviation, which for several decades have been concerned with human beings in complex work environments, the resulting potential error sources and their elimination. The first step in the CMEConcept is to create a readiness to examine and discuss human error-proneness in complex systems and the resulting danger to patient safety. In a second step, strategies for the implementation of measures and forms of communication are described which make it possible to detect potential error sources early and to work effectively towards their elimination. This CME-Concept contributes to medical quality management. Since it is

relevant to all medical personnel, the authors would like to invite all medical professions to critically appraise the content of the CME-Concept and to communicate candidly any comments or suggestions, as well as to recommend changes to the content which would more adequately reflect the needs of their own professional groups.

3.3 Aims of the CME-Concept

3.3.1 Substantive Aims of the CME-Concept

Promote Error Awareness and a Culture of Safety
To destroy current taboos, create an information base, encourage an objective discussion, develop strategies, raise the awareness of the need for changes in work processes, communicate the importance of patient safety in an acceptable way.

Increase Confidence when dealing with the Subject of Patient Safety
To reduce fears, build trust, strengthen communications, become acquainted with the activities of others and learn from one another

Promote Safety in Health Care
To allocate competencies for the implementation of patient safety measures, further improve work environment and foster a positive perception of the topic by patients

3.3.2 Methodological Aims of the CME-Concept Professionalization
- To provide information sources to interested parties
- To allocate competencies to those active in the health care process

Applicability in Different Contexts
- Modular Structure [with elements which can be employed individually]
- Comprehensible and comprehensive selection of modules to suit target group
- Implementation possibilities in basic and advanced training, as well as continuing education
- Quality development in health care institutions
- As information for all interested parties
- As a foundation for continuing education and training for doctors
- As a guideline for multipliers and those bearing responsibility
- For the general use of those active in heath care

3.4 Design of the CME-Concept

3.4.1 Participants

As a result of the CME-Concept's modular structure, courses and presentations can be provided to participants with differing knowledge levels and from different professional backgrounds. The CME-Concept can either be provided within a general framework (topic-based), or within a specific framework (for example for multipliers, as quality management for leaders, for doctors with their own practices, nurses, etc.)

3.4.2 Didactics

The courses should pay special attention to the importance of intuitive clarity and experience-based learning. Therefore the continuing education courses should involve a large number of case studies, practical exercises and opportunities to share experiences. "To have heard is not to have understood, to have understood is not to have learned, to have learned is not to have acted …"

3.4.3 Stepwise Structure of the CME-Concept "Patient Safety"

The CME-Concept on patient safety serves as a guideline for education, further education and continuing education in the field of patient safety in both the practice and the hospital. Thus the design of the seminars can vary greatly. However, in accordance with recommendations, they must:

- Include the subjects, content and learning goals specified for each qualification step/level
- Ensure the general conditions are suitable for conducting the seminars appropriately, and
- Take the methodological recommendations of the CME-Concept into adequate consideration

Examples of how a seminar may be structured are presented below; the following models are based on the practical experience of previous seminars in other fields of education, further education and continuing education, paying special attention to the quality assurance / medical quality management curricula. Among the positive consequences of the introduction of quality management in healthcare is that the methods that have been developed as a result (group work, the systematic analysis of the healthcare process, the recognition of patients' needs and experimentation with new solutions) promote creative action and encourage participants to take on additional responsibilities and regard their work as a personal challenge.

Continuing education can be offered on the following levels:

- I: Basic knowledge with emphasis on "information"
- II: Professional (basic) skills qualification with emphasis on application
- III: Additional qualification for multipliers with an emphasis on communicating and teaching skills to others

Further reading (demands of the individual levels)
http://www.forum-patientensicherheit.de/service/literatur/pdf/fbkonzept_patientensicherheit_english.pdf

3.5 Areas of instruction/Modules of the CME-Concept

For each instructional level (see table above), topics can be combined in modules – thus the continuing education can be tailored to suit different target groups and diverse needs. In this context the following should be kept in mind: **Target group, Scope, Content, Consolidation of content**

The aims of the individual aspects of PS are described and topics are presented in terms of keywords.
- Fundamentals: Key Terms and Currently Available Data
- Error research/The Psychology of Safety
- Communication/Teamwork
- Instruments/Realization/Training

3.5.1 Fundamentals

In this area of instruction, general information is presented on the importance of patient safety and its development as a subject of interest, especially in an international context following the publication of the IOM report "To Err is Human". The background and importance of the subject for healthcare and professional selfdetermination will also be introduced. At the same time, difficulties in making useful international comparisons due to the lack of systematic data in Germany, as well as problems with the interpretation of available international data and literature will be presented. As an introduction, an overview of the nomenclature is necessary, especially of terms such as "adverse event", "error" and "harm", as well as their meanings for the medical profession. Furthermore, an overview of existing institutions and their contributions to PS is provided. This includes arbitration boards, which can make detailed analyses of mistakes and resulting opportunities for continuing education, and of patient complaints. The institutions established in German-speaking countries including Austria and Switzerland, such as ombudsmen and the Stiftung Patientensicherheit (PS foundation) in Switzerland, as well as the Aktionsbündnis Patientensicherheit (Action alliance patient safety) in Germany will be discussed in some detail. Finally, the opportunities and the goals that can be achieved though the realization of greater patient safety in widely differing fields are presented and discussed, whereby the legal aspects of this topic will also be touched upon.

Further reading
http://www.forum-patientensicherheit.de/service/literatur/pdf/fbkonzept_patientensicherheit_english.pdf

3.5.2 Error Research/ The Psychology of Safety

This area of instruction encompasses important aspects when dealing with errors and their causes. The current traditional (person-based) approaches in medicine are taken into account, as well as lessons from other fields that have dealt extensively with human factors research such as industry and aviation. Classical error theory,

which deals not only with person-based causes, but also system-based causes of errors and adverse events, will also be discussed. The psychological aspects of errors and the resulting barriers to their elimination also play an important role. In addition, the evolution of safety cultures in fields of industry known as High Reliability Organizations, which are to be found in the likes of the nuclear and aviation industries, will also be discussed. This is followed by a description of the programs and their strategic realization which have taken place in these industries over the last few years.

Further reading
http://www.forum-patientensicherheit.de/service/literatur/pdf/fbkonzept_patientensicherheit_english.pdf

3.5.3 Communication/Teamwork
In this area of instruction, communication and communication strategies, as well as the promotion of teamwork are presented in their roles as integrative elements in the development of a culture of safety. At the same time, the advantages and disadvantages of communication standards and well-known communicational causes of errors, as well as the importance of goal-oriented and successful communication will be referred to. A further aspect is communication with patients and the public after adverse events have occurred. Therefore individual communication strategies and strategies for communication with the public will be presented and the importance of communication for these two important fields discussed. Additionally, team processes and the effects of these on hierarchies, especially on power relations and, in particular, power gradients within teams, are presented. Attention will be paid to the fact that the allocation of roles in team processes entails rights and obligations which team members adopt and on the basis of which they must prove themselves within team processes. Analogies will be drawn to other fields that have gone through similar processes in recent decades, especially aviation, and these will be discussed. Additionally, the opportunities and limits to the standardization of processes, as well as the transferability of key processes from industry to medicine will be considered.

Further reading
http://www.forum-patientensicherheit.de/service/literatur/pdf/fbkonzept_patientensicherheit_english.pdf

3.5.4 Instruments/Implementation/Training
Instruments, strategies and the implementation of instruments for the development of a culture of safety are introduced. These instruments cover a broad range from patient complaints and critical incident reporting systems to simulations and simulators. Traditional instruments for the localization and analysis of errors such as root cause analysis and the significant event audit will be presented and their importance explained. Furthermore, great importance is attached to the evaluation of perceived medical risks in terms of the likelihood of an incident occurring and its poCME-tential harm, as well as what this actually means for avoidance strategies in medical organizations.

Further reading
http://www.forum-patientensicherheit.de/service/literatur/pdf/fbkonzept_patientensicherheit_english.pdf

3.6 Modular Content and Model Syllabus

The following table presents the subjects to be covered and a time schedule for a CME-Concept seminar on PS. Other continuing education seminars can be combined freely from the areas of instruction.

I. Basic knowledge / Information (4 hours)	II. Basic Qualification / Guideline (16 hours)	III. Additional Qualification/ Multipliers (20 hours)
• Patient safety (background, importance for doctor, patient, public) 45 mins.	• Fundamentals (consolidating the content) 180 mins.	• Theoretical approaches/ strategies 180 mins. • Human Factors 240 mins.
• Psychology of the error (causes, types etc) 60 mins.	• Theoretical approaches/ strategies 180 mins.	• Communications / Teamwork 180 mins.
• Error management/safety thinking in other industries (examples/strategies) 45 mins.	• Communications / Teamwork 180 mins.	• Instruments / Implementation / Training 180 mins.
• Error management as a part of QM (introduction) 45 mins.	• Instruments / Implementation/ Training 180 mins.	• Group and project work 240 mins.
• Discussion 45 mins.	• Group and project work 240 mins.	• Team and communication training 180 mins (in groups).

I. Basic Knowledge / Information	II. Basic Qualification / Main Idea	III. Additional Qualification / Multipliers
Target Group: • Doctors pursuing further education • Medical students	**Target Group:** • Doctors pursuing further education	**Target Group:** • Doctors pursuing further education • Doctors with own Practice
Requirements: • Medical studies (MD)	**Requirements:** • Start of further education	**Requirements:** • Doctors with at least 5 years professional experience or who have finished their further education
Aim: • Communicate fundamentals • Develop understanding for importance of patient safety in healthcare	**Aim:** • Communication of knowledge, application fields and patient safety skills	**Aim:** • Communicate competencies and responsibilities for patient safety in participants' professional fields

Further reading

http://www.forum-patientensicherheit.de/service/literatur/pdf/fbkonzept_patientensicherheit_english.pdf

4. Training for Professionals and other PS Education and Training Activities (Spanish Ministry of Health)

Introduction-Objectives

The Spanish Teaching program on Patient Safety is included in the national Strategy of PS developed since 2005 in agreement with the representative members of all the 18 Spanish Health Regions (HR). The HRs in Spain are responsible of their healthcare system. The Teaching programme was designed based in a situation analysis according to: International recommendations (WHO, Council of Europe and European Commission) national expert, professional perception from qualitative and quantitative studies (AHRQ questionnaire results: only available in Spanish) ENEAS and APEAS studies and other studies.

The objectives of this programme are to improve the attitude and knowledge by substituting a blame culture for an attitude oriented to a proactive risk reduction and to improve skills in clinical practice by teaching professionals about how to prevent AE related with: Medication, nosocomial infection and technical procedures The target population of the program include health care professionals: clinical professionals, managers, directors and other involved in health activities. The program is mainly oriented to professionals working in the Risk management Units in each hospital or primary care facilities. Also the program addresses patients and citizens through a multifaceted approach including on-line and on-site courses. The Programme for professionals has 3 teaching levels: basic (1), expert (2) and Advanced (3) (Table 1)

Table 1: PS Education and Training in Spain

COURSE	LVL	METHOD	TARGET	CREDITS	HOURS
Basic training (Provided at HR level)	1	Present	All professionals Patients	Depends on each HR	30
Risk-management (Provided at national level)	2	On-line tutorial	Healthcare professionals and managers (superiors graduate, nurses)	9,3	120
Risk-management (Provided at national level)	1	On-line Self-tutor	Healthcare Professionals and managers (superiors graduate, nurses)	2,5	20
PS and AE prevention (Provided at national level)	1	On-line Self-tutor	Healthcare Professionals and managers (superiors graduate, nurses)	2,5	20
Master's degree (Provided at national level)	3	On site & On line	Healthcare Professionals and managers (superiors graduate, nurses)	60	1600

4.1 National Courses in Spain

4.1.1 Training Courses for Professionals

On-line training course in Risk Management and Patient Safety

Description
Centralized course at national level, organized by the SMoH through an agreement with the Carlos III University of Madrid

Objectives
1. Know and value the phases and elements of the risk management life cycle.
2. Clear and detailed description of the tools that support an efficient risk management in an organization.
3. Provide examples and practical cases of the use of the toolkit both within the health environment and also in other services familiar to everyone.
4. Provide with clear, ready-to-use software formats that allow the utilization of the toolkit in different organizations of the healthcare sector.
5. Describe the risk management and continuous improvement methodologies used successfully nowadays both in the public and private sectors.
6. Advice and serve as consultants for the development of a Risk Management and PS Improvement Plan, set into the context of the Health Organization where the student currently works.

Type of intervention
The course combines the reactive and proactive approaches to PS Improvement. The platform was developed with all the appropriate tools necessary to allow the participants: To know at any time their progression, communicate, and exchange all the information required with the group of expert tutors (which provide continued support). The Course included theoretical contents on the RM processes and practical RM tools clearly detailed with examples and practical cases, through templates and clear formats, to allow their implementation in different health organizations. This course was aimed to manager and clinical professionals, grouped in 3-4 people teams linked professionally in order to finally develop a PS improvement project on their working area. The Project consists of a set of 16 steps where professionals use the methodology and tools provided in the course, and contextualize them on their healthcare unit/area.

Duration and No. of participants
This 120h course has been running since 2006: 12 editions until now in Spanish (to Spain and Latin America) and 2 in English (to EUNetPaS project and WHO). A total of 1000 Healthcare professionals at the end of 2009, including clinical professionals (clinicians: medical doctors, nurses and others) and managers.

Evaluation

At the end of each Course call, quality evaluation surveys are sent to all students, including a set of 14 questions related to: course interest, materials, online platform, tutorial advice and support, timeframe, usefulness and overall course objectives achievement. We also evaluate student's knowledge and skills through a project designed using al risk management tools.

Outcomes of interventions

A database was performed with all the projects designed by the students. This database is a compilation of good practices that will have public access (in Spanish) in the PS Web page (www.seguridaddelpaciente.es). This database allows to find examples of the use of different tools at different clinical settings. In an attempt to retrieve information about sustainability of course usefulness, the MHSP is currently designing an evaluation survey that will be send to students 6 months after each call is finished. (This survey will also be sent to all professionals that participated in the previous 16 course calls).

Master in Patient Safety

Description

Centralized Master at national level, organized by the SMoH through an agreement with the Miguel Hernandez University of Alicante.

Objectives

1. To identify Adverse Events (AE) notification System advantages and limitations.
2. To differentiate how AE historical sequence has occurred.
3. To analyze healthcare risk management stages.
4. To distinguish Patient Safety (PS) activities on management levels.
5. To recognize potential risks on Clinical PS, procedures, diagnosis, therapeutics, assistance team and professional.
6. To identify clinical practices that can contribute to failures and errors
7. To use failures and error in order to implement improvements on PS.
8. To provide and use of clinic risk management principles.
9. To provide self learning on AE preventive risk management.

Type of intervention

This Master consists of a set of 12 modules, 2 round tables, individual Project tutorized, distributed as follows: 1)Framework 2)Basic epistemology 3)Quality assistance 4) PS risk management improvement tools 5) Available knowledge and evidence 6) Clinical practice standardization 7) Safe use of medication 8) Health technologies assessment and economical evaluation methods 9) Healthcare legal issues 10) Socio-cultural approach 11) Individual approach of AE analysis 12) Social impact of AE.

Duration

This 1500h master has been running since 2008 with 60 ECTS credits

No. of participants

30 Healthcare professionals in 2009, including clinical professionals (clinicians: medical doctors, nurses and others) and managers, involved in Patient safety and selected by the Health Regions.

Evaluation

All the modules were rating with 4,5 points in a 1 to 5 point scale regarding: objectives, acquired knowledge, utility, applicability, professors and global evaluation. Each of the 30 students developed a project related with the contents of the Master. Some of these projects will be publish during 2010 in Med Clin (Barc).

Medical school Undergraduate education

The Miguel Hernandez University of Alicante includes at 4th course of Medicine a Health Management course, as an optional subject, chosen by 85-90% of the students. This course includes 4 modules:

1st Module: Sanitary management- general concepts
2nd Module: Sanitary Management Planning
3rd Module: Assistance Quality
4th Module: Patient Safety

4.1.2 Training for Patients

Trainers Citizens Nets in Patient Safety
Description
National Net of citizens supported by the SMoH. This net was created based in a project developed (through an agreement with the Andalusia School of Public Health) since 2006 with the Spanish patients and consumers associations. The citizens belonged to this net were trained during 2009 in order to train other citizens and patients during 2010

Objectives
To create a patients and citizens active participation on PS policies: To reach higher levels of satisfaction; to incorporate healthy life habits and to improve therapeutic performance.

Content

Module 1 Healthcare safety	Module 2: Safety use of medicaments	Module 3: Prevention of infections
1. Introduction of PS. 2. Safety care: to care and self care in a proper way 3. Safety on heath care. 4. Easy practices. 5. Assessment 6. Virtual exercises: - Case in practice - Micro story	1. Introduction of medication safety. 2. Medical and pharmaceutical visit preparation. 3. Information on medicaments, prospectus and internet. 4. Easy practices. 5. Assessment 6. Virtual exercises: - Case in practice - Medical visit guidelines.	1. Introduction of safety on infection risk. 2. Skin as natural barrier, its closing infection risks. 3. Infections related with health care. 4. Easy practices. 5. Virtual exercises: - Case in practice (Final Module)

No of participants
15 Citizens' and patients' trainers during 2009: selected by Patients and Consumer Associations. They belong to the Trainers Citizens Net of PS. Citizens and patients in general are selected by Health Regions according with the objectives of the PS strategy in each HR

Evaluation
A survey was used for the evaluation regarding different items (scale 0 to 10). The items with better scores were: course coordination, administrative organization and teaching team (rated between 8 to 10) and weaker item is learned results (rated between 6.7 to 7).

4.1.3 Other courses

Regional organisation and coordination (eg. regional authorities, Health Insurance companies)

Basic courses on patient safety (and other courses) are developed and coordinated by the Health Regions.

Course organized by the Scientific Associations. Several scientific associations are developing courses on patient safety. For example the Spanish Society of Intensive medicine is developing a course (supported by the SMoH) for professional's trainers in patient safety (Information only available for students).

Local organisation and coordination (eg. hospital level)
Courses organized by the hospitals and primary care settings.