

The Measures and Proposals for Increasing the Level of Adherence in FBiH Healthcare

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Abstract:-

➤ Objectives:

Arterial hypertension represents a significant public health problem. It is estimated that around one billion people currently have hypertension, and that by the year 2025 the number will rise by 60%. Adherence is a multidimensional phenomenon, determined by interaction of several factor groups, which are also known in the literature as „dimensions of adherence“, where patient-related factors represent but one of the determinants (others are social-economic factors, healthcare-system-related factors, disease-related factors, therapy-related factors).

➤ Methods:

The study has included 280 subjects divided into two groups according to the type of means provided to them for the purpose of improving adherence to the therapy. The trial was an open, longitudinal, multicentric, comparative randomized clinical study within which patients with insufficient adherence to the antihypertensive therapy were randomized into two groups according to the type of means provided to them for the purpose of improving adherence.

➤ Results:

Based on the results of the research, it is possible to obtain partial insight into data on the degree and causes of patients' non-adherence in the FBiH. The results of the study (21) indicate the fact that patients with chronic arterial hypertension treatment have a high level non – adherence, whose key cause is: forgetfulness (48.6%), difficulties in remembering therapy (65.4%), patient's own will to temporary stop with consuming therapy (43.6%).

➤ Conclusion:

The importance of high adherence level is presented in a large number of studies, which prove it affects not only the effectiveness of therapy, but also many other segments such as the quality of patient's life, the health system, etc. Measures and proposals for increasing the level of adherence in FBiH health care are mainly based on available research in the world, as well as research carried out in FBiH, and on the basis of other available information in primary and secondary

data sources. Due to the numerous limitations and complexities of the state and political ordering, and to the inability to allocate significant financial resources, we consider it a realistic option to increase the level of adherence through measures and proposals that are in the patient / medical personnel domain.

Keywords:- Increasing Adherence in FBiH, Adherence Dimensions, Adherence to Therapeutic Efficacy.

I. INTRODUCTION

Adherence is professional term for the proper use of prescribed therapy, which can be defined as the extent to which the patient follows the instructions of prescribed therapy (1, 2). However, many consider this definition to be insufficient, and for this reason it has been extended by the WHO: as the extent to which the behavior of a person in the process of taking medications, following a diet and / or a lifestyle change is in line with the recommendations and instructions of a healthcare professional "(3). Adherence is a complex term whose role and importance is recognized as one of the biggest problems in medical practice (4). The effectiveness of the therapy depends, inter alia, on the level of patient's adherence, which is recognized and presented by the World Health Organization (WHO) as a significant public health problem (5, 6). The level of patient's non-adherence ranges from 20 to 80% (7) depending on the disease, duration of therapy, patient motivation, adverse effects of treatment, socioeconomic factors, etc. A high level of non - adherence depends on a number of factors and barriers that a patient meets during the treatment. In the last decade, there has been a large number of studies on the adherence impact and importance to the success of therapy. The results of the research point to the fact that patients' low level of adherence increases the complexity of the treatment, the costs of treatment (direct and indirect), affects the quality of patient's life, increases hospitalization by 50%, increases the death rate (8,9) and so on. The results of the research also show that the degree of non - adherence is different, i.e. no unique pattern has been found which will indicate the degree of adherence the patient will have depending on: age, education, sex, demographic characteristics, type of illness, mental and mental state, etc. (10). It is precisely the impossibility of finding a single pattern, and the greater number of obstacles for accurate measuring the level of adherence that prevents the creation

of effective and unified strategies / measures for its increase. Unfortunately, the results of the research haven't so far provided an answer to the question: *which adherence level is sufficient to achieve the desired treatment effect?* Adherence is a multidimensional phenomenon that is

extremely complex and influenced by the interaction of a large number of groups of factors that are professionally represented as "dimensions of adherence" (11). It is generally accepted that there are five adherence dimensions, as shown in Figure 1.

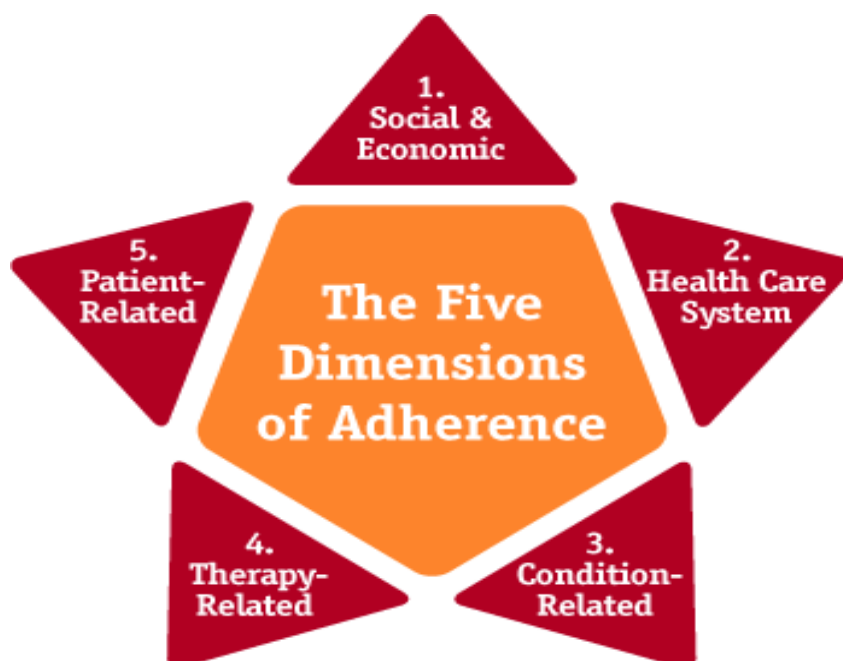


Fig 1:- Adherence dimensions
Source: World Health Organization, 2003 (12)

Each of the defined adherence dimension has a large number of potential barriers occurring at different levels (13). Different research identify key barriers that in most cases relate to: forgetfulness, insufficient education of patients in the context of application of therapy, absence of accurate and precise instructions for using prescribed

therapy, social and economic factors, complexity of therapy, drugs adverse effects and so on (14-17). Table 1 (originally made up of over 30 different sources and research) presents some of the most common barriers that cause non-adherence according to the dimensions of adherence.

Patient Barriers	Self-efficacy; Forget/remember medications; Remember to get refill; Careless medication taking; Patient's beliefs about medications/hypertension; Self-efficacy; Patient's attitude; Intentionally stop or modify the dosage; Use of herbal medicine or a cupuncture to treat hypertension; Awareness about drug insurance; Patient knowledge about hypertension and antihypertensive medications; Patient's expectations about the consequences of poor adherence to medications; Patient's awareness of adherence aids
Condition Barriers	Patient depression; Ability to open or close the medication bottle; Ability to read the print on the bottle; The extent to which the disease influences patient's risk perception; Severity of symptoms; Rate of progression of the disease
Therapy Barriers	Side effect occurrence; Medication efficacy; Medication convenience; Drug regimen complexity; Frequent medication change; Previous treatment failures; The availability of medical support to deal with side effects of meds
Socioeconomic Barriers	Financial burden; Social support; Influence of social normatives; Cultural and language barriers; Health literacy; Distance from health care facilities
Health System/Health Care Team Barriers	Difficulty in obtaining a refill; Health care system-related problems; Lack of information; Health care provider support; Practical aspects of hypertension care; Medication reimbursement; Quality of physicians' communication and patient participation; Access to health care providers; Relationship between patient and health care provider; Difficulty in scheduling appointments; Satisfaction with pharmacy services; Patient's perceptions about physician; Patient's perceptions about pharmacist;

Table 1:- (18, 19): The most common adherence barriers - hypertension disease

It is important to emphasize that it is not enough to reduce or remove one or more barriers within a single dimension of adherence. The system approach implies an active approach to reducing or removing barriers in different dimensions of adherence. It is also necessary to use the results of relevant research globally in combination with data relating to a particular population, disease or health system when developing the strategy / measure within the state or for a particular disease for reducing negative effects of non – adherence. Unfortunately, developing countries have additional factors that significantly affect the level of adherence, which refer to the amount of medical expenses. However, others factors were noticed, which are primarily related to the system of medical care, the difficulty of getting appointments, insufficient commitment to patients by medical staff and others (20) (also present in the FBiH).

Proper identification of key barriers that cause patient's non - adherence allows the creation of a strategy / measures for the active prevention of non – adherence. However, it is important to emphasize that the clear definition of key barriers for certain diseases, as well as social and economic characteristics of patients is an extremely difficult and complex process because there are no efficient enough and at the same time cheap methods that can accurately and promptly collect the necessary and relevant data on a large statistical sample

II. PATIENTS AND METHODS/MATERIAL AND METHODS

The study has included 280 subjects divided into two groups according to the type of means provided to them for the purpose of improving adherence to the therapy. The survey was conducted in 2014. The trial was an open, longitudinal, multicentric, comparative randomized clinical study within which patients with insufficient adherence to the antihypertensive therapy were randomized into two groups according to the type of means provided to them for the purpose of improving adherence. The instrument used in the trial was a questionnaire modified based on the Morisky scale. Also performed was a statistical analysis using the IBM SPSS Statistics v. 20.0 for Windows. The research objectives are:

- Identify and evaluate factors that influence therapeutic adherence.
- Examine patients' causes and barriers
- Create recommendations for increasing the degree of adherence in FBiH

III. RESULTS

Unfortunately, we can conclude that there isn't enough number of research on the patient's adherence in BiH or FBiH, and it is not possible to have accurate data regarding barriers and key causes of patients' non-adherence. The complex health system and economic and social problems only further increase the level of non-adherence, moreover, the lack of necessary financial resources and statistical data, as well as complex state and health regulation, contribute to the lack of a strategy for reducing the level of patient non-adherence, despite the numerous advantages that would result in the same. The paper presents a part of the results of the research that was conducted for the purpose of preparing the doctoral dissertation (20).

Based on the results of the research, it is possible to obtain partial insight into data on the degree and causes of patients' non-adherence in the FBiH. The results of the study (21) indicate the fact that patients with chronic arterial hypertension treatment have a high level non – adherence, whose key cause is: forgetfulness (48.6%), difficulties in remembering therapy (65.4%), patient's own will to temporary stop with consuming therapy (43.6%). The research results also point to the fact that demographic, social and economic factors significantly influence the degree of adherence. Thus, for example the age structure of the respondents significantly influenced the level of adherence, that is, the elderly (pensioners) were significantly more non – adherent. The working status is also identified as a significant adherence factor, respectively, the persons who work are more adherent than those who do not work. Treatment methods or the complexity of treatment is also one of the factors of non-adherence, as well as insufficient information / education of patients (22).

Comparing the research results in the world with the results of the study "Evaluation of the adherence factor in chronic treatment of arterial hypertension", it can be concluded that there is no significant deviation among the results. The key barriers presented in Table 1. have been observed during the research aforementioned. It is important to point out that the most common barriers in the patient's domain are "universal barriers" regardless of which disease it is, the differences are related only to the degree of their impact on adherence. A graph presented below proves the fact that forgetfulness is one of the key factors, which can successfully be reduced or eliminated using modern technologies. The graph also shows time period in which, according to the results of the research, it is the most difficult for patients to apply the prescribed therapy.

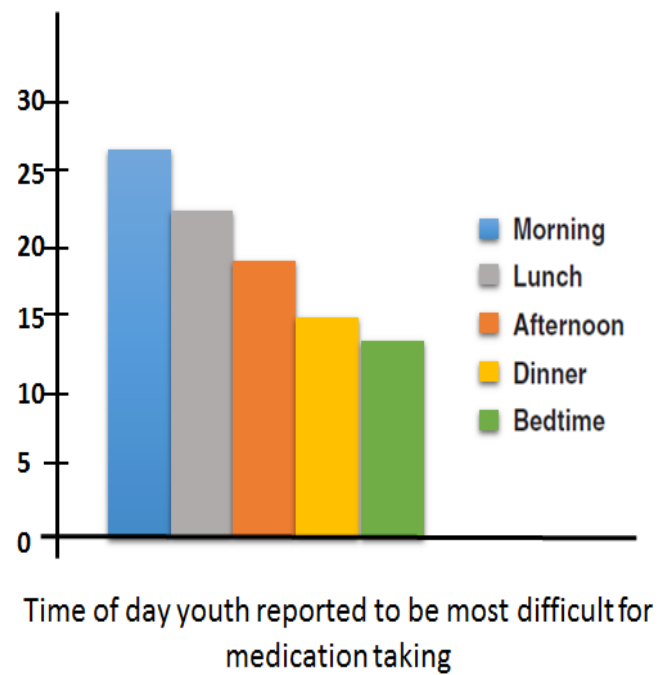
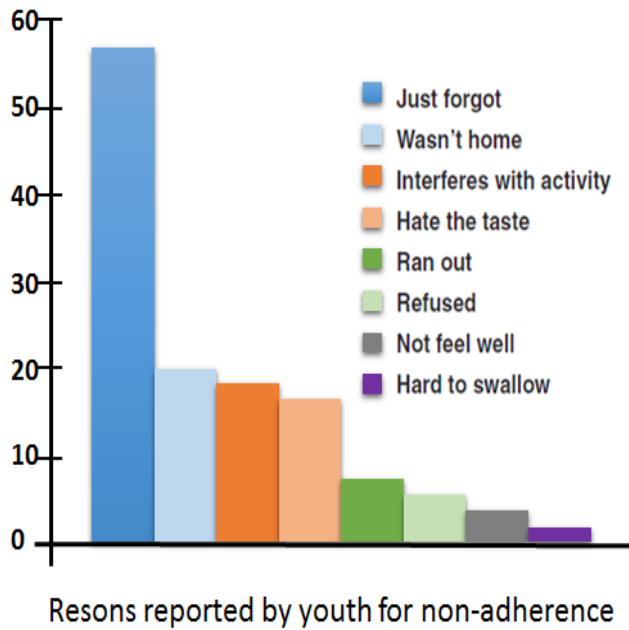


Chart 1:- Key Causes of non – adherence under the Influence of a patient (23):

It is necessary to understand the complete problematics and the influence of a large number of factors and barriers that are mentioned so far. Barriers that are directly influenced by the patient should be the focus, where it is important to answer the question: What do patients want from healthcare and how well does professional care respond to this patients' perspective? (24).

IV. DISCUSSION

We believe that in the past there was not enough attention paid to adherence, which, based on the research results, can greatly influence a number of factors that contribute to improving the health system, the effectiveness of therapy, improving the quality of life and lowering the overall costs. Recognizing the role and importance of adherence, and collecting data, it has been found that there is much room for improvement, the implementation of which creates multiple benefits. Understanding the magnitude and scope of the problem of medication non – adherence is the first step in reaching better adherence rates (25). Increasing adherence level sometimes means changing the treatment guidelines, because "it may be more realistic to adjust treatment to the patient than to adjust the patient to the treatment". Asking patients what could help them to become more adherent and tailoring interventions to these patients' wishes could be important steps to accomplish this objective (26).

Due to the state regulation of BiH, complex political situation, complex health system, insufficient financial resources, problems in health insurance, etc. we believe that the creation of a strategy and system at the level of the state or the health system of the FBiH and its realization in the short term is not possible. Because of the above, the key recommendations that will be presented relate to

recommendations that can be applied in the short term, which can make a significant contribution to increasing the level of adherence.

By analyzing the key barriers that cause patient's non-adherence, the health system, and recommendations and strategies that are available worldwide (27-30), some recommendations / measures will be presented below, whose implementation does not require significant financial investments, nor significant changing of the existing health system. The implementation of measures and proposals should result with increasing the level of adherence, and with improving the quality of medical service, hence, finally with improving the effectiveness of therapy:

- Educating patients about the role and importance of adherence (provide information in multiple formats, including written, pictorial, and verbal instructions) and the most common barriers most of the patients encounter (such as fears, beliefs, financial, social, cultural, and practical issues) while providing information on how to overcome them.
- Provide accurate and reliable information (without presuming that the patient knows how to use the therapy).
- Greater commitment to patients when explaining the way of consuming therapy, and providing clear instructions in writing form.
- Identify the barriers of non-adherence by creating a two-way communication between medical staff and the patient. Ask the patient why he or she is not able to follow treatment recommendations. The patient's view of why adherence is difficult is the one that counts
- Reducing non-adherence through the use of modern technologies such as: mobile devices, alarms and other patient reminder methods for consuming the therapy on time. Most patients have mobile devices that support the

installation of free applications that would remind them to take the therapy on time (leaflets can provide information and instructions on how to install and how to use it).

- Simplification of treatment regimens, if it's possible.
- Changing patient attitudes by medical staff can in many ways help to increase adherence. Patients may have certain beliefs (eg religious or otherwise) that are contrary to treatment therapy.

The active role of all participants greatly reduces the degree of non-adherence. Medical staff plays great and significant role, who, unfortunately, have a limited period of time to be spent with the patient, due to the volume of work and the number of daily patients. This can be an obstacle in the implementation of some of the proposed measures for reducing non-adherence. For this reason, there are other participants who need to play an active role, referring to certain agencies and institutions (31) that could through their activity increase the level of information and education, not only of the patients but also medical workers / pharmacists. Additionally, pharmacists can "substitute" the lack of time a medical practitioner has, in the context of increasing the level of information, education, and a better explanation of how to consume the treatment prescribed by doctors.

V. CONCLUSION

In order to create a systemic approach or strategy / measure for improving the level of adherence, it is primarily necessary to consolidate the results of previous research, then to improve methods and ways of monitoring the level of adherence. Based on the results, it is possible to create a strategy / measures that reduce the level of non - adherence that cannot be realized without the support of the state, health care system, health insurance system, educational institutions, agencies and other institutions whose duties and work relate to the healthcare of a country.

The complexity of state regulation, the political and economic situation in the FBiH, currently does not allow the creation and implementation of the strategy for increasing the level of adherence. For this reason, we consider it the best and fastest way to increase the level of adherence through measures that do not require significant financial means, whose implementation is not complex and which patients can directly administer. For further improvement of recommendations, further research is needed which will refer to the health system of BiH, respectively FBiH, together with available relevant research.

DECLARATION OF INTEREST

The authors declare that there are no conflicts of interest.

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