



**Republic of Srpska, Bosnia and Herzegovina
Public Health Institute**

Interim Technical Report: Final Data Analysis from the In-depth Inter- views

under research “Introduction of safety and quality standards among
private healthcare providers in the Republic of Srpska (BiH)”
conducted under Technical Services Agreement with WHO (reference 2015/538686-1)

Report submitted to:

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Acronyms and abbreviations

AP – pharmacies;

ASKVA – Agency for Certification, Accreditation and Healthcare Quality Improvement in Republic of Srpska

C – certified

CH-chain of pharmacies;

NC – non-certified

IND - independent pharmacy

MoHSW – Ministry of Health and Social Welfare

PHPs – private healthcare providers

RS – Republic of Srpska

RS HIF – Health Insurance Fund of Republic of Srpska

RS PHI – Public Health Institute of Republic of Srpska

SA – specialist practices

ST – dental practices

NOTE ON REFERENCING OF INTERVIEW TRANSCRIPTS:

When referencing citations to specific interview, the abbreviations are used throughout the report. The abbreviations consist of:

- (1) specification of provider type (AP – pharmacies; SA – specialist practices; ST – dental practices),
- (2) specification of number of interview,
- (3) specification of adoption status (C – certified; NC – non-certified) and
- (4) organizational status of pharmacy (CH-chain of pharmacies; IND-independent pharmacy).

For example, the abbreviation AP11/C/CH stands for „interview number 11 with certified pharmacy from the chain of pharmacies“; the abbreviation SA2/NC stands for “interview number 2 with non-certified specialist practice”.

1. Introduction

The research “Introduction of safety and quality standards among private healthcare providers in the Republic of Srpska (BiH)” is conducted over the period July 2015 – December 2017, with support by the Alliance for Health Policy and Systems Research. It is financed through the Technical Services Agreement, concluded between the World Health Organization and the Public Health Institute of Republic of Srpska (WHO reference number: 2015/538686-1).

The intervention studied under the research relates to the implementation of regulation (mandatory safety and quality standards) for private healthcare providers in the Republic of Srpska (RS). The diffusion of innovation theory has been used as a conceptual framework on which the research is based. A mixed method approach has been used in designing the proposed research. Primary data, needed for hypotheses testing, are to be collected through (1) face-to-face semi-structured in-depth interviews (third quarter of 2015 and first quarter of 2017) and (2) self-administered postal survey (third quarter of 2016).

The interim technical report Final Data Analysis from the In-depth Interviews is prepared jointly by all members of the core research team (Dr Siniša Stević, Prof Budimka Novaković, Prof Severin Rakić and Jelena Niškanović, BSc Psychology), with participation of the private healthcare providers’ representatives. The report serves as a starting point for the preparation of the policy brief for local stakeholders.

The report begins with positioning of the in-depth interviewing as part of the overall research design and implementation (section 2). After providing contextual information, necessary for understanding the position and roles of the private healthcare providers (PHPs) in the Republic of Srpska’s healthcare system (section 3), a summary of key findings is provided for each type of PHPs, together with a comparison of the main differences among them (section 4). The summary is based on full case reports for pharmacies, dental practices and specialist practices. Within and cross case findings are then discussed in relation to the hypotheses (section 5) and the conclusion is drawn, taking into account the research question (section 6). Finally, the recommendations for local stakeholders and policy makers are provided (section 7).

2. Research objective and methods

2.1 Research objectives

The intervention studied under the research is the implementation of regulation (mandatory safety and quality standards) for private healthcare providers in the Republic of Srpska (RS). The regulation has been in place since 2012, but not all private healthcare providers have adopted it yet. Adoption rates are differed among different types of private healthcare providers.

By studying the intervention, we seek to answer the following research question: “Why does the rate of adoption of mandatory safety and quality standards vary among private pharmacies, dental practices and specialist practices in the Republic of Srpska?” Towards that objective, the five hypotheses were developed:

- Hypothesis 1: Perceived gains in professional status positively influence adoption of safety and quality standards.
- Hypothesis 2: Fear of negative financial consequences increases adoption of safety and quality standards.
- Hypothesis 3: Availability of information on safety and quality standards increases their adoption.
- Hypothesis 4: Opinions conveyed to private healthcare providers by peers influence adoption of safety and quality standards.
- Hypothesis 5: Perceived attitudes of chambers and professional associations influence adoption of safety and quality standards.

While we recognised the existence of many possible barriers and facilitators, the hypothesis were based around five influences, which we considered to be the most important as (1) they could be related to all PHPs’ sub-groups we study and (2) they could act as both facilitators and barriers.

2.2 Study design

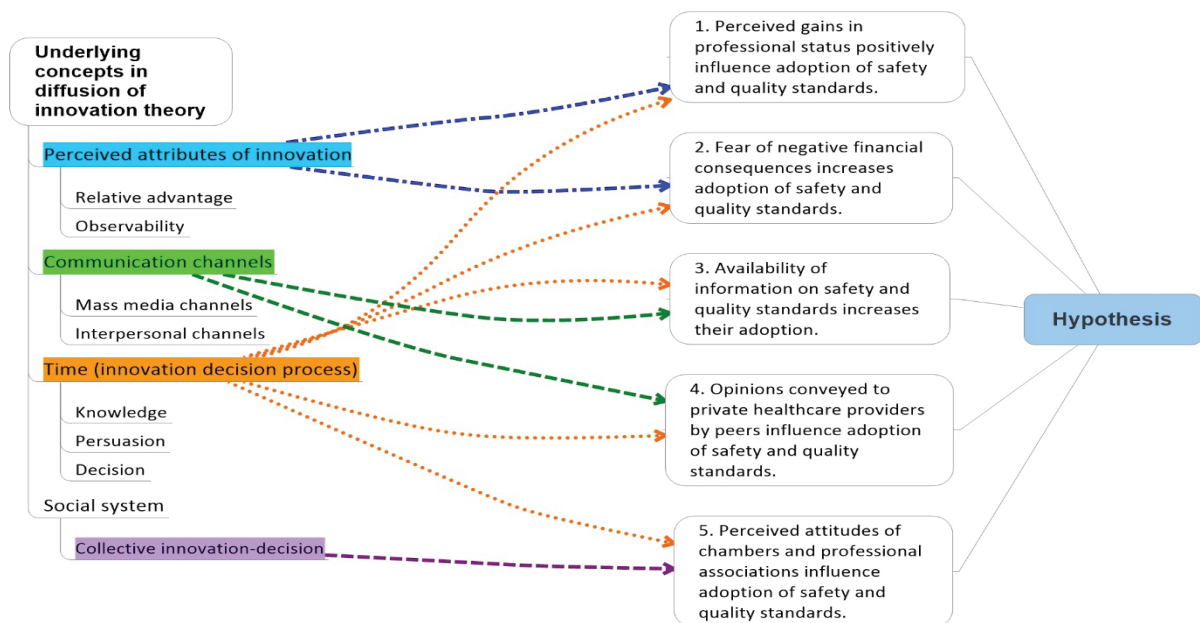
The mixed method approach is used for this research. It is implemented with a case study methodology, which allows integration of both quantitative and qualitative data. The explanatory type of case study is used in research [1]. The case study covers multiple cases (case of private pharmacies, case of private dental practices and case of private specialist practices), in order to draw a single set of cross-case conclusions (why the rate of adoption varies among the cases) that could apply to other countries.

Multiple case study (holistic) design was necessary due to the very nature of the research question. In order to explain why there are differences in the adoption rates among the three cases, each of them has first to be studied separately. Three cases of predominant PHPs were selected for analysis. The three groups of the PHPs (pharmacies, dental practices and specialist practices), which are our units of analysis, together account for a share of 96% of all PHPs in the RS. Conclusions derived on basis of these three cases can be generalised to all PHPs in the RS.

2.3 Theoretical framework

The diffusion of innovation theory [2,3] has been used as a conceptual framework on which the research is based. Adoption of the same innovation (introduction of mandatory safety and quality standards) is studied in three different social sub-systems (dental practices, pharmacies and specialist practices). The rate of adoption is the main dependent variable in all five hypotheses. It can be measured and monitored through the number/percentage of certified PHPs by type.

Graph 1: Properties of innovation used in the research design



The diffusion of innovation theory defines diffusion as “the process by which an innovation is communicated through certain channels over time among the members of a social system” [2]. The four main elements of the diffusion process are innovation (in terms of this research: introduction of mandatory safety and quality standards), communication channels (in terms of this research: the means by which information on mandatory safety and quality standards got to the PHPs), time (in terms of this research: decision to adopt certification process takes place over the time dimension) and the social system (in terms of this research: health system of the Republic of Srpska, part of which are interrelated private healthcare providers). These four elements are the main underlying concepts that were used in the research design and in the interpretation of the research findings.

2.4 Data collection

The PHPs are seen as the crucial source of information on their own attitudes and experiences. As per the research protocol, two different methods (interviews with private healthcare providers and survey of private healthcare providers) are to be used for data collection [4]. We will mix qualitative (interviews) and quantitative (survey) data collection methods, while using them in

sequential order. The research began with the collection of qualitative data. The first round of in-depth interviews, completed over the period November–December 2015, aimed to (1) provide an in-depth insight into both adopters and non-adopters perspectives and (2) inform detailed design of the questionnaire for survey (which was to take place in the second half of 2016).

In the selection of the PHPs to be included in the first round of data collection we applied stratified purposeful sampling:

1. Level 1: type of private health care providers (12 dental practices, 16 pharmacies and 16 specialist practices – stratification was based on Ministry of Health and Social Welfare's *Registry of health providers*),
2. Level 2: status of innovation adoption (altogether: 18 adopters and 26 non-adopters – stratification was based on the Agency for Certification, Accreditation and Healthcare Quality Improvement's records),
3. Level 3: PHPs density (altogether: 22 providers from regions with higher density of PHPs and 22 providers from smaller density of PHPs - stratification was based on the Ministry of Health and Social Welfare's *Registry of Healthcare Providers*) and
4. There was a need to include the additional level for the pharmacies (8 chains of pharmacies and 8 independent pharmacy - stratification was based on the Agency for Certification, Accreditation and Healthcare Quality Improvement's records).

The interviews were done by the members of the core research team (one for each group of PHPs). Majority of interviewees agreed for the interview to be recorded with a digital recorder. Four pharmacies and seven specialist practices did not agree to record interviews and detailed notes were taken. No problems were encountered with use of the informed consent forms. All signed forms were filled in at the Public Health Institute's premises.

When the planned number of interviews had been completed, a need for additional interviews was discussed within the research team. Sixteen interviews proved to be sufficient to reach the saturation point for pharmacies and specialist practices. In the case of non-adopters among dental practices, after 10 interviews, many recurrent themes emerged. We interviewed all the dental practices (two of them) that had been certified by the beginning of December 2015.

2.5 Data analysis

In the first step, the analysis of data collected through interviews essentially involved mapping of the primary data for each case to the following properties of innovation used in the research design (Graph 1):

1. Perceived attributes of innovation:
 - Relative advantages: Degree to which the adoption of mandatory safety and quality standards is perceived as a better option than retaining status quo.
 - Relative disadvantages: Degree to which the adoption of mandatory safety and

quality standards is perceived as a worse option than retaining the status quo.

- Observability: Degree to which the results of adoption of mandatory safety and quality standards are visible to different stakeholders.

2. Communication:

- Source of information: Anything that might inform a PHP owner about safety and quality standards and provide information about certification process.
- Communication channels: The means by which information on mandatory safety and quality standards got to the PHPs

3. Innovation decision process

- Knowledge: The first stage in the innovation decision process, which occurs when PHP's owner is exposed to existence of safety and quality standards and gain some understanding on how the certification process functions.
- Persuasion: The second stage in the innovation decision process, which occurs when a PHP's owner forms a favourable or unfavourable attitude towards the standards and certification process.
- Decision (motivation to introduce or not to introduce standards): The third stage in the innovation decision process, which occurs when a PHP's owner engages in activities that lead a choice to adopt or reject the certification process.

4. Social system

- Influence of chambers: Respondent's perception of attitudes and influence of chambers on process of decision making on certification.
- Influence of professional associations: Respondent's perception of attitudes and influence of professional associations on the process of making decisions on certification.
- Peers' influence: Certification process related interactions of a PHP's owner with similar individuals who belong to the same professional groups, live or work near each other and share similar interest.

The initial review of interview transcripts was a starting point for the codebook development. The codebook structure has included basic components: the codes/themes and full definition with examples. Before coding an entire data set, team members systematically evaluated the utility of the codes and the ability to apply the codes in a consistent manner. The steps in this process begin with the development of an initial code list derived from concepts of diffusion of innovation framework. Definitions in the codebook were proposed and reviewed by the team, with an emphasis on achieving clarity and agreement for code application. Five additional themes emerged during the mapping process (responsibilities, suggestions for improvement of the certification process, obstacles for implementation of certification process, time needed for implementation and mandatory nature of certification).

Coding of the primary data was done by two members of the research team, who independently

applied codes to the data. After coding the primary data and grouping the codes, the analyses proceeded with fitting the data into predefined categories. For every third interview coding discrepancies were discussed and resolved by the analysis team, the codebook revised accordingly, and a recoding performed when necessary to ensure consistent application of codes. All other transcripts were analysed independently by two coders. After a content analysis of each transcript, inter-coder agreement was assessed by calculating Kappa scores for double-coded transcripts [5]. *NVivo 10* software was used for coding each transcript and for calculation of Kappa coefficient, by running a “Coding Comparison” query. The overall Kappa score, for all nodes, was found to be $Kappa=0.80$, which presents the substantial level of agreement [6,7]. The data collected in first rounds of in-depth interviews were analysed at the level of three cases (within-case analysis), before proceeding with cross-case comparisons and analysis.

2.6 Compliance with the research protocol

Two minor deviations from the research protocol were noted:

1. There was a need to include the additional stratification level for the pharmacies (8 chains of pharmacies and 8 independent pharmacies, which was not foreseen before commencement of implementation).
2. Given the late autumn’s unpredictable weather, the interviews commenced with providers situated on the locations that were the most difficult to reach by the road, scheduling those closer to the main roads to the end of interviewing period. It was planned that the interviews would begin with adopters and later move to non-adopters.

2.7 Reflexivity

In order to avoid any influence of the research team members’ positions, values and attitudes on the data collection process, the following measures were taken:

- The member of the research team that comes from the ASKVA did not participate in data collection. All interviews were performed by other members of the core research team.
- None of the interviewers from the RS PHI was in a position to interview a PHP to which he/she previously provided support in the preparation for the certification by the ASKVA.
- Overall objectivity of the data collection was additionally ensured by the inclusion of a co-investigator from another research institution (Medical Faculty of University of Novi Sad) in the core research team.

3. Contextual information

The Republic of Srpska, is one of the constituent parts of Bosnia and Herzegovina (the others being the Federation of Bosnia and Herzegovina and the Brčko District of Bosnia and Herzegovina), which has its own legislative and executive functions and responsibilities, including those related to healthcare. This section provides an overview of contextual information, necessary for understanding position and roles of the private healthcare providers in the Republic of Srpska's healthcare system.

3.1 Legal framework

Government of the RS health system is centralized, with planning, regulation and management functions held by the Ministry of Health and Social Welfare (MoHSW). The MoHSW regulated conditions for establishment of PHPs through the *Rulebook on conditions for commencement of health facilities' work* [8]. The list of conditions has been a subject to a number of changes over the last 10 years. The previous *Rulebook on conditions for establishment of health facilities* [9] was enacted in 2005. Through subsequent amendments to the Rulebook: (1) size of required space was reduced in 2006, (2) qualifications of nurses required for establishment of specialist practices (paediatrics and gynaecology) were loosened in 2006, (3) list of mandatory equipment for dental practices was extended in 2008 and (4) autoclave was included on the list of mandatory equipment in all types of health facilities in 2008. The autoclave was removed from the list of mandatory equipment in all types of health facilities, by the enactment of the current *Rulebook on conditions for commencement of health facilities' work* [8].

The *RS Law on Healthcare* [10], enacted in 2009, provided the legal framework for strengthening the structures and the processes in the establishment and improvement of safety and quality systems in healthcare. The Law equalised public and private health care providers in the health system, classifying all of them in a broad category of "health facilities". It was a significant change for a number of PHPs, as they needed to undergo a re-registration process to obtain valid registration at the MoHSW and valid court registration. In addition to accreditation (based on broader and more demanding quality standards and voluntary for providers), the Law introduced mandatory certification of both public and private healthcare providers. Through the certification process, the Agency for Certification, Accreditation and Health Care Quality Improvement (ASKVA) certifies that providers comply with safety standards in service provision. After the initial assessment, the ASKVA performs re-assessments of the providers every four years. The ASKVA makes annual plans with schedules for certification of both public and private health care providers. Based on the ASKVA's recommendation, the MoHSW verifies the completion of the certification process by issuing its certificate to individual healthcare providers. The purpose and importance of the certification process was influenced by amendments of the Law, enacted in 2015, which (1) opened up the possibility of partial certification of healthcare providers (by organisational units), (2) extended re-assessment cycle from four to seven years, (3) removed provision that certification of provider is a precondition for provision of health services and (4) adjusted the ASKVA's sources of financing.

It took about three years to move from "having the Law in place" to actual implementation of the certification process. The MoHSW issued two necessary bylaws in the year 2012. The *Rulebook on certification procedure and registry of certified providers* [11] provided the legal frame-

work for the assessment procedure and described roles of the ASKVA and healthcare providers in the certification process. Through the *Rulebook on certification standards* [12], the MoHSW endorsed mandatory safety standards for different types of healthcare providers [13,14,15]. The certification standards have a parallel focus on patients' safety (e.g. enforcing implementation of measures for control of nosocomial infections), staff safety (e.g. enforcing measures for occupational health and safety) and environment protection (e.g. enforcing adequate disposal of medical waste). Amendments of the *Rulebook on certification standards* [12] provided a more precise scope of dental practices' standards in 2013, while the new version of standards for pharmacies was enacted by the 2014 amendment. Not all of the requirements of the certification standards were new to PHPs. The standards included some of the legal requirements, which had previously existed in regulations, such as keeping medical records [16], medical waste management [17,18], safety at work [19] and control of nosocomial infections [20]. The standards do not cover financial aspects of PHPs functioning, such as the requirement for fiscal cash registries, which was imposed by the *Law on Fiscal Cash Registries* [21].

There are three chambers of healthcare professionals in the RS, established by the *Law on Health Chambers* [22] Pharmaceutical Chamber, Chamber of Dentists and Chamber of Medical Doctors. Chamber membership is mandatory for all healthcare professionals.

3.2 Roles of private healthcare providers

There are three types of non-state providers in the Republic of Srpska: (1) private healthcare providers, (2) complementary and alternative medicine providers and (3) non-governmental organizations. The private healthcare providers significantly contribute to service delivery in the RS, particularly at the primary healthcare level. Majority of dental services for adult population are provided by private dental practices. With only a few public pharmacies, the network of private pharmacies assures access to different types of medicines and medical supplies. The number of private family medicine practices is still low and they serve less than 5% of the RS population. The number of private specialist practices and specialist centres has grown in the RS since the RS HIF started contracting with selected private sector specialists (e.g. paediatrics, gynaecologists, ENT, ophthalmologists, dermatologists), in order to ensure access to such services in rural areas of the RS.

Table 1: Private healthcare providers in the Republic of Srpska

Types of private healthcare providers	Number of providers registered in the MoHSW's databases	
	July 2014	January 2016
Specialist Practice	79	98
Dental Practice	133	171
Pharmacy	340	446

3.3 Other important stakeholders

The RS Health Insurance Fund (RS HIF) administers the mandatory health insurance scheme, in accordance with the RS *Law on Health Insurance* [23]. The Fund contracts services of both public and private healthcare providers. The following types of the PHPs have contracts with the RS Health Insurance Fund:

- private pharmacies (all private pharmacies have been allowed to enter into the contract with the RS HIF at the time of interviews conduction)
- selected private specialist practices (contracting with specialist practices commenced in 2010; the 5-years contracts with some of the selected practices expired in 2015 and needed to be renewed)
- private family medicine practices,
- selected private specialist centres and
- selected private hospitals.

The RS HIF's annually enacted rulebook on principles, conditions and criteria for contracting did not recognise certification status as one of the contracting criteria in the period 2014-2016 [24,25,26]. The RS HIF does not contract services of private dental practices (provision of selected dental services is contracted with public primary healthcare centres instead).

The Public Health Institute (RS PHI) supported the certification process mainly because of its own commercial interests (having experience with the preparation of public healthcare providers for certification, the RS PHI was able to offer its expertise and support to private providers on commercial basis). It provided services to individual PHPs, but also to the Association of Private Medical Doctors of the RS and Chamber of Dentists of RS.

The Inspectorate of the Republic of Srpska, established in accordance with the *Law on Inspections* [27], includes different types of inspections. The PHPs are subject of control performed by the Market Inspection, Health Inspection, Work Inspection, Fire Safety Inspection, and Urbanistic and Ecological Inspection.

4. Key findings

A summary of key findings for each type of PHPs is provided in this section, together with a comparison of main differences among them. The summaries are based on the full case reports for pharmacies, dental practices and specialist practices.

4.1 Summary of case study 1: Pharmacies

The objective of this part of the study was to contribute in finding answers as to why the rate of adoption of mandatory safety and quality standards (certification process) varied among private pharmacies in the RS. During the first phase of the research, 16 face-to-face semi-structured in-depth interviews with owner's/managers of certified and non-certified private pharmacies were conducted. The pharmacies operated either independently or as units of the different size chains of pharmacies.

This phase of the study showed that owners and managers of certified pharmacies, especially those coming from pharmacy chains feel that they have gained important benefits (mainly in managerial sense) from the innovation (*"in all our pharmacies, the work is performed according the same procedures which makes it easier to control the work and employee's performance"*, AP11/C/CH). They feel that standards as such are well designed, relevant and useful; however they feel that the benefits of the standards' introduction can mainly be observed by managers themselves and the pharmacy staff, less by the patients. Benefits from the certification were less important and visible to the non-certified, independent pharmacies and their answers focused on disadvantages of the innovation such as cost, (*"financial issues, it really costs a lot"*, AP16/C/IND), additional staff time needed for compliance to standards and administrative burden (*"I can see only burden, filling out the forms"*, AP1/NC/IND; *"it is just taking time writing procedures for the things that we have always performed"*, AP4/C/IND).

The owners or managers of the certified chain and non-chain operating pharmacies were quite active in obtaining information about certification. The Agency for Certification, Accreditation and Healthcare Quality Improvement and the Pharmaceutical Society were their main information sources (*"we did not hesitate to ask the ASKVA about anything that was not clear regarding the standards and their application so this was really an active involvement of me and other pharmacists, according to our responsibilities"*, AP15/C/CH; *"we had contact with the ASKVA, we got from them all we needed to know about certification"*, AP11/C/CH). Official web sites and organized professional events that covered the issue of certification were the main communication channels for them. On the other hand, the owners of non-certified independent pharmacies in most cases obtained information about innovation through personal communication with colleagues and inspection staff. They were more passive recipients of information.

Significant knowledge about process of quality and safety improvement in general and specifically certification and positive attitude on certification which owners/managers of certified pharmacies have demonstrated proved to be very motivating factors for accepting the innovation (*"thanks to previous experience, both personal and experience from my staff, we did not hesitate, we instantly knew that we were going to apply for certification"*, AP11/C/CH). They were rather swift in making their decisions. For certified pharmacies, other moti-

vating factors to accept the innovation were legal obligation to introduce standards, risk of losing contract with the RS HIF and to some extent risk of losing patients: *“When we applied for a Health Insurance Fund contract, I am not sure, but I think that it was for contract for 2013/2014, among other documents, they asked for confirmation that we have applied for certification. Considering all the risks, the contract with the HIF was the dominant”* (AP14/C/IND).

The managers/owners of non-certified independent pharmacies expressed certain disinformation about the innovation and concerns about the purpose of the certification process, while emphasising the costs of certification and lack of adequate information on the process as the main factors to delay their acceptance of the innovation (*“we have these standards already implemented, money is the main reason for not finishing certification, also the application process has taken longer due to relocation to new premises, but it was mainly the financial costs”*, AP9/NC/IND).

Interviewees from the certified pharmacies seem to be more independent in the decision making process, however they have emphasised a very supportive role of the Pharmaceutical Society in both decision making and implementation process: *“The Pharmaceutical Society contributed to the preparations for the certification process in all pharmacies through the development of general procedures”* (AP15/C/CH).

Interviewees from the non-certified pharmacies seem to be more inclined to consider opinions of the peers. Lack of knowledge on the process, motivation of pharmacy staff to comply with the standards, costs and time required for the implementation were listed as obstacles to the introduction of certification standards in general, but to a smaller extent by certified pharmacies.

The Interviewees proposed a number of improvements to the certification process that might contribute to more successful implementation, such as provision of additional information on the process, revision of standards, raising awareness on importance of certification, selective contracting with the Health Insurance Fund or imposing more strict regulations on certification (*“the ASKVA should organize the education for the professionals working in the pharmacies especially in the smaller pharmacies that are not part of the chains as they do not have dedicated teams for the development of procedures”*, AP11/C/CH).

An interesting case finding was the opinion of the majority of representatives from certified pharmacies (especially from pharmacy chains) that after the experience with certification and considering benefits the process has produced, they would introduce quality and safety standards with some internal or external assessment even without any legal enforcement (*“yes, we would introduce that, but it would not be called certification, it would be our own internal quality control”*, AP3/C/CH). Small independent pharmacies (mainly non-certified) responded that they would not have commenced such a process, if it was not required by regulations. This was one of the differences that were observed between the independent pharmacies and pharmacy chains (Table 2).

Table 2: Comparison of the findings between chain and independent pharmacies

Properties of innovation*	Subcategories	Pharmacies	
		Chain	Independent
Perceived attributes of innovation	Advantages	Major	Minor
	Disadvantages	Minor	Major
	Observability	Visible effects	No visible effects
Communication	Sources of information	ASKVA, professional association	Peers, professional association
	Communication channels	Internet, seminars	Interpersonal communication
Innovation decision process	Knowledge	Substantial	Insufficient
	Persuasion	Positive	Negative
	Motivation	Positive	Negative
Influences from social system	Peers	Minor	Major
	Chamber	Minor	Minor
	Professional associations	Major	Major

* Based on the diffusion of innovation theory [2]

The sample included pharmacies from higher and smaller density regions. However, no significant differences were identified between the interviewees coming from these two subgroups.

4.2 Summary of case study 2: Specialist Practices

The objective of this part of the study was to contribute in finding answer why the rate of adoption of mandatory safety and quality standards (certification process) varied among private specialist practices in the RS. During the first phase of the research, 16 face-to-face semi-structured in-depth interviews with owners of certified and non-certified private specialist practices were conducted.

This phase of the study showed that owners of certified practices gained certain benefits from certification, such as efficient management, better management of risks in infection control and improved safety of employees and patients (*“my healthcare institution is better organized and works more efficiently”*, SA12/C).

Non-certified practices feel that major benefits from the certification cannot be expected and have focused their attention mostly on disadvantages of the process (costs, time required to complete the process of certification, lack of information on the process and unsatisfactory level of education provided during of preparation for certification). Regarding observability, it seems that effects of innovation were noticed only internally by owners of the practices and the staff, not by other stakeholders in the process (such as patients or authorities).

The ASKVA was mentioned as the most important source of information by both categories of interviewees (*“I went to lectures by the ASKVA, and I had a good look at the ASKVA’s web site”*, SC9/NC), followed by the Association of Private Doctors in RS. The owners of certified practices were more active in obtaining the information about the innovation; they mainly used the Inter-

net to get the information. Another important source of information were colleagues from the public healthcare organizations that had completed the certification process but also from other private practices that had completed the certification process. Mass-media were not mentioned by the interviewees as a source of information about certification.

The owners of certified practices had somewhat better knowledge and more precise information on the certification process and standards, prior to the commencement of the process, when compared to their non-certified peers. However both groups were reserved towards the process prior to its commencement and had doubts about their ability to comply with the standards without external assistance. Legal obligation to introduce the standards was the main motivator for both groups of interviewees, but the risk of losing contract with the RS HIF was also mentioned as a reason to start with the introduction of innovation: *“contract with the Fund, the financial aspect”* (SA13/C).

The owners of certified practices were relatively quick in making decision about entering the certification process. The cost of the preparation for certification and external assessment were the main factors for the owners of non-certified practice to decide not to adopt the innovation.

Influences from the social system (peers, chamber, professional associations) did not have a significant effect on the owners of certified practices throughout their decision making process: *“I did not have to wait for anybody’s experience because I had my own experience in the introduction of certification”* (SA16/C).

It seems that the owners of non-certified practices were more influenced by peers not to start with the certification process. It also seems that negative attitudes of the Association of Private Medical Doctors of the RS towards the certification process had some influence on the non-certified practices. Interviewees from the certified practices stated that most significant obstacles in the implementation of standards were duration of the certification process and demanding process of education (needed to comply with requirements of standards).

Proposals for innovation improvement, provided by certified providers were related to the decrease of costs (both preparation for certification and assessment costs), adaptation of standards for different types and sizes of private practices, better dissemination of information about innovation, selection of educators with a higher level of professional knowledge and equalizing of health authorities approach for private and public healthcare providers *“the certification ought to be set more professionally, better adjusted to the type and size of healthcare institutions”* (SA6/C). The non-certified providers’ proposals for improvement of the certification process were quite similar to those of certified practices. They added a few more specific ideas on licensing of the educators, who provide training as part of preparation for the certification, and customization of the training courses according to the specific needs of the private providers. When asked if they would apply for certification if it were voluntary, majority of both certified and non-certified practice owners responded that in such a case they would not have considered introduction of the quality and safety standards in their daily work.

The sample included specialist practices from higher and smaller density regions. However, no significant differences were identified between interviewees coming from these two subgroups.

4.3 Summary of case study 3: Dental Practices

The objective of this part of the study was to contribute in finding answer why the rate of adoption of mandatory safety and quality standards (certification process) varied among dental practices in the RS. During the first phase of the research, 12 face-to-face semi-structured in-depth

interviews with owners of dental practices were conducted, two of which had completed the certification process.

Both certified and non-certified providers perceived that there were certain advantages of certification or that benefits can be expected (particularly in relation to infection control and risk avoidance for both patients and health professionals): *“I’ve been always repeating to my nurses that they need to strictly adhere to sterilization principles...this is primarily important for patients”* (ST12/C). The costs of the certification process were identified as the major disadvantage by both certified and non-certified providers (*“current economic context is unfavourable and any investment, which does not bring income back, is risky for dental practices”*, ST3/NC). Dentists from non-certified practices identified the time required for additional paperwork, imposed by the standards, as a major disadvantage of the innovation. The owners of certified practices strongly advocated a view that certification of their practices had not been made visible by the MoHSW.

Colleagues from other private dental practices were mentioned as the first and the main source of information on certification. Consequently, interpersonal communication with dentists in other private practices was the most important communication channel. Three institutions were mentioned by both certified and non-certified dental practices as relevant sources of information on certification: (1) the Ministry of Health and Social Welfare of Republika Srpska, (2) Public Health Institute of Republika Srpska and (3) the ASKVA (*“the first and only information that came from ASKVA was the request to fill in and submit an application for certification by the defined date... the deadline for certification was extended later”*, ST5/NC). Some owners of the certified dental practices actively searched for information about certification and used the Internet in the process. They primarily used the ASKVA’s web site, where they could find relevant bylaws, certification standards and additional information in the Q&A section. The Chamber of Dentists’ web site was also used. Mass media were not an important source of information on certification for dental practices.

It can be concluded that there is not sufficient body of knowledge about certification standards and process among dental practices. Interviewees from certified practices, as well as the dentist currently in process of preparation for certification, mainly demonstrated correct knowledge on certification process and standards, while about one half of interviewees from non-certified practices demonstrated misinformation and lack of knowledge on certification process and standards. Prior to entering the process, the adopters of certification standards expressed scepticism towards their ability to prepare for the certification, even though no major changes in the practice functioning were foreseen. It seems that legal reasons, personal reasons and professional status were the main motivators for innovators among dental practices to adopt the certification process: *“The law forced us to accept certification”* (ST12/C).

The adopters felt that the process of external assessment was an opportunity to reassess and improve their own practice and they were quicker in making their decisions on certification than the non-certified providers. Non-adopters provided other argumentation for not adopting certification standards, such as perceived lack of benefits, complexity, cost and inappropriateness of the entire process. Dentists who adopted certification had not chosen to elicit or to value opinions of peers. This group of dentists highly valued their own opinion and with pride described current status of their practices.

The Chamber of Dentists of RS, although perceived in the beginning as a platform for organising active resistance of dental profession towards the certification (*“colleagues are still waiting for*

the official signal from the Chamber to enter the certification process”, ST5/NC), did not come up with its official position on certification and lately has supported certification through organisation of training on infection control in dentistry: “the Chamber did not use the opportunity for partnership with the ASKVA” (ST11/NC). None of the professional associations was officially interested in certification nor provided a public statement on acceptance/rejection of the certification process. Most important obstacles to implementation of certification standards mentioned by both adopters and non-adopters were lack of examples of internal procedures, problems with medical waste disposal and lack of clear guidance on sterilization procedure.

The most important proposals on how to increase adoption of the certification process by dentists were following: organization of training required by certification standards, promotion of certified dental practices, reduction of costs associated with certification, reduction of standards' requirements, adaptation of standards for small practices and assuring better availability of information on certification. If the certification program was voluntary, majority of non-certified dentists would not even consider joining it. Certified dentists would probably consider joining a voluntary certification process.

The sample included dental practices from higher and smaller density regions. However, no significant differences were identified between interviewees coming from these two subgroups.

Table 3: Cross-case comparison of the findings

Properties of innovation*	Subcategories	Pharmacies		Specialists practices		Dental practices	
		Certified	Non-certified	Certified	Non-certified	Certified	Non-certified
Perceived attributes of innovation	Advantages	Major	Minor	Minor	None	Minor	None
	Disadvantages	Minor	Major	Major	Major	Minor	Major
	Observability	Visible effects	No visible effects	Less visible effects	No visible effects	No visible effects	No visible effects
Communication	Sources of information	ASKVA, professional association	Peers	ASKVA, peers, professional association	ASKVA, peers, professional association	ASKVA, Chamber	ASKVA, Chamber, peers
	Communication channels	Internet, seminars	Interpersonal communication	Internet, seminars, interpersonal communication	Internet, seminars, interpersonal communication	Internet, seminars, interpersonal communication	Interpersonal communication
Innovation decision process	Knowledge	Substantial	Insufficient	Substantial	Moderate	Substantial	Insufficient
	Persuasion	Positive	Negative	Reserved	Reserved	Reserved	Negative
	Motivation	Positive	Negative	Negative	Negative	Negative	Negative
Influences from social system	Peers	Minor	Major	Minor	Major	Minor	Major
	Chamber	Minor	Minor	None	None	Minor	Minor
	Professional associations	Major	Minor	Minor	Major	Minor	Minor

* Based on the diffusion of innovation theory [2]

4.4 Cross case comparison of findings

Perceived attributes of innovation: Major advantages of the proposed innovation were only noticed by representatives of chain operating certified pharmacies (improved organizational management), while other certified providers stated that the advantages of the innovation were not so important. The disadvantages of the process were insignificant with certified pharmacies and dentists, while owners of certified specialist practices mainly stated that the process has significant disadvantages. Most of the non-certified providers emphasised cost, administrative burden and time required for meeting the standard requirements as major disadvantages. Significant observability of the innovation was only noticed by certified pharmacies, mostly in relation to staff attitude and professional behaviour, and to a smaller degree by certified specialist practices, while certified dentists have stated that observability of the certification was missing. Non-certified providers mainly stated that observability was not at all a feature of the certification process.

Communication: The main source of information about certification for all providers was the ASKVA, regardless of their certification status, except for owners of non-certified pharmacies, for whom the main source of information were their colleagues. It is interesting that interpersonal communication was much more used and often was the sole channel of communication with non-certified providers. Certified providers used the Internet more as a communication channel and they were often attending professional meetings in order to obtain information about innovation.

Innovation decision process: The knowledge about innovation prior to its adoption was substantial among all certified providers, which was not the case among the non-certified PHPs. A similar conclusion can be made in relation to persuasion of providers towards innovation. Only pharmacy representatives had a positive attitude about innovation prior to its adoption. Only the pharmacists employed in pharmacy chains were up to a certain level motivated by possible benefits to be gained from the introduction of innovation (increased professional credibility and improved managerial capacity), while for all other PHPs, negative reinforcements (legal obligation and financial risks) were more important factors in deciding to adopt the innovation.

Influences from the social system: Peers exerted important influence on all non-certified PHPs, and minor on no influence on certified providers' adoption of certification. Generally, medical chambers had no, or had minor, influence on decision making related to the adoption of certification standards and the process (with all PHPs, regardless of their certification status). Professional associations were more influential than chambers in relation to the adoption of certification standards and process. In the case of pharmacies, Pharmaceutical society had significant influence on adoption of certification among certified pharmacies. The Association of Private Medical Doctors of the RS had influenced non-certified private practice owners to refuse the adoption of innovation.

5. Discussion

This section of the report aims to explain the differences between private healthcare providers in relation to the research hypotheses and identify issues that emerged during this phase of the study that have implications for the next phases of the research.

5.1 Confirmation of hypotheses

Hypothesis 1 was about the influence of possible gains in the professional status of providers from the adoption of quality and safety standards. Based on the findings presented in the case reports it was evident that a few owners/managers of certified pharmacies in chains have considered possible gains in professional status, such as credibility of institution or more effective management as an important factor in making the decision to adopt the quality and safety standards. However, for majority of interviewees from both certified and non-certified pharmacies, this was not a primary motivation. Situation is similar with dentists, though it is difficult to make generalisations, given the small number of certified dental practices. It seems that gains in professional status were not important at all to the owners of the specialist practices in decision making to adopt the certification process. The results of this phase of research do not allow for the hypothesis 1 to be confirmed. This might be related to the very nature of private for-profit healthcare service provision. Improvement of someone's professional status among colleagues does not necessarily lead to improvement of reputation among the patients (i.e. does not generate additional income). With no clear link between improved professional status and improved PHPs' business results, this attribute of innovation is not seen as advantageous by majority of PHPs. Positive effects of gains in professional status might be more related to personal characteristics of the owners of some PHPs, who were among the early adopters of the certification standards and process.

Hypothesis 2 was about fear of negative financial consequences and its influence on the adoption of mandatory quality and safety standards. The study findings suggest that this was a rather important factor in the decision making process for two out of three groups of private health care providers. At this point it might be important to mention that (1) all pharmacies have a contract with the RS HIF and are continuously renewing those contracts, (2) majority of specialist practices have contracts with the RS HIF, which are renewed every five years, and presently are in the process of renewal and (3) privately owned dental practice do not have contracts with the RS HIF for provision of dental services. Having this in mind it gets much clearer why the owners of both certified and non-certified pharmacies repeatedly mentioned the risk of losing contract with the RS HIF in their responses as an important factor in the decision making process to adopt the innovation responses. This was also the case for owners of specialist practices although not in such extent (as 9 out of 16 interviewed providers have a contract with the RS HIF). The dental practices did not mention this risk at all, which was expected, as they are not contracted by the RS HIF for provision of dental services.

Hypothesis 3 was about the availability of appropriate information about innovation and its influence on the decision making process. Based on the findings, it can be assumed that the availability of information influenced the rate of adoption of innovation. Generally, the owners and managers of the pharmacies were active in the search for the information and got sufficient and correct information about innovation from trustworthy sources (the ASKVA and the Pharmaceutical Society of RS). The owners of the specialist practices and dentist practices demonstrated a significant level of misinformation about innovation, partially related to their more passive approach in obtaining the information about innovation. One can also claim that the ASKVA was rather passive in provision of information towards private health care providers in general and

that it was mainly responding on the demand for information by different providers or their associations, rather than having a systematic and organized information campaign with an aim to provide correct and timely information to its potential clients.

Hypothesis 4 was about opinions of peers and their influence on the adoption of innovation. From the study findings it can be concluded that for early adopters the opinions of peers were irrelevant. The owners/managers of certified pharmacies, specialist practices and dental practices stated that the opinions of their peers were not an important factor in the process of decision making, probably due to the fact that they saw other providers as competition. However, opinions of peers were important for decisions on certification non-adoption made by the owners of non-certified pharmacies, dental practices and specialist practices. However, it can be concluded that they were more likely looking for collegial support to justify the already made decision to postpone the adoption of the innovation.

Hypothesis 5 was about perceived attitudes of chambers and professional associations and its influence on the adoption of safety and quality standards. Based on the findings from pharmacies and specialist practices cases, it can be concluded that the Chamber of Medical Doctor of RS and the Pharmaceutical Chamber of RS did not play a significant role in the decision making process regarding participation to the certification process. The situation is fairly different for owners of the dental practices. It seems that the Chamber of Dentists of RS was perceived as a platform for organising active resistance of dental profession towards the certification, which had negatively influenced the process of innovation adoption. The results of this phase of research do not allow for the hypothesis 5 to be confirmed in relation to perceived attitudes of chambers. Majority of members of the Chamber of Medical Doctor of the RS are employees of the public healthcare facilities. The medical profession encompasses numerous specializations, whose interests are more difficult to harmonize into a unified chamber's position than in the case of other chambers. Not all the owners of private pharmacies are pharmacists by profession. In the case of pharmacies, the decision on the adoption of certification standards could be made by other professions also. This diminishes the importance of the Pharmaceutical Chamber in the decision making on certification.

The influence of professional associations on the decision making process was also considered. The results of this phase of research allow for the hypothesis 5 to be confirmed in relation to perceived attitudes of professional associations. The Pharmaceutical Society had a significant influence on the owners/managers of the pharmacies' adoption of the certification. The Society had a positive attitude towards certification, its members were actively involved in the process and have offered continuous and significant support to the professionals to fulfil the legal obligation. The Society might have influenced the rate of adoption of innovation. On the other hand, some owners of specialist practices and none of the dental practices' owners stated clearly that their professional associations had significantly influenced their decision making process.

5.2. Implications for the next phases of the research

Certain issues have surfaced during this phase of the research that might have some influence on the next stages of the research. Most importantly, it seems that the criteria for the selection of adopters and non-adopters among the PHP owners/managers were not sufficiently precise. Based on the responses from the interviews with the owners of some non-certified providers it seems that they adopted the innovation, even though they were not officially certified, mainly due to technical reasons (lack of capacity of the ASKVA to respond on demands for assessment of high number of providers in a short period of time; or lack of submitted application from managers/owners of pharmacy chains for a specific pharmacy). A similar theme appeared with some

owners of dental practices that were working on the adoption of standards - they were waiting for the ASKVA to send them a precise schedule for the pre-assessment visit. This has implications on the design of the next phases of this research. More specifically:

1. *Implications for the questionnaire design and analysis strategy:* Additional questions should be added in the introductory part of the questionnaire (e.g. "Do you prepare your practice/pharmacy for certification?"), allowing for a group of non-adopters to be divided into two subgroups: (i) PHPs that reject the certification standards and the process (not being certified and not started the preparation for certification) and (ii) PHPs that decided to adopt the certification standards and the process, but haven't completed certification yet (not being certified but are engaged in the preparation activities).
2. *Implication for interview guide design:* The interview guide for non-adopters (which is to be used again in the 3rd phase of the research) should be revised, in order to allow for the possibility of posing some of the questions differently (in the case when a PHP has made a decision to adopt certification and is engaged in the preparation activities).
3. *Implication for selection and recruitment of interviewees:* Inclusion of additional stratification level for non-certified PHPs should be considered (whether the practice/pharmacy has started with process of standards adoption or not).

6. Conclusions

The aim of this phase of the study was to do the ground work and prepare the field for the following phases of the study that will explore the research question in greater depth. Still, certain conclusion can be reached and we feel that those conclusions can contribute to finding the answer to the question: “Why does the rate of adoption of mandatory safety and quality standards vary among different types of private healthcare providers in the Republic of Srpska?” Towards that answer, we tested five research hypotheses. Based on the findings of this phase of the research, we believe that:

1. Perceived gains in the professional status did have some positive but not crucial influence on the adoption of safety and quality standards by private healthcare providers.
2. Fear of negative financial consequences did significantly increase the adoption of safety and quality standards.
3. Availability of information on safety and quality standards increased their adoption.
4. Opinions conveyed to private healthcare providers by peers had negative influence on the adoption of safety and quality standards at early adoption stages.
5. Perceived attitudes of chambers had limited influence on the adoption of safety and quality standards.
6. The level of support of professional associations to private health care providers in the implementation of certification had significant influence on the level of adoption of the safety and quality standards.

In conclusion of this phase of research, we believe that it can be stated that the rate of adoption of mandatory safety and quality standards varies between different groups of private providers mainly due to (1) different level of fear from negative financial consequences and (2) level of support of professional associations to private health care providers in the implementation of the proposed innovation. However, this is just an explorative phase of the study and these findings need to be confirmed or dismissed through the next stages of research, specifically a survey of the private health care providers and interviews with selected resisters among the private healthcare providers.

7. Policy implications/Recommendations

Implications for policy makers are grouped according to the stakeholder who could be responsible for implementing the recommendations:

1. **Recommendations to the ASKVA:**

- Put more efforts in the information and education of PHPs. Organise a series of meetings/seminars, to explain to non-adopters what certification is, what its advantages are, what the certification process looks like, what it looks like to have certification implemented in private practice, how much time certification takes in everyday work, what additional work is required daily and how much time it takes away from patients.
- Review and improve standards for certification of PHPs, to facilitate acceptability of standards among the PHPs (with particular focus on tailoring standards to the needs and limitations of small practices, with 2-3 employees, and specificities of certain specialisations).
- Improve transparency of approach for scheduling certification assessments: regularly provide list of planned assessments through its web site.
- Broaden the list of trained assessors, coming from the private dental practices. In broadening the list, select assessors with high expertise and experience.
- Consider alternative approaches to covering assessment costs by the PHPs (e.g. payment in instalments).
- Organise events to present results of the certification process and to share experience of certified PHPs with other providers.
- Put more focus on public promotion of the providers who successfully completed the certification process.
- Put more focus on the explanation of the purpose and importance of the certification process to general public (e.g. current and future patients).

2. **Recommendations to the Ministry of Health and Social Welfare of RS:**

- Consider the possibility of shifting some of the certification costs away from PHPs (to other sources of financing).
- Consider the possibility of amending bylaws, in order to allow the ASKVA to also issue certificates for completion of the certification process (or a specific mark, recognisable by patients) that could improve certification's observability among the patients.
- Consider the possibility of more clearly providing public support to the certification processes among the private healthcare providers.
- Consider the need to make more direct announcements about the certification of PHPs and explicitly demand from the providers to enter the certification process.
- Consider alternative approaches to tackling the problem of illegal provision of dental services – the approaches that would look beyond mandate of Inspectorate of the RS.
- Consider the need to precisely define time needed for issuing decision on certification, after submission of certification assessment report by the ASKVA.

3. **Recommendations to the RS Health Insurance Fund:**

- Consider the possibility of specifying completion of the certification process as one of the mandatory criteria for contracting
- Consider the possibility of implementing selective contracting with the healthcare providers, on the bases of certification status
- Consider the possibility of the RS HIF's participation in promoting the use of certified pro-

viders' services (as more safer for the insured population)

4. ***Recommendations to the chambers:***

- Come up with an official position regarding certification and announce it publicly to the members
- Consider possible approaches for making examples of internal procedures available to dental practices by the Chamber of Dentists of RS
- Consider the possibility of including healthcare quality and safety related issues in the programs of healthcare professionals' continuous education

5. ***Recommendations to the professional associations:***

- Continue the provision of support to individual pharmacies in complying with requirements of the certification standards (the Pharmaceutical Society of RS)
- Consider how the experiences of the Pharmaceutical Society of RS could be useful in adjusting the approached used for the provision of support to members of the associations (other professional associations)

6. ***Recommendations to the Inspectorate of RS:***

- Consider the possibility of routinely checking the certification status during all health inspectors' visits to PHPs.

7. ***Recommendations to the Public Health Institute of RS:***

- Continue supporting the certification process through provision of training on the management of risks in infection control and assistance to the PHPs with the development of internal procedures.
- Take a more active role in advocating control of sterilisation with biological indicators and provide support to the PHPs in establishing the control system.

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