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# Measures to Improve Integration of Healthcare in Federation of Bosnia and Herzegovina

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**ABSTRACT**

**Introduction:** In its annual report for 2008, the World Health Organization (WHO) states fragmentation is one of the five most common shortcomings experienced by health systems in health care provision, while an integrated healthcare model can significantly improve efficacy/efficiency, reduce visits to doctors, improve patient satisfaction, and ensure safe and quality healthcare. **Aim**: The aim of our study is to point out importance of the cooperation between healthcare professionals from different sectors, institutions and levels of care involved in patient treatment and care and to propose measures for integration including criteria for clinical review and audit. **Methods**: In this paper, feedback and results from three workshops held in Tuzla on October 16th, 2007, Bihac on December 9th, 2013, and Sarajevo on November 24th, 2018, were analyzed. All three workshops used the same methodology: first they have had a lecture on the topic of "Interface theory and protection blocks in the health system" and the second part took the form of six working groups in accordance with participants' affinities and places of employment. **Results**: The measures proposed to improve the interface are included: Development and adoption existing of clinical practice guidelines and pathways; Maintain joint working group meetings; Eliminate conflicts between PHC and hospital care and seek consensus through formal cooperation. Criteria for clinical audit of the PHC-hospital interface are: annual analysis of unnecessary or inadequate referrals as well as of any duplication of tests and prescriptions (failure to control costs); joint planning of preventive treatments (including the ministry and public health authorities); and clear responsibilities related to screening programs and patient path analysis. **Discussion**: Standardized communication protocols should be used to improve communication between health professionals at different levels and to moderate integration processes and protect data. **Conclusion:** Regular communication between healthcare professionals across the various institutions and levels of health care is a prerequisite for organizational, functional, service and clinical integration.

**Key words: Integrative Care, Quality, Clinical Audit..**

## 1. INTRODUCTION

Health systems and the health care organizations that make them up are among the most complex systems known to society (1). This fact is additionally complicated by constantly changing demand for existing services and challenges facing health care–the aging population, the ever-increasing number of chronic illnesses, rising health risks, the increasingly evident shortfalls in and poor distribution of staff, and the fact that health care costs are rising much faster than general economic growth (2).

In its annual report for 2008, the World Health Organization stated that fragmentation was one of the five most common shortcomings experienced by health systems in health care provision (3). Given the unclear boundaries between subsystem and system elements and that a system is only as stable as its strongest link, the quality of a health care system is most effectively measured at the points where its elements and subsystems come into contact or interface. There is thus a need for a coherent set of methods and models, across all the different levels of the system, from financing, administration, organization, and service delivery to clinical practice, to enable bonding, balancing and cooperation within and between the various sectors of the health care system.

One way to overcome this problem is through integrated health care which can significantly improve efficiency, reduce visits to doctors, improve patient satisfaction, and ensure safe and quality health care. It can improve the rational use of financial and other resources, increasing productivity and efficiency, reducing the fragmentation of records and documentation, drawing clearer lines between levels of care and ensuring a clearer horizontal and vertical distribution of sectorial obligations. The integrated model also provides better quality and efficacy of patient outcome, reducing variation in practice and encouraging the use of evidence-based medicine that focuses on the patient and their satisfaction with the services provided, their passage through the system with minimal problems or complication, and the quality of their relationship with health and care providers.

## 2. AIM

The aim of our study is to point out importance of the cooperation between healthcare professionals from different sectors, institutions and levels of care involved in patient treatment and care and to propose measures for integration including criteria for clinical review and audit.

## 3. METHODS

In this paper, feedback and results from three workshops held at Tuzla on October 16th, 2007, in Bihać on December 9th, 2013, and in Sarajevo on November 24th, 2018 were analyzed. The Tuzla workshop was part of a *Quality Improvement and Accreditation Program* sub-project presenting accreditation standards to family medicine teams at the Tuzla, Kladanj and Orašje health centres and to hospital representatives from the Tuzla University Clinical Centre and the Orašje Cantonal Hospital. The Bihać workshop was part of staff training at the Dr Irfan Ljubijankić Cantonal Hospital with colleagues from health centres in Bihać, Sanski Most, Bosanska Krupa and Ključ. The final workshop was held at the Business Academy of the Economics and Business Faculty of Sarajevo University as part of a lecture course for the Integrated Health Care on the Second Level of Continuous Professional Education for Health Managers.

The purpose of these workshops was to identify the main problems facing family medicine teams, local hospitals and other key actors in the healthcare system, and to address issues in ensuring continuity of coverage and better communication between family medicine, hospitals and patient-focused pharmacies.

All three workshops used the same methodology. Once the participants had been introduced, there was a lecture on the topic of "Interface theory and protection blocks in the health system." Interface definitions were given and the interface to the quality of care, interface responsibilities, and possible forms of the relationship between primary healthcare (PHC) and the hospital discussed. The interface model, as defined by the European Working Group on Quality in Family Practice (EQuiP), was presented, as were perspectives from the position of the health system, of quality, the patient and the service provider. Ten EQuiP strategic targets were developed to improve the interface and goals associated with the action plan. Protection blocks (PHC, the hospital, the local community) were presented, along with the relevant participants in acute problem areas, e.g., variations encountered in referring patients to specialists or the hospital, poor communication between the PHC and the local hospital, problems with hospital admissions, the patient's pathway through the hospital system–management immediately after admissions, planning release and discharge, and returning to the PHC physician and the community. This was followed by an instructive example of ordering and discontinuing drug-taking through the PHC and the hospital, which demonstrated how uncoordinated and poor communication in prescribing therapy often leads to drug interactions, unwanted drug effects, incomplete medical history, incomplete list of medications for release, and re-admission to hospital because of medical errors.

## 4. RESULTS

The second part of the presentation covered the results of a qualitative examination, interviews with management representatives, administrative staff, doctors and nurses in the pilots, and the responses of different actors to similar topics from health centres and local hospitals. The idea behind this presentation was to draw the attention of the participants to the areas where basic misunderstanding tends to arise between PHC and the local hospital and ask for ideas for group work. Issues in integrated healthcare (definitions, reasons for integration, integration levels, information systems, some published papers, site auditing, etc.) were then addressed in more detail. The patient perspective was given special attention. Then, there was group work intended to allow discussion between hospital-based and health centre-based and other health professionals on major issues raised during the presentation and any other practical issues of concern to them. A pre-prepared questionnaire served as a guideline to facilitate discussion.

The second part took the form of working groups. Six groups were formed, in accordance with participants' affinities and places of employment. For the purposes of this paper, the results of the three groups of education participants have been analyzed. Each group included representatives from primary and hospital health care. Group 1 also included healthcare professionals from family medicine, health centres, dental polyclinics and the Institute of Occupational Medicine. Group 2 were pharmacists, mostly from private pharmacies in Zenica-Doboj Canton. The third group comprised health professionals with work experience in hospital health care. All groups received a tailored set of questions prepared by the module leader for them to answer and suggest solutions.

Group 1 was given the five most common problems related to interfaces in emergency medicine and asked to provide answers on issues of horizontal and vertical integration. The problems raised most often by this group may be summed up as emergency services being a faster way for patients to enter the healthcare system, i.e. a faster way to get to a specialist or be examined by the desired specialist, as well as providing a way for uninsured patients and patients without personal documentation to access health services, resulting in large numbers of chronic patients burdening the emergency services. Additional problems raised included that emergency medical staff are not adequately protected from verbal and physical violence and the lack of cooperation between health care institutions and the cantonal authorities. Many services are performed privately

due to lack of equipment (e.g. ergometry and Holter monitoring) and limited amounts of reagents, as the annual reagents supply gets used up very quickly. Patients tend to be referred back to their family doctor by the Emergency Services during regular clinic hours, causing patient dissatisfaction and poor communication between colleagues.

Multidisciplinary interface teams should be created and training programmes developed for them, with regular meetings, training for doctors from both sides ensuring everyone is up to. Training modules could cover all areas of primary and secondary care. In general, the five most common problems in emergency medicine identified were: the lack of emergency medicine specialists, outdated equipment, a lack of adequate transport vehicles, insufficient staff training, a lack of generally accepted and approved treatment algorithms, and a lack of communication between colleagues.

Group 2 task was to answer the following question: "What are the methods and tools for improving the quality of interface, including communication and information exchange?" Its members first noted that many patients with cardiovascular diseases gravitate towards Tuzla Canton, while oncological patients tend to go to Sarajevo Canton. Patients with discharge letters (generally only a couple of hours old) tend to go directly to the pharmacy to collect their prescription, but emergency services are not authorized to issue prescriptions only with their discharge letters. Family medicine centres are not open on weekends or holidays. As a result, the pharmacists have to take the responsibility for issuing drugs directly themselves. Pharmacy staff thus faces the moral dilemma of whether to bend the rules for the patient or comply rigorously with the legal provisions. An additional problem is that they cannot inspect the patient's records. If they refuse to issue the medication, the patient may end up waiting two to three days before they can get their prescription from the family medicine practitioner. The proposed solution would be for the cantonal Health Minister to change the regulations allowing the emergency services to issue prescriptions in such cases.

There is also the problem of uninsured patients who cannot pay either to see a doctor or for the medicines they need. How is a balance to be struck between the therapy they need and the legal regulations? A particularly good example are migrants who seek a specific treatment without a prescription. Group 2 members also cite a problem with buying OTC drugs. There is no set maximum for the purchase of OTC drugs, even though an incorrect or excessive dose could be lethal. Individual over-the-counter purchases should be limited in some way.

The measures proposed to improve the interface include: development and adoption of clinical practice guidelines and pathways; Maintain joint working group meetings; Eliminate conflicts between PHC and hospital care through clinical pathways and seek consensus solutions through formal cooperation. As to the daily surgical roster, members of the working group noted both positive (reduced costs, high level of efficiency) and negative experiences for PHC (outflow of money; uncertainty regarding post-operative procedure). The distribution of funds over which institutions have autonomous disposition, should therefore be adjusted; home treatment should be provided for certain conditions (where hospital treatment is too expensive, for example, with cardiomyopathy) for which the fund must relocate resources.

Group 3 was asked to identify three priorities in organizing integrated health care and a possible design for the model, using a concrete example. Three group members stated that their priorities were patients with malignant diseases, the geriatric population (+65) and mental health. Health professionals from this group stated that oncology patients require treatment in PHC, in accordance with clinical practice guidelines adopted jointly by colleagues from both PHC and the hospital level. This should include screening, complete diagnostic processing, including laboratory tests, X-RAYs, cytology where required, biopsy, etc., and then referral on to secondary and tertiary levels. This would mean that any surgical interventions required were performed and the patient either returned to the PHC or sent for further therapy in a secondary institution. Further treatment means palliative care, prevention of complications, education of the patient and their families/career, and psychological help. Palliative care for all patients in the terminal phase allows integration of all levels of healthcare, both horizontally and vertically. The concrete example involved opening homes for the elderly and incapacitated, since the only such homes at present are private. There should be homes with sufficient capacity, even if only at the cantonal level. One option suggested was the construction of public homes using private capital. There is also a need for better organized home care services with physiotherapy services.

## 5. DISCUSSION

All organizations and systems involve a certain degree of hierarchy and consist of separate, but interconnected components that must complement each other if they are to fulfill their common tasks. Integration is thus a cohesive factor and without integration at the various levels, all aspects of health care suffer. There is also often a difference between horizontal and vertical integration. Horizontal integration relates to strategies linking similar levels of health care (i.e., in order to overcome boundaries between professionals or departments or linking hospitals providing similar services), while vertical integration relates to strategy connecting different levels of health care (4).

Perhaps the most commonly cited definition of integrated health care is: "Integrated Care is a concept bringing together inputs, delivery, management and organization of services related to diagnosis, treatment, care, rehabilitation and health promotion. Integration is a means to improve the services in relation to access, quality, user satisfaction and efficiency (5)." Some authors emphasize other aspects. Brown and McCool suggest that integration provides greater efficiency and effectiveness and reduces duplication and losses, while allowing for more flexible service delivery and better coordination and continuity (6). By contrast, the WHO study group sees the value of integration in the capacity to encourage a holistic approach and personalize approaches to multidimensional health needs (7). Kodner and Spreeuwenberg suggest a definition of integration that is more patient-oriented: "Integration is a coherent set of methods and models, funding, administration, organization, service delivery and clinical levels designed to create connectivity, coherence and collaboration with and between therapy and care." The aim of these methods and models is to improve the quality of health care and quality of life, patient satisfaction and the efficiency of the system for patients with complex and

long-term health problems through multiple services, service providers and environments (8).

Standardized communication protocols and forms are should be used to define and improve communication between health professionals at different levels and to moderate integration processes and protect data (9). Patients often require examination by different specialists and a range of medical services, like laboratory tests, X-ray, etc. A patient needs assessment should therefore be done in one place in order to gather the data required to coordinate healthcare. The point of a model based on one access point for healthcare is to reduce the number of professionals and organizations patients need to face and to organize the number of places where the care they need is being provided to them.

The essence of creating integrated healthcare is reaching consensus on the explicit allocation of tasks and jobs (10). The "patient path" through the system must be revised, ensuring an easy way through the points of interfaces. If the problem is, for example, that referral from the health centre to the hospital are inadequate, then colleagues from both institutions should be brought together to discuss any disputed matters and agree an optimal solution that is in the best interests of the patient.

The contents and results of the workshop we conducted as part of our lectures on Integrated Health Care at the continuous professional education for healthcare managers supports the thesis that an integrated health system entails forming multi professional groups for communication between levels and enhancing professional identity in PHC. The decisions of multidisciplinary team should be based on evidence, best practices, actual needs, and the resources available.

Minimizing costs while maximizing effects is always one of the goals of the reform. In reforming health care systems, however, cost reduction or *cost-effectiveness* should be a result, not the primary goal of improving quality (11, 12, 13). An integrated health system entails forming multidisciplinary groups for communication between levels and enhancing professional identity in PHC, so that decisions are based on evidence, best practices, actual needs, and the resources available (14).

## 6. CONCLUSION

As a result of the group feedback during the workshops on implementing integrated care, we recommend the following criteria for clinical review of the PHC-hospital interface: annual analysis of unnecessary or inadequate referrals and evaluation of such practices, as well as of any duplication of tests and prescriptions (failure to control costs); joint planning of preventive treatments (include the ministry and public health authorities); and clear responsibilities regarding screening programs and patient path analysis.

Parameters that could be tracked through clinical audit of the PHC-hospital interface include: reduced duplication of tests and investigations; reduced number of referrals to specialists and admissions to hospital; decreased bed-days per patient; joint meetings attendance of the family medicine and hospital teams; and improved communication at a professional level.

Standardized communication protocols and forms should be in place to define and improve communication among and between health professionals at different levels of care and to moderate integration processes and protect data. Patients must be included in the audit of clinical work and their expectations monitored.


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