

“Nursing standards, guidelines, protocols in BiH – Best case reporting

Dr Dietmar Aussehofer

July, 2015

The “Strengthening Nursing in Bosnia and Herzegovina (ProSes)” project aims to improve health outcomes sustainably in BiH by developing the quality and effectiveness of nursing services, particularly at the primary care level, and by increasing vulnerable groups’ access to nursing services. The project intervenes simultaneously across the nation’s two entities, i.e., Republika Srpska and the Federation of Bosnia and Herzegovina.

The ProSes project is supported by the Swiss Government and implemented by a consortium under the operational leadership of the Fondacija Fami (a foundation for improvement of health and social care provided to the BiH population), with the Division of Tropical and Humanitarian Medicine of the University Hospitals Geneva (HUG) and the University of Basel’s Institute of Nursing Science both of which provide technical leadership.

Please use the following reference to cite this report:

Ausserhofer, D., Novo, A., Rakic, S., Dropic, E., Fisekovic, E., Sredic, A., Van Malderen, G. (2014): Nursing standards, guidelines, protocols in BiH – Best case reporting. Final report. All rights reserved.

Content

Acknowledgments	4
Executive summary	6
1 Background	7
1.1 Context of the “Strengthening Nursing in Bosnia and Herzegovina (BiH)” project	7
1.1.1 Quality assurance and improvement in Bosnia and Herzegovina	8
1.1.2 Context of nursing care in Bosnia and Herzegovina	8
1.2 Nursing standards, guidelines and protocols	9
1.2.1 Clarification of terms	10
1.2.2 Nursing standards, guidelines and protocols in Bosnia and Herzegovina	11
1.3 Objectives	12
2 Methodological approach	12
2.1 Data collection and analysis	13
2.2 Ethical aspects	13
3 Findings	14
3.1 Description of four healthcare institutions	14
3.2 Department, unit or sector for quality assurance and improvement	18
3.3 Approaches to standardizing nursing care through SOPs	19
3.4 Enablers and barriers to standardizing (nursing) care	22
4 Conclusions and recommendations	24
5 Literature	29
6 Appendix	31
Photographs	41

Acknowledgments

This report was prepared for the Strengthening Nursing Care in Bosnia and Herzegovina project by Dr. Dietmar Ausserhofer, Institute of Nursing Science, University of Basel. Overall direction and coordination was provided by Dr. Ahmed Novo (Agency for Quality Improvement and Accreditation in Healthcare of the Federation of Bosnia and Herzegovina - AKAZ) and Dr. Severin Rakic (Health Management Center of the Public Health Institute of Republika Srpska - HMC).

In addition, the following key stakeholders of the project reviewed the document:

- Ivanka Franjic, Federal Ministry of Health
- Dr. Jasna Vuckovic, Ministry of Health and Social Welfare of Republika Srpska
- Dr. Nešad Hotić, Tuzla University Clinical Center
- Senada Mujacic, Tuzla University Clinical Center
- Dr. Kasim Brigić, Primary Health Care Center Tuzla
- Dr. Lejla Mackovic, Primary Health Care Center Tuzla
- Spomenka Omanović, Primary Health Care Center Tuzla
- Dr. Zlatko Maksimovic, Primary Health Care Center Bijeljina
- Dr. Mirko Sovilj, General Hospital Prijedor

We gratefully acknowledge the funding and kind support provided by the Embassy of Switzerland in Bosnia and Herzegovina, which was crucial for implementing the ProSes project, establishing the technical working group and publishing this document.

This publication is supported by the Embassy of Switzerland in Bosnia and Herzegovina. The content and findings of this publication do not necessarily reflect the views of the Swiss Government.

Executive summary

Background: The “Strengthening Nursing in Bosnia and Herzegovina (BiH) (ProSes)” project aims to contribute sustainably to improving health outcomes in BiH by increasing the quality, effectiveness and accessibility of nursing services. As intermediate goals, the project combines interventions in three areas: 1) Nurse recognition and quality of nursing services; 2) Community nursing and outreach to vulnerable groups; and 3) Formal nursing education. It is expected that a number of mechanisms will promote nursing quality and recognition, most notably the development and implementation of standard operating procedures. Building on findings from a previous fact finding mission, despite high variability in BiH healthcare quality, we hypothesized that some facilities would function as positive deviants, i.e., they would have developed effective strategies to elevate nursing quality and safety management through standardisation.

Objective: In each selected positive deviant healthcare facility, our objective was to explore four points: (1) how their quality and safety management systems had been established and what roles nurses had played, e.g., in nursing care standardization; (2) what factors had facilitated the development, adaptation, implementation, monitoring, and evaluation of standardization and standard operating procedures (SOPs) for nursing; (3) what barriers jeopardized the sustainability of these achievements, and possible strategies to overcome these barriers; and (4) how they approached the continuous development, adaptation, implementation, monitoring and evaluation of nursing SOPs.

Methods: We used a multiple-case study design to study 4 cases of positive deviance, including one primary-level and one secondary/tertiary-level health institution in each BiH entity (Republika Srpska and the Federation of Bosnia and Herzegovina). In this context, a case study is an empirical inquiry that investigates a contemporary phenomenon in depth within its real-world context (Yin, 2014). Based on anecdotal evidence collected in the previous project phase, the following facilities were considered best cases: in Republika Srpska, the Primary Health Care Center (PHCC) Bijeljina and General Hospital Prijedor, and in the Federation of BiH, PHCC Tuzla and Tuzla University Clinical Center. We collected data via qualitative research methods. Along with direct observation and document review, these included focus group interviews with healthcare facility management, quality assurance teams, nurse managers and frontline nurses. To explain how these facilities had improved nursing care quality through standardisation, collected data were analyzed using ‘explanation building’ analytic techniques.

Findings: In all four positive deviant facilities, the certification/accreditation process was a crucial enabling factor to build up necessary competencies, structures and processes and to initiate continuous safety and quality of nursing care improvement. In Tuzla University Clinical Center and DZ Tuzla, nurses work within their units or sectors in advanced roles, e.g., as ‘quality coordinators’. As such, they promote quality assurance and improvement, and are responsible for improving the overall quality of nursing care, for instance through the development and implementation of SOPs. In each studied facility, we observed a consistent approach regarding the development, adaptation, implementation and evaluation of (nurse-related) SOPs. Moreover, we found how this approach was imbedded in the facilities’ strategies for quality/safety assurance and improvement at the micro-, meso- and macro-levels.

Conclusions: The four studied BiH healthcare facilities embarked on their safety and quality assurance and improvement journeys almost a decade prior to this study. Since they began, their organisational cultures have undergone substantial changes, leading to numerous positive impacts on the quality of nursing care, including the use of nurses in advanced roles (as ‘quality coordinators’ or ‘quality nurses’). At the macro-, meso- and micro-levels of BiH’s healthcare system, key players are responsible for improving the safety and quality of nursing care, not only by standardizing nursing procedures, but also by ‘spreading the message’. In the current context of BiH healthcare facilities, particularly their limited resources, the ProSes project can help such players develop a systematic and sustainable approach to the continuous improvement of patient nursing care quality.

1 Background

1.1 Context of the “Strengthening Nursing in Bosnia and Herzegovina (BiH)” project

Worldwide, healthcare systems face increasing demands due to the current demographic shift, a concomitant rise in chronic diseases, and increasing financial constraints. Within this context, nurses have invaluable potential to influence health outcomes via their adaptive capacity, their understanding of care processes, their closeness to patients, and their large numbers. In Bosnia and Herzegovina (BiH), the healthcare education, professional training and health care delivery systems all focus primarily on curative measures and physicians’ contributions, limiting the nursing workforce’s effect against current and future health needs, particularly those of vulnerable populations. In addition, significant gaps in nursing competencies and practice impede efficient operation of the country’s health system, weaken hard-earned reform achievements (e.g., in family medicine) and leave the country ill-equipped to handle projected healthcare needs.

Since 1998, the Swiss Agency for Development and Cooperation (SDC) has continuously supported BiH’s two entities’ Ministries of Health in implementing their reform agendas via the Family Medicine Implementation Project (FaMI). During the implementation of the FaMI project, which phased out in March 2011, major gaps in nurses’ education and practice were identified. The resulting challenges incur are interlinked. They include inadequate formal nursing education, lack of continuous education for nurses, lack of clearly defined roles and job descriptions, insufficient workforce planning, the absence of a licensing system for nursing, shortfalls in standards of nursing practice, limited possibilities for career development and a weak status of nurses in healthcare.

The “Strengthening Nursing in BiH (ProSes)” project aims to contribute sustainably to health outcomes in BiH by improving the quality and effectiveness of nursing services, particularly at the primary care level, and by increasing vulnerable groups’ access to nursing services. Concerning geographical coverage, the project intervenes nation-wide, across both entities of Bosnia-Herzegovina as well as the Brcko district. It proposes a long-term intervention in three phases, the first of which (2012-2016) is funded by the Swiss Government. In order to achieve the overall purpose of improved quality and access to nursing care, the project combines intermediate interventions in **three areas**: (1) Nurse regulation and recognition; (2) Community nursing expansion and outreach to vulnerable groups; and (3) Formal university-level nursing education.

Improved recognition and quality of nursing (intermediate intervention 1) are expected to result from a number of mechanisms, most notably the development and implementation of practice standards, guidelines and protocols. Realizing synergies to improve nursing care quality in BiH will demand in-depth knowledge of the roles of nursing care, the key players, and safety/quality assurance and improvement contexts across both its healthcare systems.

1.1.1 Quality assurance and improvement in Bosnia and Herzegovina

The two entity-level accreditation agencies, ASKVA (the Agency for Certification, Accreditation and Healthcare Quality Improvement of Republika Srpska, established in 2003), and AKAZ (the Agency for Healthcare Quality and Accreditation in the Federation BiH, established in 2005) are responsible for assuring and improving healthcare quality in their respective entities. In this sense, their mandates include the certification and accreditation of healthcare facilities. Minimal standards are requirements for the protection of patient safety. Their achievement leads to certification of the healthcare facility. Optimal standards are statements of expectations or requests that, when fulfilled, ensure provision of high-quality healthcare. Their achievement ensures accreditation of the facility. Certification is obligatory for all health institutions, whereas accreditation is voluntary. Both certification and accreditation are demanding processes. For hospitals they include development of documents in five areas: (1) Organization and management; (2) Health promotion and prevention activities; (3) Clinical services; (4) Patient satisfaction; and (5) Patients' rights and responsibilities (Agencija za kvalitet i akreditaciju u zdravstvu u Federaciji Bosne i Hercegovine, 2010a, 2010b).

Accreditation agencies require healthcare institutions to check their practices against publicly available certification and accreditation standards approved by their respective Ministries of Health. Standards apply to the following topics: health service organization; optimum quality and safety management; internal assessment of optimum quality and safety of health services; risk management; control and information on the quality of work performed by health workers and associates; rights and duties of health workers and associates in the process of health service quality and safety improvement; sub-commissions for drugs, medical documentation, infection control, revision of policies and procedures, continuous professional development; and workplace safety and provision of a healthy workplace, including radiation protection, etc. (ASKVA, 2012, 2013; AKAZ, 2010a, 2010b).

The certification/accreditation process requires not only an external evaluation, but continuous maintenance. Training and facilities are provided by AKAZ in the Federation of BiH, and by HMC in Republika Srpska. Preparation time for external assessment is not defined. Once certification status has been achieved, it has to be renewed after four years (certification); accreditation (which includes certification) expires after three. The cost of the certification/accreditation process depends on the size of the health institution.

1.1.2 Context of nursing care in Bosnia and Herzegovina

In the BiH healthcare system, as nursing is a traditionally female profession, it receives little attention. Particularly acute care is strongly physician-driven. To a large extent, nurses are educated, then deployed by physicians. This arrangement substantially affects the development and

implementation of a clear nursing role. Although nurses perform activities related to direct patient care, they also carry out large volumes of administrative work for their supervising physicians. Such a division of duties, i.e., the treatment of nurses as physicians' assistants, results in a lack of respect from physicians and a lack of recognition for their profession from society as a whole. Further, as few healthcare facilities document the assessment, planning, implementation and evaluation of nursing care, procedures performed by nurses are rarely recorded as such; therefore, the current BiH healthcare financing system includes no provision to link nurses' performance with Diagnosis-Related Groups.

To advance nursing as a profession and strengthen nursing care, it is crucial to assemble professional bodies who can lobby for and support the development and implementation of a clear scope of nursing practice, including clear job descriptions for nurses. Initiatives designed to strengthen the existing nursing associations and support the establishment of nurse chambers have been launched in both BiH entities. For instance, the *Law on Nursing and Midwifery* (Official Gazette of the Federation of BiH, 2013) introduced in 2013 provided a legal framework for the profession of nursing and midwifery, including acceptable methods of practicing and organizing the profession in associations and chambers; educational standards and requirements to practice; rights, obligations and responsibilities of nurses and midwives; and safety and quality control of the practice of nursing and midwifery in Federation of BiH. In Republika Srpska the nursing profession is regulated alongside other health professions by the *Law on Healthcare* (Official Gazette of the Republike Srpske, 2009), but the legal framework for the organization of a nurse chambers remains to be established.

1.2 Nursing standards, guidelines and protocols

Nursing standards, guidelines and protocols improve the quality of nursing care provision by articulating consistent best-practice approaches. They also improve and standardise patient/client care, define / clarify roles, legitimacy and responsibility, provide bases for care auditing and evaluation, facilitate effective staff induction, and serve as educational tools. Guidelines and protocols are internationally regarded as useful tools to facilitate quality improvement and establish evidence-based practice (EBP), i.e., the conscientious and judicious use of current best evidence to guide healthcare decisions (Titler, 2008). Combining research findings, organizational experience (including quality improvement data and financial data), clinical expertise, expert opinion, and patient preferences ensures clinical decisions based on all relevant evidence. Thus, EBP ensures a workable balance of efficacy (the ability to reach a desired result under optimal conditions), effectiveness (the ability to produce the desired result in daily practice), and efficiency (the achievement of a desired result with a minimum of expense, time, and effort) (Institute of Medicine, 2011; Thomas et al., 2000).

1.2.1 Clarification of terms

As nursing standards, clinical guidelines and clinical protocols reflect national and regional priorities, it is necessary to explain briefly what each of these three terms denotes for the purposes of this document. *Nursing standards* define the requirements for professional responsibility and accountability, evidence-based practice, client-focused provision of service and ethical practice. They are formulated to assist nurses to provide safe, ethical and competent care. For example, according to the American Nurses Association's Model of Professional Nursing Practice Regulation, nursing standards cover four essential categories: (1) the scope of practice (i.e., roles and functions of nurses); (2) professional standards (i.e., statements about minimum levels of acceptable performance of tasks central to clinical practice, education, administration and research); (3) practice standards (i.e., requirements concerning core nursing practice processes, including evidence-informed practice, reflective practice and continuing competence, clinical judgement and decision making, communication, and collaboration); and (4) a code of ethics (i.e., nurses' responsibilities regarding human and cultural rights, and rights concerning life, choice, dignity and respect). Professional standards regarding evidence-based practice provide basic principles for nurses both to understand interventions, guidelines and protocols and to engage in their development and implementation. According to the International Council of Nurses, responsibility for the development and implementation of nursing standards should remain with national nursing chambers and associations.

(Clinical Practice) Guidelines have been defined by the Institute of Medicine as "systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances" (Institute of Medicine, 1990). To date, a number of international and national bodies, including the World Health Organization, the Centers for Disease Prevention and Control, the Johanna Briggs Institution, and the Infusion Nurses Society, develop clinical practice guidelines to assist clinicians, including nurses, in their decision-making, thereby reducing inappropriate variations in practice and promoting high-quality healthcare (Institute of Medicine, 2011). Guideline development demands tremendous professional expertise and rigor (e.g., as described in the Scottish Intercollegiate Guidelines Network's *SIGN 50* handbook) to systematically and understandably convey such topics as bias minimization and evidence retrieval and review (Grimshaw, Thomas, & MacLennan, 2004; Hakkennes & Dodd, 2008; Institute of Medicine, 1992; Thomas et al., 2000).

By translating and adapting (inter)-national guidelines to initiate and support evidence-based practice in local contexts, healthcare facilities commonly develop *clinical protocols* (Burgers, Grol, & Eccles, 2005). More specific than guidelines, these list unequivocal, comprehensive criteria to identify

specific clinical conditions or organizational aspects and prescribe steps to manage them. It is important to note that in the literature the terms *local guidelines*, *clinical protocols* and *standard operating procedures* (SOPs) are often defined or described very similarly; however, they have very specific meanings among healthcare professionals.

1.2.2 Nursing standards, guidelines and protocols in Bosnia and Herzegovina

During a one-week visit to BiH (November 11 to November 15, 2013), we conducted initial analyses of the country's development and implementation of nursing standards, guidelines and protocols. Based on our findings, with the support of ProSes, standards of nursing practice and a code of ethics have since been developed for the Federal Nursing Chamber and the future Nursing Chamber in Republika Srpska.

Specific *evidence-based guidelines* related to nursing care (e.g., the prevention and treatment of pressure ulcers or patient falls) have not yet been developed and implemented on a nation- or entity-wide level. However, medical associations have translated and adapted a number of evidence-based guidelines and clinical pathways for the diagnoses and treatment of medical conditions (e.g., hypertension, diabetes, stroke, etc.) to meet local needs. In the development of these guidelines, several nurses were involved in national and entity-level working groups.

Finally, with no systematic approach to developing nursing care operating procedures, few BiH healthcare facilities have implemented written SOPs. Thus, depending largely on what nurses have learned either from their formal training or from more experienced colleagues in clinical settings, their performance of specific procedures can differ substantially. However, those healthcare facilities that have already undergone or are in advanced phases of the AKAZ or ASKVA certification processes develop and implement SOPs ("*procedure*"), some of which relate to nursing care (see 3.4.1).

Certified/accredited healthcare facilities and those for whom certification or accreditation are pending can be considered 'positive deviants' within the BiH healthcare system. Positive deviance is "based on the observation that in every community there are certain individuals, groups or organizations, whose uncommon but successful behaviours or strategies enable them to find better solutions to a problem than their peers" (Marsh, Schroeder, Dearden, Sternin, & Sternin, 2004). With positive deviant institutions serving as models for the planning and implementation of standards, studying and reproducing the systematic approaches and "good practices" of such institutions has a strong potential not only to reduce high inter- and intra-institutional variability, but to accelerate quality development across all aspects of nursing.

1.3 Objectives

In collaboration with the Federal Ministry of Health and the Ministry of Health of Republika Srpska, AKAZ (in the Federation of BiH), ASKVA and HMC (in Republika Srpska), we identified four positive deviants, i.e., healthcare facilities that had already undergone or were in advanced phases of the certification/accrreditaton process: General Hospital Prijedor and DZ Bijeljina (RS), and DZ Tuzla and Tuzla University Clinical Center (Federation of BiH). Our assumption was that, by facilitating the standardization of nursing care, these positive deviants would serve as catalysts for nursing care quality and safety improvements across BiH.

The specific objectives of this best case reporting were:

1. To investigate the studied institutions' quality and safety management systems and their nurses' roles in the standardization of nursing care;
2. To describe factors (contextual, structural, process-related, personnel-related) facilitating the development, adaptation, implementation, monitoring and evaluation of nursing SOPs and other contributors to nursing standardization;
3. To identify barriers (contextual, structural, process-related, personnel-related) that jeopardized the sustainability of existing achievements, along with strategies used to overcome these barriers;
4. To explore the overall approach / model for the development, adaptation, implementation, monitoring and evaluation of nursing SOPs.

2 Methodological approach

In the two BiH's entities, Republika Srpska and the Federation of BiH, we used a multiple-case study design in one primary level and one secondary/tertiary level health institution (4 cases). Due to practical reasons (i.e. feasibility, available resources) the number of cases was limited to 4 facilities, which does not exclude the possibility that there might be more positive deviant facilities within the two entities. A case study is an in-depth empirical inquiry investigating a contemporary phenomenon within its real-world context (Yin, 2009). The study was guided by a positive deviance approach: Based on the assumption that some healthcare facilities in BiH had already found strategies and solutions to improve nursing quality through standardisation, we aimed to learn from these "exceptional performers" and their best practices. Between May 14 and May 16, 2014 and from June 25 to June 30, 2014 (see programme, Appendix 6.1, p. 26) we visited the four selected healthcare institutions and collected relevant information via focus groups, interviews, observations/walk-rounds and document reviews. We focused particularly on approaches already in place to improve nursing quality through standardisation and sustainable implementation of SOPs. The mission was performed by a team consisting of one nursing expert (DA), a local translator (AS) and, in Republika

Srpska, with the participation of the head of the Health Management Center. The nursing expert coordinated planning and preparation of the site visits and data collection, and ensured that meetings could take place with relevant stakeholders and institutional representatives. These meetings deepened our insights regarding the local context of quality assurance and improvements within the studied facilities and allowed discussions concerning the systems and processes of SOP standardisation and implementation.

2.1 Data collection and analysis

Focus group interviews and observations were conducted in *dom zdravljas* (primary healthcare facilities) and hospitals (secondary healthcare facilities) in three cities – Prijedor, Tuzla and Bijeljina – within the two entities. Over four site visits, the team conducted a total of 13 individual interviews and focus groups (each between 30 and 90 minutes) with a total of 85 people, including frontline nurses, nurse leaders and managers, quality coordinators and facility directors. Furthermore, within each of the four healthcare facilities, in addition to our document review, we conducted at least one walk-round, observing medical, surgical and gynaecological / obstetrical, emergency and intensive care units. For the focus group interviews, in collaboration with local team members, the nursing expert prepared semi-structured questioning routes (see Appendix 6.2, p. 27).

For the aims of this study, focus group interviews were not recorded and transcribed verbatim. Instead, questions were asked in English by the nurse expert and translated orally (by a translator) to the focus group's language, who responded in their own language. Their answers were translated to English and noted. The focus group interviews were open, allowing participants to discuss the questions, to follow up on one another's statements, to agree or disagree, or to give examples. Collected data were summarized and analyzed by the nurse expert using Yin's 'explanation building' analytic technique (Yin, 2009). First, each case was analyzed individually; then all cases were viewed together to isolate common factors explaining how these facilities had improved nursing care quality through standardisation (e.g., via the development, implementation and evaluation of SOPs). The aim was to find a general explanation that would apply to all individual cases, despite their varying degrees of detail.

2.2 Ethical aspects

The four directors of the healthcare facilities signed the informed consent sheet (see Appendix 6.3, p. 29), allowing the researcher to collect relevant information for use in this report and, as appropriate, in other publications. The four healthcare facilities organized all focus groups based on written information about the mission and project. At every level, participation was completely voluntary. At the beginning of each data collection session, participants were informed that they were free to withdraw at any time with no consequences, e.g. by informing the researcher that they no longer

wished to participate or by leaving the room. Participants received oral information about the ProSes project, the aim of the focus group and the focus group process. They were then informed that the researcher's notes were solely to capture their statements, with no reference to names or other identifying characteristics. I.e., the study records allowed no link between responses and participants' identities. After this initial briefing, before data collection began, participants were invited to provide written consent confirming that the nature and purpose of the project and the focus groups had been sufficiently explained. Although, immediately before the questioning route began, a self-introduction round (i.e., name, position and workplace) was made, only the participants' positions and workplaces were noted.

3 Findings

3.1 Description of four healthcare institutions

Information of selected organizational characteristics of the four healthcare facilities is summarized in Tab. 1 and Tab. 2. The four facilities differ significantly in terms of size, number and type of services provided, as well as available financial and human resources. However, our visit confirmed that each could indeed be considered a positive deviant in terms of quality assurance and improvement of healthcare services within BiH's two entities. Due to the formal certification/accreditation process, each has established structures and processes that enable continuous safety and quality improvement of healthcare services. Additionally, nurses were fulfilling advanced roles in certain areas, e.g., within the sector for quality assurance and improvement (see sect. 3.2 below). Prijedor Hospital and DZ Bijeljina have already been certified, while Tuzla University Clinical Center and DZ Tuzla have reached advanced phases of the certification process. The entire DZ Bijeljina has been certified by ASKVA, but has also undergone separate certification processes, including ISO 9001 and ISO 14001 certification. Additionally, several departments (family medicine teams, the mental health center and the community based rehabilitation center) have achieved ASKVA accreditation, while the laboratory service has recently achieved ISO 15189 certification from the national BiH accreditation body (BATA).

With the support of AKAZ, ASKVA, and HMC, the four positive deviant facilities have built up the human capital, structures and processes necessary to launch programmes for continuous assurance and improvement of care safety and quality. As these programmes require dedicated professional staff with advanced knowledge of patient care and healthcare processes, nurses are ideal and cost-effective choices to administer them. As a result, in addition to their advanced work in quality assurance and improvement within sector for quality and assurance improvement – the heart of their facilities safety and quality improvement strategies (described in depth in the following chapter

3.2), nurses regularly work alongside other healthcare professionals on various quality and safety commissions. For example, General Hospital Prijedor currently supports five commissions to deal with issues concerning drugs, patient rights, safety, healthcare-associated infections, surgery and clinical quality. The Tuzla University Clinical Center administers 15 commissions, of which eight involve interdisciplinary nurse-physician collaboration on a variety of topics (see Appendix 6.5, p. 33). Within the DZ Tuzla, the commission for quality and safety consists of head physicians and nurses who have undergone or are attending all or parts of the 12-module AKAZ training course. At the DZ Bijeljina, four commissions convene regarding healthcare associated infections, user complaints, medical waste and security.

Tab. 1: Organizational characteristics of the two acute care hospitals

Organizational characteristics	Dr Mladen Stojanovic Hospital (Public Institution) Prijedor	Tuzla University Clinical Center (Public Institution)
1. Total population served by the hospital (approximately)	180,000	500,000
2. Total number of acute care beds (end of 2013)	351	1.342
3. Average bed occupancy rate (end of 2013)	64%	65%
4. Average length of stay in 2013	6 days	7 days
5. Total budget planned for 2014	15,000,000 KM	105,047,205 KM
6. Number of departments	22	37
7. Total number of medical units/wards within the departments	15	107
8. Total number of employees	511	2,440
a. Physicians	94	469
b. Nurses with bachelor degree	0	129
c. Nurses with higher school degree	41	40
d. Nurses with secondary school degree	191	1,045
e. Other health collaborators with direct patient contact (e.g. psychologists, social workers, defectologists)	22	49
9. Quality assurance team	2	7
a. Lawyer	0	1
b. Physicians	0	2
c. Nurses	0	2
d. Psychologists	1	0
e. Economists	1	1
f. Administrative personnel (personnel)	0	1

Tab. 2: Organizational characteristics of the two primary healthcare centers

Organizational characteristics	Bijeljina Primary Healthcare Center	Dr Mustafa Sehovic Primary Healthcare Center Tuzla
1. Total population served by the DZ (approximately)	130,000	120,000
2. Total budget planned for 2014	11,105,757 KM	ca 20,000,000 KM
3. Number of departments	12	13
4. Total number of employees	354	749
a. Physicians	90	189
b. Nurses with bachelor degree	0	10
c. Nurses with higher school degree	17	26
d. Nurses with secondary school degree	171	269
e. Other health collaborators with <u>direct</u> patient contact (e.g., psychologists, social workers, defectologists)	4	18
5. Quality assurance team	3	3
a. Physicians	0	1
b. Nurses	0	2
c. Psychologists	0	0
d. Economists	0	0
e. IT professional	1	
f. Occupational Safety and Health professional	1	
g. Administrative personnel	1	0

The four observed institutions' quality and safety strategies varied considerable concerning both their details and the levels to which they had been implemented. Still, we noted no fewer than three innovative "state-of-the-art" strategies: benchmarking of quality indicators; (2) a Critical Incident Reporting System (CIRS); and (3) unit-level implementation of quality nurses. With their focus on standardization (e.g., SOPs), these strategies provide a solid contextual framework upon which to raise the quality of nursing care. As a secondary benefit, they promise to strengthen the professional recognition of nurses within BiH healthcare.

The first of the three noted strategies occurred in Republika Srpska, where ASKVA has developed a unit-level benchmarking system for all hospitals based on patient discharge data (i.e., Diagnosis Related Groups). At any time, hospital administrators can generate benchmarking reports comparing their hospital-level data on 38 quality indicators (e.g., length of stay, mortality for specific procedures) with those of other hospitals. The measured indicators were selected based on the WHO Performance Assessment Tool for Quality Improvement in Hospitals (PATH)

(<http://www.pathqualityproject.eu/>). Pending adoption by the RS Ministry of Health, draft ASKVA regulations will require all hospitals in Republika Srpska to gather and report on similar data. By establishing an avenue of performance feedback regarding accepted quality indicators, ASKVA aims to stimulate hospitals to improve their quality and safety. The use of such data for quality improvement purposes is also a requirement for ASKVA certification. As part of that process, each hospital has to demonstrate internal measures based on benchmarking reports. In addition to preparing an annual comparative report on hospital performance for the ministry of health, ASKVA also assists hospitals regarding questions and dilemmas.

In 2014, ASKVA's counterpart in the Federation of BiH, AKAZ, developed a set of performance indicators for hospitals and another for primary health centers approved by the Federal Minister of Health. In the hospital set, data on 41 indicators and adverse events are mandatory and 12 are elective; for primary health centers, 38 are mandatory and 8 elective. Moreover, Tuzla University Clinical Center has established a benchmarking system for nurse-sensitive indicators, e.g., pressure ulcer incidence (primary data collection), patient falls and drug side effects (derived from critical incident reports). Data are also collected and monitored on the quality of nurse documentation (e.g., content, readability) via random checks of patient dossiers. Each unit receives feedback comparing their data to those of other units and to findings from the previous year.

Second, as a requirement of their certification, all four selected facilities have implemented CIRS. In the DZ Tuzla, all employees are encouraged to report critical incidents (e.g., errors, near misses and adverse events) to the department for quality improvement. After categorizing incoming reports, the coordinator for risk management conducts a 'Root Cause Analysis' of each incident with the relevant department. According to the department for quality improvement, although reporting is not anonymous, the system is well-used by healthcare professionals, especially by nurses. As was the case with the insertion of urinary catheters by nurses, the occurrence—and reporting—of critical incidents stimulated the development of SOPs, leading to higher standards of care.

Third, to elevate safety and quality improvement to the next level and even closer to the micro-level (the "sharp end" of safety and quality), the Tuzla University Clinical Center intends to establish full-time graduate nurses as "quality nurses" on each unit. So far, 10 such nurses are employed in this function and are currently defining their roles in collaboration with the quality improvement sector (see 3.2). Among other responsibilities, they will assess and monitor risks and safety issues, safety and quality improvement, and unit-level activities. This is a highly innovative strategy, which to our knowledge has only been reported in US hospitals, where so called "patient safety officers" serve as ambassadors for quality and safety improvement initiatives at the unit level. In addition to

contributing significantly to patient care, this position offers graduate nurses a unique opportunity to raise their profiles within their institution while augmenting their nursing competencies.

3.2 Department, unit or sector for quality assurance and improvement

All four institutions have well-established departments, units or sectors for quality assurance and improvement. According to the Law on Healthcare in Republika Srpska, this is mandatory for all healthcare institutions in Republika Srpska. In the Federation BiH, a statute on quality improvement and accreditation requires each healthcare facility to establish at least a commission for quality assurance and improvement. Surpassing this requirement, the Tuzla University Clinical Center and DZ have each devoted an entire unit / section to the purpose. In these units / sections, “quality coordinators” (e.g., physicians, nurses, economists, lawyers and / or engineers) work together, either full- or part-time, to advance the (re-)certification process. Their participation makes them the main drivers for quality and safety control and improvement within their facilities. The Tuzla University Clinical Center’s “Section for Quality Improvement” was established in 2003 (two years before AKAZ) and now consists of 7 persons: 1 lawyer (section head), 1 economist (quality indicators, statistics), 2 graduate nurses (SOPs, standardization), 2 physicians (working part-time on medical documentation, CIRS analyses) and 1 administrative support person. The Department for quality improvement was formed in the Primary Healthcare Center Tuzla in 2006. The department has 3 employees: one doctor (quality manager who coordinates the work), one graduate nurse (risk management coordinator); and one nurse in charge for communication with patients and staff. In Prijedor Hospital, the unit was established in 2008, when the quality improvement project for hospitals began, and consists of 2 full time positions (1 psychologist and 1 economist). In the two facilities in the Federation of BiH, the quality coordinators received initial training on healthcare system safety and quality, evidence-based practice, clinical pathways, guidelines, quality improvement strategies, etc. from AKAZ. Those in Republika Srpska received equivalent training at the HMC. In Republika Srpska, in addition to the initial training, through two MoH quality improvement projects (one for hospitals, one for DZs), quality coordinators in hospitals received over 7 years of continual support in professional development (2008-2014), while those in DZs received 1.5 years (2012-2013). Additionally, team members from the Tuzla University Clinical Center have received 6 months’ training (2 x 3 months) at Cincinnati Children’s Hospital (USA), with whom the section for quality assurance and improvement has established a collaboration.

At the time of writing, AKAZ and HMC were the only BiH institutions developing nurses’ capacities in safety and quality improvement. Although the AKAZ (Federation of BiH) certification manual does not strictly define which professions can / should be trained as quality coordinators, almost half of those trained by AKAZ are nurses. In Republika Srpska, nurses account for approximately 20% of

quality coordinators in DZs, but none in hospitals. Among the nurse quality coordinator's quality and safety improvement duties is the assessment and monitoring of critical incidents (e.g., i.m. injection site abscesses, patient falls, or haemorrhaging following the insertion of urinary catheters) and improving the quality of nursing care. This includes the development and implementation of SOPs through collaboration with head and frontline nurses. Nurses from the department, units or sectors for quality improvement are contracted as external examiners/assessors and facilitators for AKAZ and ASKVA regarding the certification and accreditation of healthcare facilities. Thus, nurses play critical roles within these units and within the facilities undergoing certification/accreditation. A job description for nurses working as quality coordinators in the Tuzla University Clinical Center can be found in Appendix 6.7 (see p. 34).

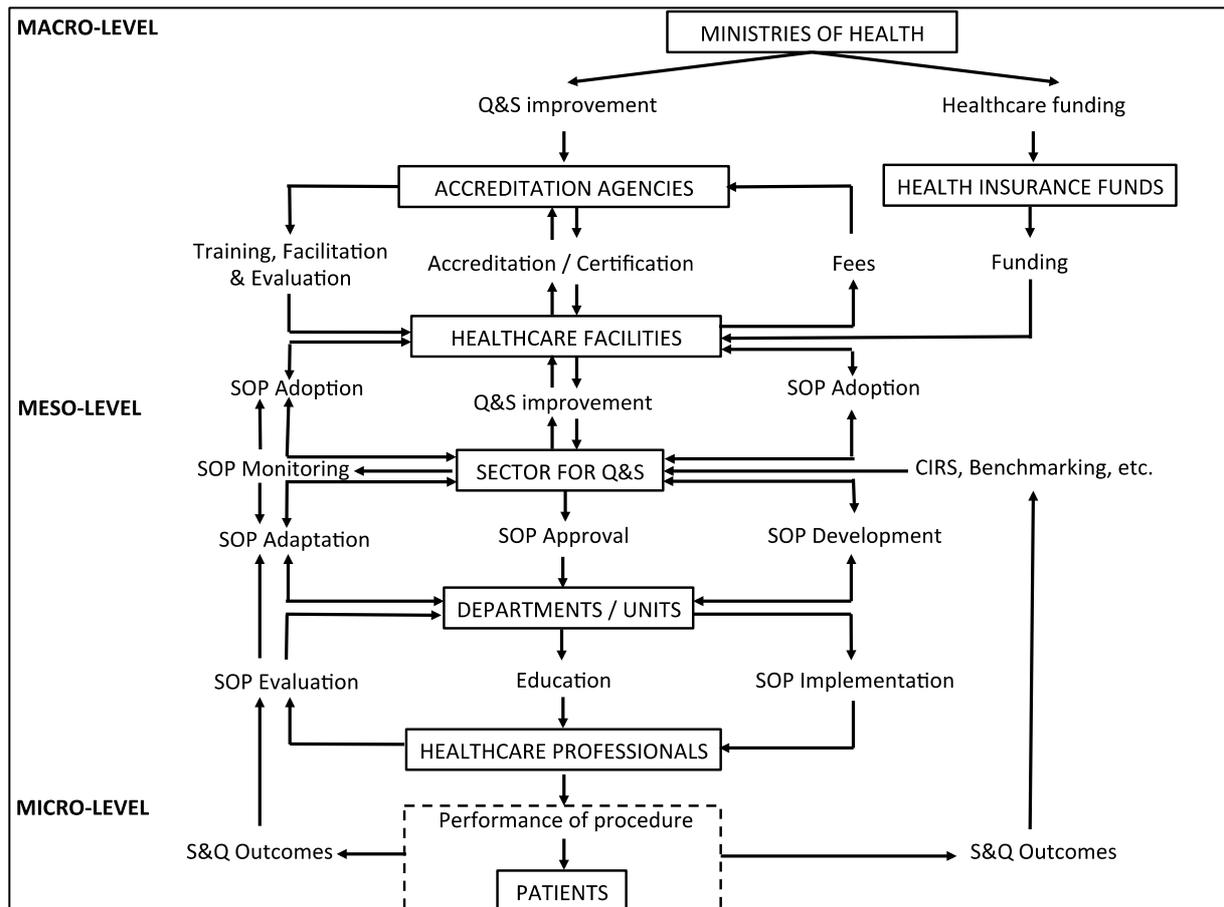
3.3 Approaches to standardizing nursing care through SOPs

It is obvious that the development and implementation of nurse-related protocols / SOPs in BiH healthcare institutions need to be considered within the framework of quality assurance and improvement of the Bosnian healthcare system. In this context, as healthcare facilities aiming for accreditation or certification need to fulfil defined standards, including the use of defined clinical pathways and SOPs, the agencies facilitating and overseeing the related processes, including the HMC, are the major drivers of progress. Apart from the certification/accreditation processes, no other incentives exist to stimulate healthcare facilities or nurses: no nursing chambers or strong nursing associations prioritize development and implementation of SOPs related to nursing care. To date, only the DZ Tuzla and Tuzla University Clinical Center have managed to develop clinical pathways and SOPs that go beyond those required for their accreditation / certification. However, having developed over 1,200 SOPs and 47 clinical pathways, and now working intensively on internal harmonization of procedures, clinical pathways and documentation, the Tuzla University Clinical Center offers an excellent model for development.

Most of the clinical pathways and procedures requested within the BiH certification / accreditation process reflect the multiprofessional context of healthcare and apply equally to all healthcare professionals. Various requested SOPs relate to nursing tasks, e.g., sterilisation, medical waste disposal and infection prevention; but few deal with direct patient care provided by nurses. In DZ Bijeljina, for instance, while nursing procedures are to some extent reflected in clinical pathways, no specific nurse-related SOPs have yet been developed. Among the first nursing care tasks recommended for standardization by the quality assurance and improvement team involved management of urinary and peripheral venous catheters and of wounds as these involve high risks of complication (e.g., healthcare-associated infections), but no standard procedures currently exist for their performance. In other cases, e.g., anaphylactic shock during home visits, SOPs would clarify

nurses' tasks and responsibilities. On the other hand, DZ Tuzla's 67 SOPs (see Appendix 6.8, p. 35-36) include a number of nurse-related procedures, e.g., for intra-muscular, intravenous and subcutaneous injections, electrocardiogram preparation, application of ophthalmologic drops, and emergency procedures.

Figure 1: Current model of development, adaptation, implementation and evaluation of nurse-related SOPs in Bosnian healthcare 'positive deviant' facilities



Based on the information provided to us, we developed a model describing the development, adaptation, implementation and evaluation of nurse-related SOPs in 'positive deviant' healthcare facilities (see Figure 1) and their relationships with quality and safety assurance and improvement at the micro-, meso- and macro-levels. Although we observed differences between the four institutions, this model provides a general explanation of how these facilities improve the safety and quality of care—including nursing care—through standardisation (i.e., development, implementation and evaluation of SOPs).

Development and adaptation of SOPs

Initially, each facility's primary motivation to identify target topics and develop SOPs was the

certification/accreditation framework, with development mainly under the responsibility of the quality assurance team. Interestingly, the first SOPs developed in DZ Tuzla, Prijedor Hospital and DZ Bijeljina focused on how SOPs should be produced. As a result, their SOPs correspond to international standards, e.g., they are written in a very concise format and usually include the following elements: title, context, aim, and a step-by-step description (i.e., checklist) for the specific procedure. The extent to which the SOPs' step-by-step descriptions reflect external evidence (e.g., evidence-based guidelines, research evidence, etc.) remains unclear; yet it can be assumed that the SOPs are currently based mainly on internal evidence (i.e., accounts of 'how we do things around here', local literature). After this initial phase, the need to develop further SOPs (e.g., for risk assessment, CIRS, benchmarking) is continuously assessed by the quality assurance team and reported by departments and units. The occurrence and reporting of critical incidents, e.g., complications arising from the insertion of urinary catheters, can stimulate SOP development. In the four facilities studied, SOPs were developed "in house" or adapted using examples and evidence provided either by AKAZ or the Ministry of Health and Social Welfare of Republika Srpska quality improvement projects. In some cases, documents have been shared between institutions (e.g., Prijedor Hospital has received SOPs from Tuzla University Clinical Center and Clinical Center of Sarajevo University); still, few inter-entity or international structural exchanges occur between healthcare facilities. Concerning nurse involvement, though, head nurses and frontline nurses participate fully in the process of developing SOPs, although this work is mainly done in working groups outside of their working time. The quality assurance team supports working groups with literature and feedback. As shown in Figure 1, the iterative processes of development and adaptation can consist of numerous rounds of review and feedback between the quality team, the involved departments / units and the healthcare facility management. The final SOP version is first approved by the quality assurance team, then adopted and signed by the facility director (Figure 1). To date, macro-level institutions (i.e., AKAZ, ASKVA, CHM) are not systematically involved in the SOP development process and usually neither request nor receive information from healthcare facilities on newly developed SOPs.

Implementation and evaluation of SOPs

Once adopted and signed, nursing-related SOPs are provided to the head nurses of the relevant departments (i.e., those defined within the SOP). As the key persons responsible for SOP implementation, these nurses have to ensure that frontline nurses are aware of and use these protocols. Along with each SOP, an implementation plan (e.g., necessary education/training) is developed. Depending on the nature of the SOP, this includes either education by the head nurses or self-study. At monthly meetings, education sessions on new SOPs are provided and pre- and/or post-tests conducted to evaluate nurses' knowledge regarding the new procedure. On each unit, SOPs are

kept in a folder (the *'blue folder'*) stored at the information desk (in DZs) or the central nursing station (in hospitals), in a location visible and accessible to all clinicians. DZ Bijeljina also makes SOPs available in electronic form and nurses have access to procedures via computers. New employees are introduced by a mentor to all SOPs, then supervised.

While the implementation of SOPs is very similar across the four institutions, the evaluation approach differs to some extent and includes evaluation at two levels. A first evaluation strategy consists of head nurses' control (e.g., medical waste) and supervision of frontline nurses. According to head nurses, if nurses neglect specific procedures (e.g., wearing gloves where necessary), the supervisor 'speaks up', warning and informing them concerning the relevant SOPs. Any nurse observed not following an SOP has to prepare a presentation on the procedure for the next regular monthly meeting.

SOP adherence is also monitored and documented. In DZ Tuzla, for instance, all head nurses are required to complete a structured "follow-up sheet" and provide information on whether nurses are aware of and follow the SOPs, noting any possible indications for revision or review. Secondly, the quality assurance and improvement team regularly conduct internal control visits (similar to walk-rounds), surveys assessing nurses' knowledge of SOPs, and annual unit-level audits to follow up and if necessary revise SOPs. Moreover, to evaluate improvements due to the implementation of SOPs, critical incident statistics (e.g., incidences of pressure ulcers, patient falls, medication errors) are monitored and benchmarked.

3.4 Enablers and barriers to standardizing (nursing) care

In all four institutions, participants reported high initial resistance to care standardization among healthcare professionals, including nurses: while it would obviously increase administrative work, the benefits were not immediately apparent to all concerned. For example, when the WHO's surgical checklist was implemented in Prijedor Hospital, the feedback from healthcare professionals in the operating theaters could be summarized as: „This is the stupidest thing I have ever seen“.

At the time of our data collection, however, the value of standardizing nursing care was generally acknowledged. Within all four institutions, the focus groups, head and frontline nurses reported that the development and implementation of SOPs had improved the quality and safety of nursing care. Moreover, they acknowledged SOPs' potential to (1) provide security for nurses regarding their duties; (2) protect nurses from litigation that might arise from errors; (3) protect the patient from unnecessary harm; (4) provide the basis for a common understanding and language among nurses; (5) improve the visibility of nursing care (e.g., to other professional groups and management); and (6) increase nurses' sense of professionalism. Since the introduction of standardized care, the organizational culture has changed to include high nurse valuations of SOPs and documentation. In

the initial phase, particularly among physicians (whose support remains crucial), the quality assurance team reported considerable difficulty obtaining staff cooperation. Now, when physicians' treat the team as a valuable resource, coming to them for help on quality and safety issues, the team members see this as a significant indicator of their success.

Regarding potential enablers for the success of the four 'positive deviants', focus group participants consistently mentioned the following aspects:

Facilitators:

- Institutions' vision and mission to prioritize quality assurance and improvement, including the resolution to achieve certification or accreditation;
- The director's ability to lead/overcome resistance (e.g., from physicians) and provide leadership continuity (i.e., stay in place);
- Financial support provided by health insurance funds or other sources to fund professional-level healthcare training and education;
- Establishment of a unit / section for safety and quality assurance and improvement;
- Education and training provided by government bodies (AKAZ or HMC) and on-going open exchange and networking with these institutions;
- Initial support from the quality assurance departments of other facilities (e.g., Tuzla University Clinical Center => DZ Tuzla);
- Nurses' motivation and enthusiasm regarding this topic and the opportunity for nurses to work on the quality assurance team;
- Involvement of head/frontline nurses in multi-professional working groups;

On the other hand, individual and focus group interviewees also reported a number of issues as barriers to the successful improvement of nursing care through standardizing care:

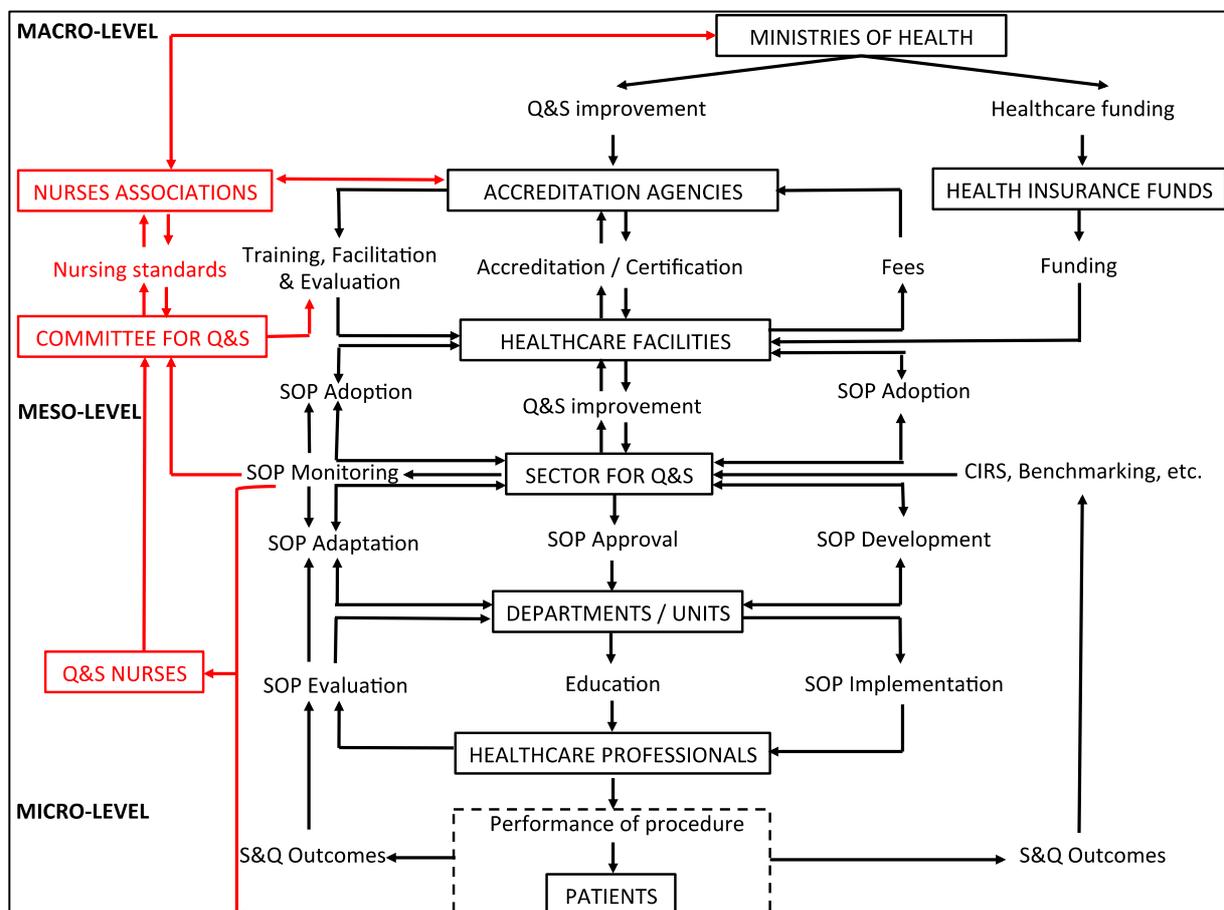
Barriers:

- Funding shortages regarding certification/accreditation processes and the establishment of quality assurance units/departments;
- Resistance from clinicians, especially physicians, to standardization of care;
- Lack of professional recognition for nurses' competencies regarding quality and safety improvement;
- Lack of trust by physicians in nurses' competencies (e.g., when measuring blood pressure or triage);
- Shortages of materials or resources to adhere to implemented SOPs;

4 Conclusions and recommendations

This ‘positive deviant’ study has gathered insights and lessons from four BiH healthcare facilities engaged for almost 10 years in safety and quality assurance and improvement. Given the cultural, political, legal and financial variability between and even within the country’s two entities, the levels of development and implementation of nursing-related SOPs within these facilities reflect the complexity of the nursing care situation in BiH. Yet, to assure and improve the safety and quality of the care they provide, in addition to developing the necessary capacities, structures, and processes, all four have managed to assemble quality and safety assurance departments. Alongside these developments, changes in their organizational cultures have positively impacted nursing care, leading to advanced roles for nurses as ‘quality coordinators’ or ‘quality nurses’. At the macro-, meso- and micro-levels of BiH’s healthcare system, the commitment of key players has propelled improvements in the safety and quality of nursing care, especially via the standardization of procedures. The following are our recommendations to further their efforts.

Figure 2: Expanded model describing a proposed approach to development, adaptation, implementation and evaluation of (nurse-related) SOPs in ‘positive deviant’ healthcare facilities in the Federation of BiH and Republika Srpska.



Macro-level

Health ministries, Health insurance funds, Accreditation agencies

Many healthcare institutions currently lack the financial resources to start or undergo the certification/accreditation process. Therefore, in an environment where the value of certification/accreditation processes vis à vis the development of 'safety cultures' is not yet fully accepted, finding successful strategies to enable and facilitate the development of nurse-related SOPs and to assure and improve the safety and quality of care can be a major challenge. Impacting safety and quality of care at a national or entity level, e.g., via standardization of nursing procedures, will require 'Spreading the message' to healthcare facilities not yet underway towards certification.

Coercive and / or non-coercive macro-level incentives will be required to stimulate facilities to start or complete the certification process and thus to improve the quality of their nursing care.

In the Federation of BiH, a recommended first step is for the health ministry and health insurance fund to establish a grant system whereby healthcare facilities that have not yet undergone certification can apply for 'start-up funding' to initiate the process. This would allow healthcare professionals, including nurses (if possible graduate nurses) to receive the needed training either directly through AKAZ in the Federation of BiH or through the HMC in Republika Srpska. To select the facilities most likely to successfully complete the certification process, the enablers for the success of the 'positive deviants' studied here could provide guidance on assessing facilities' readiness to change. In RS, all hospitals and DZs have already started preparation for certification on the framework of the entity's two quality improvement projects. To date, 20 of RS's 54 DZs and 5 of its 14 hospitals have completed or are about to complete the certification process. To accelerate matters, a grant system could be established for facilities that are in advanced phases of preparation for certification, but are unable to pay ASKVA's fees for the process.

Second, in collaboration with nurse associations, both entities' health ministries and accreditation agencies could organize a symposium for the leadership teams of all DiH hospitals and / or DZs that have not yet completed the certification process. There, the impact / benefits of the certification process, both on the safety and quality of care and on the nursing profession, could be presented by and discussed with national and international experts on safety and quality of (nursing) care. Such a symposium would stimulate facilities to increase the priority of safety and quality of care, to start or complete their certification processes and to support healthcare professionals, including nurses, within their facilities to pursue additional education / training on this topic.

Third, in collaboration with AKAZ and CHM, ProSes has developed a special training program for nurses in Federation of BiH and Republika Srpska hospitals and DZs to augment their capacities on quality and safety, with a focus on standardizing nursing care through the development and implementation of SOPs. The framework of this training includes the development and

implementation of SOPs for a selected number of nursing procedures in the trainee's healthcare facilities. Such SOPs can also be shared between facilities and should be integrated in the AKAZ and ASKVA certification / accreditation manuals as mandatory components for healthcare facilities undergoing certification. In addition to the obvious benefits of standardization, this will increase the visibility and importance of nursing professionals regarding care safety and quality assurance.

Nurses' associations and chambers

The accreditation agencies and the certification process itself are currently the BiH healthcare system's most important drivers in terms both of quality and safety improvement and of the importance of standardized nursing care, i.e., healthcare policymakers and healthcare facilities administrators increasingly recognize the need to develop and implement nurse-related SOPs (Figure 2). A crucial next step for nursing care in BiH will be the functionalization and operation of nurses' associations and chambers to develop and implement nursing standards in accordance with the International Council of Nurses (e.g., its scope of practice, professional standards, code of ethics). The topic of safety and quality of care offers newly-established chambers and nurses' associations a unique opportunity to play a key role. Since Florence Nightingale (1820-1910) we have known that 'quality and safety assurance and improvement' are core elements of nursing care. For instance, while the aim of medical care in acute-care settings is mainly to diagnose and treat diseases, it is nursing care that ensures patients' safe passage through the care process, i.e., nurses protect patients from negative outcomes such as pressure ulcers, thrombosis, healthcare-associated infections, falls, etc. **Focusing on safety and quality offers a unique opportunity to promote the establishment of nurses' associations and chambers (e.g., via press releases and broad communication via public media) and to position these bodies and their members as major contributors to the quality and safety of the BiH healthcare system.** However, multi-professional collaboration is crucial: in view of training / education or other quality and safety improvement activities, nurses' organizations need to consolidate their strong nursing partnerships with AKAZ, ASKVA and HMC (see Figure 2). Membership dues or fees for providing various services (CPD, etc.) will provide financial sustainability, allowing nurses' associations and chambers to operate on this topic while supporting nurses to receive quality and safety improvement training, particularly via standardization of nursing care.

Moreover, nursing capacities and expertise on quality and safety assurance and improvement should be bundled on a national or entity level. However, care should be taken not to isolate nurses from the networks they formed while receiving training through their respective accreditation agencies. Instead, any nurses' association / chamber should offer a platform for collaborative networks, particularly among 'quality coordinators' or 'quality nurses'. Under the lead of local nurse

experts, financed by their ministries of health, accreditation agencies or health insurance funds (e.g., for annual meetings, conferences), such networks will allow their members to present and exchange knowledge, share experiences and develop innovative solutions to common problems. These nurses can then lead working groups to elevate nursing standards and develop activities to implement and test SOPs at the entity or national level. The suggested approach / model for development, adaptation, implementation and evaluation of nursing SOPs (see Figure 2) provides a contextually sensitive approach to such activities.

Healthcare facilities

Representing the largest proportion of healthcare professionals in every country the world over, nursing is a 'waking giant'. Only over the past decade has its value regarding patient safety and quality of care been internationally recognized (Institute of Medicine, 2010; Prime Minister's Commission on the Future of Nursing, 2010). Evidence is increasing that nurses are crucial to the development of safe, high-quality care (Aiken et al., 2014; Blegen, Goode, Spetz, Vaughn, & Park, 2011; Needleman et al., 2011). At the same time, to address the changing needs of individual clinicians, institutional leaders, healthcare systems, and ultimately cultures, processes as complex as the development and implementation of guidelines, clinical pathways and SOPs demand systematic approaches (Michie, van Stralen, & West, 2011; Seers et al., 2012; Titler, 2008). Engaging nurses in interdisciplinary teams and working groups will ensure consideration of profession-specific practices, along with barriers and facilitating factors for behaviour change. As is clear from the cases of the four positive deviants described above, **within units for safety and quality assurance and improvement, nurses (both bedside and in advanced roles) can play key roles in the development and implementation of clinical pathways and SOPs in BiH healthcare facilities.** Within individual healthcare facilities, leaders must focus on creating environments in which engagement of nurses is seen not as a risk or threat, but as an opportunity to improve the safety and quality of care for the benefit not only of every patient, but of the entire organization.

Micro-level

Nurses

The development of legal frameworks for the implementation of nurses' associations and chambers will provide a strong incentive for nurses across BiH to increase their engagement in their facilities' safety and quality assurance and improvement. As a preliminary step, *the Nursing and Midwifery Act of the Federation of BiH (Article 35)* defines nurses' responsibilities regarding the implementation of procedures for protection of health and the environment, personal care, and safety of the patient and the community. In doing so at the entity level, it acknowledges the

legitimacy of nurses as full contributors not only to the local development, implementation and evaluation of nursing-related SOPs, but to the continuous elevation of healthcare standards across BiH .

5 Literature

Agencija za kvalitet i akreditacij u zdravstvu u Federaciji Bosne I Hercegovine. (2010a). *AKREDITACIJSKI STANDARDI ZA BOLNICE*. Sarajevo: AKAZ.

Agencija za kvalitet i akreditacij u zdravstvu u Federaciji Bosne I Hercegovine. (2010b). *AKREDITACIJSKI STANDARDI ZA DOM ZDRAVLJA*. Sarajevo: AKAZ.

Agencija za sertifikaciju, akreditaciju i unapređenje kvaliteta zdravstvene zaštite Republike Srpske , Agencija za sertifikaciju, akreditaciju i unapređenje kvaliteta zdravstvene zaštite R. S. (2012). *Vodič kroz sertifikaciju i akreditaciju za bolnice*. Retrieved January 14, 2015, from https://www.askva.org/fileadmin/Sertifikacija/standardi/Standardi_za_sertifikaciju_bolnica_fin_al.zip

Agencija za sertifikaciju, akreditaciju i unapređenje kvaliteta zdravstvene zaštite Republike Srpske, Agencija za sertifikaciju, akreditaciju i unapređenje kvaliteta zdravstvene zaštite R. S. (2013). *Standardi za sertifikaciju domova zdravlja*. Banjaluka: ASKVA. Retrieved from https://www.askva.org/fileadmin/Sertifikacija/standardi/Standardi_za_sertifikaciju_domova_zdravlja.pdf

Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., ... for the, R. N. C. consortium. (2014). Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. *Lancet*, (0). doi:10.1016/S0140-6736(13)62631-8

Blegen, M. A., Goode, C. J., Spetz, J., Vaughn, T., & Park, S. H. (2011). Nurse staffing effects on patient outcomes: safety-net and non-safety-net hospitals. *Medical Care*, 49(4), 406–414. doi:10.1097/MLR.0b013e318202e129

Burgers, J., Grol, R., & Eccles, M. (2005). Clinical guidelines as a tool for implementing change in patient care. In R. Grol, M. Wensing, M. Eccles, & D. Davis (Eds.), *Improving Patient Care: The Implementation of Change in Health Care*. Edinburg, Scotland: Elsevier Butterworth Heinemann. Retrieved from <http://books.google.ch/books?id=K88YYAAACAAJ>

Grimshaw, J. M., Thomas, R. E., & MacLennan, G. (2004). Effectiveness and efficiency of guideline dissemination and implementation strategies. *Health Technology Assessment*, 8, iii – iv.

Hakkennes, S., & Dodd, K. (2008). Guideline implementation in allied health professions: a systematic review of the literature. *Qual Saf Health Care*, 17(4), 296–300. doi:10.1136/qshc.2007.023804

Institute of Medicine. (1990). *Clinical Practice Guidelines: Directions for a New Program*. (M. J. Field & K. N. Lohr, Eds.). Washington, DC: The National Academies Press.

Institute of Medicine. (1992). *Guidelines for clinical practice: From development to use*. (M. J. Field & K. N. Lohr, Eds.). Washington D.C.: National Academy Press. Retrieved from http://www.nap.edu/openbook.php?record_id=1863

Institute of Medicine. (2010). *The Future of Nursing: Leading Change, Advancing Health*. Washington D.C.: The National Academies Press.

Institute of Medicine. (2011). *Clinical Practice Guidelines We Can Trust*. Washington, DC: The National Academies Press.

- Marsh, D. R., Schroeder, D. G., Dearden, K. A., Sternin, J., & Sternin, M. (2004). The power of positive deviance. *BMJ*, 329(7475), 1177–1179. doi:10.1136/bmj.329.7475.1177
- Michie, S., van Stralen, M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1), 42. Retrieved from <http://www.implementationscience.com/content/6/1/42>
- Needleman, J., Buerhaus, P., Pankratz, V. S., Leibson, C. L., Stevens, S. R., & Harris, M. (2011). Nurse staffing and inpatient hospital mortality. *New England Journal of Medicine*, 364(11), 1037–1045. doi:10.1056/NEJMsa1001025
- Official Gazette of the Federation of BiH. (2013). Law on Nursing and Midwifery., 43, 18–24. Retrieved from http://www.fmoh.gov.ba/images/federalno_ministarstvo_zdravstva/zakoni_i_strategije/zakoni/zakoni_PDF/Zakon_o_sestrinstvu_i_primaljstvu_43_13.pdf
- Official Gazette of the Republike Srpske. (2009). Law on Healthcare, 106, 1–16. Retrieved from http://www.investsrpska.net/files/Zakon_o_zdravstvenoj_zastiti.PDF
- Prime Minister’s Commission on the Future of Nursing. (2010). Front Line Care: the future of nursing and midwifery in England. Report of the Prime Minister’s Commission on the Future of Nursing and Midwifery in England 2010. http://webarchive.nationalarchives.gov.uk/20100331110400/http://cnm.independent.gov.uk/wp-content/uploads/2010/03/front_line_care.pdf
- Seers, K., Cox, K., Crichton, N., Edwards, R., Eldh, A., Estabrooks, C., ... Wallin, L. (2012). FIRE (facilitating implementation of research evidence): a study protocol. *Implementation Science*, 7(1), 25. Retrieved from <http://www.implementationscience.com/content/7/1/25>
- Thomas, L., Cullum, N., McColl, E., Rousseau, N., Soutter, J., & Steen, N. (2000). Guidelines in professions allied to medicine. *Cochrane Database Syst Rev*, (2), CD000349. doi:10.1002/14651858.cd000349
- Titler, M. G. (2008). *The Evidence for Evidence-Based Practice Implementation Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. (R. G. Hughes, Ed.). Rockville MD.
- Yin, R. K. (2009). *Case Study Research: Design and Methods*. SAGE Publications. Retrieved from <http://books.google.it/books?id=FzawlAdilHkC>

6 Appendix

6.1 Programme of the site visits

Programme 1st visit – Best case reporting in Republika Srpska

Arrival: Tuesday, 13 May

Departure: Friday, 16 May

Date	Place	Participants
Wednesday, 14 May	Banja Luka Prijedor	- Meeting/Interview IPH - Severin Rakic 60' - General Hospital Prijedor: <ul style="list-style-type: none"> • Interview with hospital management and quality assurance department (60') • Field observations and document review (60')
Thursday, 15 May	Prijedor	- General Hospital Prijedor: <ul style="list-style-type: none"> • FG with head nurses (60') • FG with frontline nurses (60') • Field observations and document review (60')
Friday, 16 May	Sarajevo	- Team discussion of findings (2 hours)

Programme 2nd visit – Best case reporting BiH

Arrival: Tuesday, 23 June

Departure: Tuesday, 1 July

Date	Place	Participants
Wednesday, 25 June	Tuzla	- Tuzla University Clinical Center: <ul style="list-style-type: none"> • Interview with hospital management and quality improvement sector (60') • Field observations and document review (60')
Thursday, 26 June	Tuzla	- Tuzla University Clinical Center: <ul style="list-style-type: none"> • FG with head nurses (60') • FG with 'quality nurses' (60') • Field observations and document review (60')
Friday, 27 June	Tuzla	- Primary Health Care Center Tuzla: <ul style="list-style-type: none"> • Interview with quality assurance department (60') • FG with head nurses (60') • Field observations and document review (60')
Monday, 30 June	Bijeljina	- Primary Health Care Center Bijeljina: <ul style="list-style-type: none"> • Focus group with quality sector manager and (60') • Interview with director (30') • Field observations and document review (60') • FG with head nurses (60') • FG with frontline nurses (60')
Tuesday, 1 July	Sarajevo	- Team discussion of findings (2 hours)

6.2 Questioning route for the focus group interviews

Consultancy - "Nursing standards, guidelines, protocols in BiH – Best case report" – Questioning Route

Meeting with _____ at _____ Number of participants _____

Date _____

Questions	Observations / Comments
Opening	
<ul style="list-style-type: none"> • Introduction to the interview / focus group (see own sheet) • Short introduction round 	
Introductory questions	
Is your institution already accredited/certified? If yes, when did you get your accreditation/certification?	
Who made the decision to go through the certification/accreditation process? How where you able to do it? How much did it approximately cost you? Did you receive financial support from insurance fund for the certification/accreditation?	
Was there a quality and safety management team responsible for the necessary preparation for the certification/accreditation process? What role did frontline nurses play (e.g. development of SOPs) within this team?	
Transition	
How would you rate the quality of nursing care in your facility? Where would you say that nursing care has improved due to certification/accreditation process?	
Are there any patient outcomes (e.g. patient falls, pressure ulcers, hospital-acquired infections) that are measured and monitored in your hospital?	
If yes, do you provide feedback to units / nurses on the performance on these patient outcomes (e.g. patient falls, pressure ulcers, hospital-acquired infections)?	
Do you have a professional nursing practice model (vision, mission of nursing care) that highlights the importance of providing nursing care in a standardized and evidence-based way?	
Key questions	
Could you provide us a full list with topics guidelines and protocols relevant to nursing care have been developed and implemented in this health care facility in the certification/accreditation process?	
How have they been developed (e.g. adaptation?), respectively who was responsible for the development?	
How have they been implemented, respectively who was responsible for the implementation?	
How do you know if nurses adhere to these guidelines and protocols? Do you have a monitoring or evaluation system in place?	
How do you stimulate the further development and implementation of SOPs beyond the requirements of the	

accreditation/certification?	
Are nurses given the opportunity or empowered to work in (interdisciplinary) working groups within your health care institutions on the development of SOPs? Are Mds supporting nurses in this process?	
What resources are nurses provided to work within health care institutions or in system wide in mono- or interdisciplinary working groups on the development of SOPs?	
What facilitators (e.g. administrative commitment and support, knowledge of the research process, research consultants, affiliation with a university and financial resources) for the development and implementation of guidelines and protocols do you experience in your facility?	
What barriers (e.g. lack of time, staff, access to research information, and research knowledge, lack of support from administration, and lack of authority to change practice) for the development and implementation of guidelines and protocols do you experience in your facility?	
What incentives do you use to stimulate the development and implementation of new SOPs?	
Ending questions	
On which topics have you currently planned to standardize nursing care in your facility?	
Would you be interested in supporting other facilities for standardizing nursing care or work in or support entity- or nation-wide work groups?	
Is there anything that we missed to ask?	
Is there anything that you came wanting to say that you didn't get a chance to say?	

Document review

Full list of SOPs related to nursing care implemented in the facilities (=> Comparison among the four institutions).

Observations

Where are SOPs stored at the unit? How accessible are they for nurses?

6.3 Informed consent sheets for the Federation of BiH and Republika Srpska

Informed consent

I, the undersigned, authorized representative, _____ do hereby confirm that (kindly tick the correct claims):

1.	I read and understood information related to project, as written in the abstract "Nursing standards, guidelines and protocols - best case reporting"	<input type="checkbox"/>
2.	I had an opportunity to ask questions related to the project and participation of our health institution.	<input type="checkbox"/>
3.	I voluntarily agree that our health institution participates in the mission "Best case reporting", which is a part of the project "Strengthening nursing in BiH (ProSes)".	<input type="checkbox"/>
4.	I understand that our health institution can withdraw from this mission at any time, without citing reasons for withdrawal, and will not be subject to penalties, or obligated to answer questions related to withdrawal reasoning.	<input type="checkbox"/>
5.	Procedures related to information confidentiality were clearly explained to me (use of names, pseudonyms, data protection etc.)	<input type="checkbox"/>
6.	If applicable, special conditions of consent to interviews involving the use of audio, video or other manners of data collection were explained to me and secured.	<input type="checkbox"/>
7.	The possibility of using data for research, publishing, sharing and archiving was explained to me.	<input type="checkbox"/>
8.	I understand that other scholars will have access to this data only if they are willing to keep the confidentiality of the data and if they agree with the terms stated in this form.	<input type="checkbox"/>
9.	Choose only one of the given options:	<input type="checkbox"/>
		<input type="checkbox"/>
10.	I, along with the researcher/scholar, agree to sign this sheet of informed consent.	<input type="checkbox"/>

Participant:

Name of the participant

Signature

Date

Researcher/scholar:

Name of the researcher/scholar

Signature

Date

6.4 Data collection sheets for hospitals and DZs

Organizational profile of the 'best cases' - Hospitals

1. Name of the hospital	
2. Address	
3. University/Teaching hospital	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Total population served by the hospital (approximately)	
5. Total number of acute care beds (end of 2013)	
6. Average bed occupancy rate (end of 2013)	
7. Average length of stay in 2013	
8. Total budget planned for 2014	
9. Number of departments	
10. Number of units/wards within departments	
- List of all units/wards within departments	1 2 3 etc.
11. Total number of employees	Number: _____ Full time equivalent ¹ : _____
- Physicians	Number: _____ Full time equivalent: _____
- Nurses with bachelor degree	Number: _____ Full time equivalent: _____
- Nurses with higher school degree	Number: _____ Full time equivalent: _____
- Nurses with secondary school degree	Number: _____ Full time equivalent: _____
- Other health collaborators with direct patient contact (e.g. psychologists, social workers, defectologists)	Number: _____ Full time equivalent: _____
12. Quality assurance team	Number: _____ Full time equivalent: _____
- Physicians	Number: _____ Full time equivalent: _____
- Nurses	Number: _____ Full time equivalent: _____
- Psychologists	Number: _____ Full time equivalent: _____
- Economists	Number: _____ Full time equivalent: _____
- Administrative personnel (personnel)	Number: _____ Full time equivalent: _____
- Others: _____	Number: _____ Full time equivalent: _____

¹ Full time equivalent = the number of total hours worked divided by the maximum number of compensable hours in a full-time schedule as defined by law (e.g. 100% position = 1 FTE; 50% position = 0.5 FTE; an employee working 18 hours a week by contract divided by a maximum number of work hours a week if working full-time 36 hours corresponds to 0.5 FTE).

Organizational profile of the 'best cases' – Dom zdravljas

1. Name of the DZ	
2. Address	
3. Total population served by the DZ (approximately)	
4. Services provided in 2013	
- Total number of patient visits at the DZ (across all departments/all types of services)	
- Total number of home visits by nurses	
4. Total budget planned for 2014	
5. Number of departments	
6. Number of units/wards within departments	
- List of all units/wards	1 2 3 etc.
7. Total number of employees	Number: _____ Full time equivalent ² : _____
- Physicians	Number: _____ Full time equivalent: _____
- Nurses with bachelor degree	Number: _____ Full time equivalent: _____
- Nurses with higher school degree	Number: _____ Full time equivalent: _____
- Nurses with secondary school degree	Number: _____ Full time equivalent: _____
- Other health collaborators with <u>direct</u> patient contact (e.g. psychologists, social workers, defectologists)	Number: _____ Full time equivalent: _____
8. Quality assurance team	Number: _____ Full time equivalent: _____
- Physicians	Number: _____ Full time equivalent: _____
- Nurses	Number: _____ Full time equivalent: _____
- Psychologists	Number: _____ Full time equivalent: _____
- Economists	Number: _____ Full time equivalent: _____
- Administrative personnel	Number: _____ Full time equivalent: _____
- Others: _____	Number: _____ Full time equivalent: _____

² Full time equivalent = the number of total hours worked divided by the maximum number of compensable hours in a full-time schedule as defined by law (e.g. 100% position = 1 FTE; 50% position = 0.5 FTE; an employee working 18 hours a week by contract divided by a maximum number of work hours a week if working full-time 36 hours corresponds to 0.5 FTE).

6.5 List of commissions and engagement of nurses (+) in the Tuzla University Clinical Centre

The list of commissions

No.	Commission name	Protocol no.
1	Clinical Transfusion Board	
2	Commission for Information Technology and Management	
3	Commission for Quality and Security Improvement of Healthcare Services	
4	Commission for Activities in Securing Healthy Work Environment	
5	Commission for Infection Control	
6	Commission for Healthcare Documentation	
7	Commission for Medication	
8	Commission for Medical Devices	
9	Ethical Commission for Implementation of Transplantation Procedures	
10	Committee for Exposure to Medical Radiation	
11	Malignant Disease Board	
12	Clinical Waste Management Board	
13	Clinical Practice and Revision Board	
14	Commission for Patients' Complains	
15	Anti-corruption Team	

6.6 Job description of a nurse working as quality coordinator in the Tuzla University Clinical Center

Sector for organizational affairs and quality improvement

In line with the latest trends dictating continuous improvement in the organization of health institutions, as well as a need for continuous improvement and higher quality service, in mid-2003, the Sector for organizational affairs and quality improvement has been established as a part of Public Health Institution University Clinical Center Tuzla. A primary objective of the Sector is to provide conditions for accreditation and standardization of the Institution following Accreditation Standards for Hospitals of the FBiH Agency for Quality and Accreditation.

Principal activities of the Sector are: standardization of the process in the Institution; clinical quality control; coordination of the relation with the patients and staff; improvement and development of the organization in the Institution; medical and non-medical systems development suggestions; risk management; organizational design of the Institution; quality measurement and analysis.

The activities of the Sector

The activities performed in the sector are especially related to:

1. Organizational structure, procedures and resources research
2. Research data analysis and suggestions for rationalization and modernization of the organization
3. Participation in creation of the policy and procedures, protocols, clinical pathways and other standardization documents
4. Quality indicators set up and monitoring
5. Coordination of the relationship with the patients
6. Conducting complaint process for patients and nurses
7. Patient satisfaction measurement
8. Participation in defining themes for clinical revision and coordination of implementation procedures of clinical revision
9. Medical and other documentation standardization
10. Control of the implementation of the agreed standards (policy and procedures implementation, completion of medical forms and other documentation etc.)
11. Participation in the quality management plans development and risk management of the organizational units and monitoring of their implementation.
12. Creation of reports and analysis for quality management

Standardization and Quality Control Officer has the following tasks:

- Work on implementation of the accreditation standards for hospitals and give instructions for their application; draft policies and procedures and give instructions for their creation.
- Participate in adjustment of clinical guidelines and give instructions for their application.
- Participate in clinical pathways creation and control of their implementation in practice.
- Establish areas and themes for clinical quality control in cooperation with authorized staff of the clinics and polyclinics
- Participate in clinical quality control (systematic measurement of the clinical practice, referral to standards, control mechanisms set up).
- Participate in defining criteria for quality control and the methodology of quality control.
- Monitoring the work of the groups tasked for quality control and performance procedures at clinics and polyclinics.
- Participate in defining performance indicators (structure, process and outcome).
- Quality control through revision of medical documentation.
- Complaint analysis in cases of severe consequences for a patient.
- Participate in data analysis obtained in quality control process.
- Participate in quality management plan creation
- Participate in quality improvement plan creation.
- Reporting, analyzing and elaborating.
- Provide suggestions for quality improvement in the area of standardization and clinical quality assurance and performance indicators.
- Participate in self-assessment and implement internal assessment of application of accreditation standards for hospitals.

Standardization and Quality Control Officer

Senada Mujacic VMS

6.7 List of SOPs developed and implemented in PHCC Tuzla

<p>Primary Health Centre Tuzla „Dr Mustafa Sehic“ Quality Improvement Department</p> <p>LIST OF NURSE PROCEDURES</p>
1. Sharp objects disposal procedure
2. Hands washing and disinfection procedure
3. Home visits procedure
4. Infection control procedure
5. Team inventory check procedure – expiry date and disposal of expired material
6. Phone calls procedure – answering and handling
7. Sterile instruments proper use and maintenance procedure
8. Patients triage and appointment scheduling procedure
9. Newborn admittance and umbilical cord care procedure
10. Procedure for transport of the equipment and heavy objects, lifting of the equipment and techniques to be used
11. ECG examination procedure
12. Peripheral pulse assessment procedure
13. Patient identification procedure
14. Instructions for acceptance of sample/specimen not taken in the biochemistry laboratory
15. Blood and urine sample centrifuge
16. Blood sampling instructions
17. Patient preparation procedure for blood sampling for biochemical analysis
18. Newborn blood sampling via heel procedure
19. Goldmann visual field exam
20. Working with spirometer
21. EEG diagnostic test
22. Vaginal treatment procedure
23. Cervix treatment procedure
24. Procedure regulating nursing role for EMNG testing at the Department of Clinical Neurophysiology
25. Procedure regulating nursing role for evoked response analysis at the Department of Clinical Neurophysiology
26. Phototherapy
27. Cryotherapy in physical therapy
28. Tympanometry - tests the condition of the middle ear and mobility of the eardrum (tympanic membrane)
29. Vestibular function test procedure
30. Vision testing using ortho-rather
31. Lung function testing with SPIROVIT SP-1
32. Hearing test – audiometry

33. Decontamination and sterilization procedure of the instruments used in bronchoscopy
34. Molluscum contagiosum treatment
35. Working with vacomed – vacuum treatment device
36. Echocardiography appointment
37. Working with Bimed 99S
38. Flexion and extension of humerus at shoulder
39. Procedure for receiving samples and delivering results of microbiological analysis at medical diagnostic center of the Department of Microbiology
40. Nurse's approach to patient with mechanical eye injury
41. Procedure for medication administration to an eye
42. Checking blood pressure by auscultation (using stethoscope)
43. Procedure for inhalation therapy administration
44. Procedure for axillary temperature measurement
45. Procedure defining the content of the therapy record sheet at the Sports Medicine Polyclinic
46. Procedure for preparation, handling and disposal of parenteral solutions
47. Standardized procedure for intravenous medication administration (i.v.)
48. Drawing up medication from vial and ampulla
49. Procedure for patient identification before the ionizing radiation
50. Procedure for general and periodical medical examination of the employees and monitoring
51. Flexion and extension of forearm at elbow
52. Procedure defining minimal content of the nursing documentation
53. Cryotherapy – ice and cold compression therapy
54. Condyloma treatment (condilomata acuminata) at the Dermatology & Venerology Clinic
55. Nasal smear collection for microbiological analysis
56. Throat specimen collection for microbiological analysis
57. Manufacture of mobile prosthetic aids – total prosthesis
58. Procedure for the first time appointment of diabetic patient at the Polyclinic for the Internal Medicine.
59. Handling and application errors of the proscribed therapy
60. Using heart rate monitor - polar S410 for Harvard step test
61. Procedure for the treatment of light burns
62. Taking temperature in children - rectal temperature check
63. Use of magnet in therapy
64. Use of medica laser V2.0. in therapy
65. Flexion and extension of tight at knee
66. Phototherapy administration
67. Procedure for insertion of the urinary catheter and ongoing care in patient's home

Photographs

Tuzla University Clinical Center



Primary Health Care Center Tuzla



Primary Health Care Center Bijeljina



General Hospital Prijedor



The Project is supported by the Government of Switzerland and the Embassy of Switzerland in Bosnia and Herzegovina



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Ambasada Švicarske u Bosni i Hercegovini

Zmaja od Bosne 11, Zgrada RBBH, objekat B
71000 Sarajevo, Bosna i Hercegovina
Tel.: +387 33 275 850,
Fax: +387 33 570 120
E-mail: sar.vertretung@eda.admin.ch
Web: www.eda.admin.ch/sarajevo



Fondacija fami

Milana Preloga 12B
71000 Sarajevo
Telefon: +387 33 802 526
Faks: +387 33 802 581

Kralja Aleksandra 52
74000 Doboj
Telefon: +387 53 231 900
Faks: +387 53 242 217

fami@fondacijafami.org
www.fondacijafami.org