

# Management of Patients with Heart Failure in Primary Health Care

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## ABSTRACT

Heart failure (HF) is a global pandemic, affecting at least 26 million people worldwide and increasing prevalence, and is a serious public health problem as health care costs increase significantly with the aging population, the introduction of new technologies and treatments reduces the level of mortality from HF, but hospitalization is increasing, which makes it economically expensive. The GPs also express the need for a multidisciplinary approach to treating patients with HF, since the main problems are associated with uncertainty regarding clinical practice, how to provide evidence and how to work together in a team. The aim of our study is to study the management of patients with HF by general doctors.

**Methods:** At the first stage, we conducted a literary search, then with a multidisciplinary team of general practitioners, public health specialists and decision makers developed a questionnaire to identify knowledge and management of patients with HF. The survey was conducted anonymously in 2018 among GPs of city. The local ethical commission considered questionnaire.

**Results:** GP indicated that main etiology of HF is Ischemic 67,6%. Only 47.1% of doctors are analyzing hospitalized cases, Last three years completed training more than 89,6% physicians, and just 42,1

% developed any specific programs for patients with HF. 63.3% said that they explain the treatment, and 88.8% rehabilitation programs, how to change their way of life 78.8%, and how this will affect the daily life of 57.9%.

**Conclusions:** There is a need to study the adherence of primary care physicians to clinical protocols and to identify the need to provide additional guidelines for the management of patients with HF, since the disease has comorbidities and sometimes clinicians find it difficult to ensure the correct treatment tactics. Therefore, the wrong tactics lead to unreasonable costs and inefficient distribution of health resources and has economic consequences.

**Key words:** general practitioners, physicians, primary healthcare, heart failure

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## INTRODUCTION

Noncommunicable diseases (NCDs), or chronic diseases, which are the result of a combination of genetic, physiological, environmental, and behavioral factors, and include diseases such as cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. According to WHO, 15 million deaths associated with NCDs occur between the ages of 30 and 69 years [1]. Of these “premature” deaths, more than 85% are estimated to occur in low- and middle-income countries. These diseases are due to forces including rapid unplanned urbanization, globalization of unhealthy lifestyles and population aging [2].

Heart failure (HF) is a global pandemic, affecting at least 26 million people worldwide and increasing in prevalence [3], for example, an estimated 5.3 million Americans live with heart failure and its prevalence is increasing annually [4]. CHF is a serious public health problem, most of which is associated with hospitalization, and the data on the cause of CHF hospitalization are scarce. (four). Health care costs are increasing significantly with the aging of the population, the introduction of new technologies and methods of treatment has reduced mortality rates from CHF, but hospitalization is increasing, which makes it economically costly [5,6], for example, this figure increased in America from 400000 in 1979 to almost 1.1 million in 2005, while in 2008 research in the United States showed costs for CHF 34.8 billion US dollars [7,8]. Mozzafarian D. etc identify that one case in 9 deaths in 2009 included HF as contributing cause, and about half of people who develop heart failure die within 5 years of diagnosis [9].

Miek Smeets and etc. analyzed 18 qualitative articles where it was determined that the uncertainty of general practitioners in all areas of HF management was emphasized. HF management began with an uncertain diagnosis, due to a lack of knowledge, which led to difficulties in planning communication, treatment, and preliminary medical care. GPs expressed a need for a multidisciplinary approach to chronic care for CHF. The main problems are related to the uncertainty of GPs in relation to clinical practice, how to bring evidence in practice and how to work together as a multi-professional team [10].

The aim of our study is to study the management of patients with CHF by general doctors.

## METHODS

At the first stage, we conducted a literary search for the management of patients with CHF by general practitioners. Search was carried out in a database Pubmed, google scholarship and etc. At the next stage, a multidisciplinary team of general practitioners, public health specialists and decision makers developed a questionnaire to identify knowledge and management of patients with CHF. The survey includes 20 questions. The survey was conducted anonymously in 2018 among GPs of city doctors. Before you begin a survey obtained informed consent. Questionnaire was considered by the local ethical commission. The survey was filled for 20 minutes, and the interviewer was always there so that he could clarify the questions. The results of the polls were analyzed by a statistical method. The interpretation of the results was carried out by an expert group.

RESULTS

A larger number respondents young physicians with work experience of 2-5 years 49.4% took part in the survey, according to the others data shows, from work experience varies from 15.4% and 13.9%. The smallest number of participants took part more than 20 years of work experience

of 6.6%. 93.4% participated is GP, which is related to the state policy of providing the population with general practitioners, in which managers send therapist for retraining from the therapist to a general practitioner (table 1). Membership in professional activities is an important component for the doctor's self-development, in our case it was revealed that none of the respondents belong to any medical associations.

Table 1: Characteristics of respondents

Questions		abs	%
Age	20-30	86	33,2
	31-40	83	32,0
	41-50	27	10,4
	50 up	63	24,3
Gender	female	233	90,0
	male	26	10,0
Speciality	General Practitioners	242	93,4
	theurapist	17	6,6
Work experience	2-5 years	128	49,4
	6-10 years	38	14,7
	11-15 years	36	13,9
	15-20 years	40	15,4
	up 20	17	6,6
Membership in association	yes	0	0,0
	no	259	100,0

GP indicated that main etiology of HF is Ischemic 67,6%. Only 47.1% of doctors are analyzing hospitalized cases, a big problem is not the interest of doctors in analyzing and identifying the reasons for hospitalization of the patient 35.1% and 17.0% did not take part in this matter. In opinion of physicians the main reason for hospitalization of patients with HF is comorbidity problems 64,9%, Due to HF 30,5%. Last three years completed training more than 89,6% physicians, and just 84,2% indicated that training helped to improve ability to manage patients with HF. Just 42,1 %

developed any specific programs for patients with HF. 21,3% do not analysis the prevalence of HF in your region. On the part of the doctors, not enough patients were informed, only 63.3% said that they explain the treatment, and 88.8% rehab programs, how to change their way of life 78.8%, and how this will affect the daily life of 57.9%. Patients explain the actions of doctors when stress is 66.4%, how to explain to friends that there is such a disease, 58.3%, and that patients can participate in clinical trials of 17.0% (table 2).

Table 2: The work of respondents with HF patients

Questions		Yes		No		Do not know	
		abs	%	abs	%	abs	%
Etiology of HF (70% percent up patient)	Mixed	70	27,0				
	Ischemic	175	67,6				
	Unknown	14	5,4				
Do you conduct an analysis of the hospitalization of patients with HF		122	47,1	91	35,1		
In opinion of physicians the main reason for hospitalization of patients with HF	General incidence in other nosologies	168	64,9				
	Due to HF	18	6,9				
	Emergency hospitalization due to HF	61	23,6				
	I do not know	12	4,6				
Have you completed training (advanced training) in the last three years		232	89,6	12	4,6		

Has training helped improve your ability to manage patients with HF		218	84,2	12	4,6	14	5,4
Have you developed any specific programs for patients with HF		109	42,1	135	52,1		
Do you estimate the prevalence of HF in your region		189	73,0	46	17,8	9	3,5
diagnostic and laboratory tests check							
quarterly	Electrocardiograph	205	79,2	46	17,8	8	3,1
	Chest x-ray	57	22,0	192	74,1	10	3,9
	Echocardiography	123	47,5	136	52,5		
	Lung function tests	49	18,9	200	77,2	10	3,9
	Blood tests	251	96,9	8	3,1		
every six months	Electrocardiograph	157	60,6	102	39,4		
	Chest x-ray	86	33,2	173	66,8		
	Echocardiography	134	51,7	115	44,4	10	3,9
	Lung function tests	43	16,6	191	73,7	25	9,7
	Blood tests	151	58,3	91	35,1		
once a year	Electrocardiograph	77	29,7	182	70,3		
	Chest x-ray	193	74,5	57	22,0	9	3,5
	Echocardiography	63	24,3	196	75,7		
	Lung function tests	156	60,2	89	34,4	14	5,4
	Blood tests	122	47,1	137	52,9		
Do you tell patients	which probably caused his HF, the existing underlying disease that we can treat					3	
	How severe is HF	247	95,4	12	4,6		
	What are your treatment options	233	90,0	12	4,6	14	5,4
	Should a patient participate in a cardiac rehabilitation program	164	63,3	67	25,9	28	10,8
	What if symptoms suddenly worsen	230	88,8	15	5,8	14	5,4
	What lifestyle changes can make to feel better	218	84,2	27	10,4	14	5,4
	How will this affect your daily activities, such as playing golf or nursing my grandchildren	204	78,8	41	15,8	14	5,4
	What can be done to reduce stress and anxiety	150	57,9	95	36,7	14	5,4
	How to explain your condition to friends, relatives and colleagues	172	66,4	41	15,8	46	17,8
	Am I eligible for any clinical trials	151	58,3	75	29,0	33	12,7
	44	17,0	163	62,9	52	20,1	

**DISCUSSION**

In all countries of the world, the incidence, prevalence and hospitalization of patients with CHF is increasing. In America, approximately 80 thousand cases a year, patients with HF arrive at the emergency department (ED), and currently about 10-20% of the ED presentations for HF send them home [11]. It is important to select the right patient for management on the basis of ED, since simply removing a larger number of patients for discharge from the ED is not the answer. Patients discharged directly from the ED, have higher rates after discharge than 20-30%, found after discharge from a stationary installation [12,13]. It is important to note that many of the patients who return to ED shortly after discharge are also hospitalized, but approximately 40% due to non-cardiac causes [14,15].

Regardless of etiology, reducing preventable 30-day overdoses for patients discharged after hospitalization of HF is a national initiative to improve quality with financial implications for hospitals with high readmission rates. Given that each year Kazakhstan seeks to increase life expectancy, it is critically important that doctors know how to manage patients with HF. Inevitably a reduction in the number of cases with HF, however, there is a need for proper management of patients with HF.

GPs were aware of the depressive symptoms of patients in 35% of all cases, which indicates many aspects, including the definition of awareness and practical issues of the primary level, can contribute to unexpectedly low levels of awareness of depressive symptoms in patients with chronic hepatitis. The level of awareness may increase if the GP suggests their

patients to talk about emotional stress, to pay special attention to patients with chronic hepatitis B with a low level of education [16]. When studying knowledge and adherence to guidelines, it was revealed that 437 (40%) physicians knew the guidelines well, with preliminary findings showing that physicians knowledge of the guidelines themselves do not lead to more effective implementation of the recommendations and there is a need for further research solving this important problem [17].

Another study showed that of the 451 general practitioners, none of them made four optimal solutions: 7% considered stopping treatment with statins, 36% initiated treatment with  $\beta$ -blockers at a low dose, and 4% doubled the  $\beta$ -blocker in the titration increase phase. Finally, for our vignette patient who also suffers from chronic obstructive pulmonary disease, 45% of general practitioners continued therapy with  $\beta$ -blockers, even when they thought they were prescribing a long-acting  $\beta$ 2-agonist. It was revealed that doctors do not follow treatment recommendations from the recommendations of clinical practice in their decisions regarding the treatment of patients with heart failure. The guidelines in the guidelines may seem contradictory when statin treatment should be stopped, when the patient feels comfortable, or when the  $\beta$ -blocker should be increased by titration in patients who have more symptoms. The priority of evidence-based medicine may be positively associated with difficult treatment decisions [18].

During the analysis of our results, physicians noted the excessive use of X-ray diagnostics, these issues require a more detailed study of the validity, since it is not safe for the patient and cost-effective item. On the part of the doctors, not enough patients were informed, almost a third of 25.9% do not explain the essence of the treatment, how to change the lifestyle of 21.2 %, and how this affects the daily life of 42.1%. The actions of the patients are explained by the doctors in case of stress 43.6%. Friends and people who are close to the patient have an important influence on changes in behavioral risk factors, 41.7% don't know how to explain to them what their condition is. These facts indicate the need for training primary care physicians to work in a team with both the representatives of the medical staff and the patients themselves. It is also necessary to determine the need for the development of clinical guidelines, which includes possible treatment tactics in the presence of concomitant diseases. This can be done through medical associations, but the low interest of doctors to cooperate with associations requires another attention from decision makers.

## CONCLUSIONS

There is a need to study the adherence of primary care physicians to clinical protocols and to identify the need to provide additional guidelines for the management of patients with HF, since the disease has comorbidities and sometimes clinicians find it difficult to ensure the correct treatment tactics. Therefore, the wrong tactics lead to unreasonable costs and inefficient distribution of health resources and has economic consequences.

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