



FINAL REPORT

Implementation of the information system LOVE YOUR HEART
among family physicians/general practitioners (GPs) in the County
of Istria

Co-financed by the EU in the framework of the IPA CBC Adriatic Programme

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Project details

Project title	Implementation of the information system LOVE YOUR HEART among family physicians/general practitioners (GPs) in the County of Istria		
Reference number	Contract N° 11/2014-LYH Addendum No. 1	Service contract number	class: 910-01/14-01/16 prot. N. 2163/1-06/1-14-84 class: 500-01/14-01/92 prot. N. 2163/1-06/1-14-31
Project start date (commencement)	29.09.2014.	Project end date	480 days (16 months) from the start day (29.01.2016.)
Contracted amount €	102.000,00 HRK	Project acronym	LYH
Country	The Republic of Croatia		
Name of Contracting Authority	The County of Istria, Administrative Department for Health and Social Care	Name of contact person (Contracting Authority)	Roberta Katačić, Project Manager
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Name of Beneficiary	The Region of Istria (Istarska županija)	Name of contact person (Beneficiary)	Roberta Katačić (Project Manager)
Name of Contractor	The Association of Teachers in General Practice /Family Medicine (ATGP/FM)	Name of contact person (Contractor)	Biserka Bergman Marković, Project Manager
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Introduction

Project “Love Your Heart” is a comprehensive project in the prevention of cardiovascular diseases (CVD) conducted in the County of Istria.

A central information system for the CVD programme has been built within the Project “Love Your Heart”. The system connects family medicine physicians in the County of Istria – health centres and the Pula General Hospital.

In order to enable more efficient inclusion of family physicians in the comprehensive Project LOVE YOUR HEART, the Project the "Implementation of the information system LOVE YOUR HEART among the family physicians/GPs of the County of Istria" was designed. The Project is conducted by both the Region of Istria and the Association of Teachers in General Practice /Family Medicine.

An extra information system for the CVD prevention programme, included in the standard information system (electronic health records) was built. The information system for this Project is used by all family physicians on the whole territory of the Republic of Croatia.

This additional information system for the CVD prevention programme is part of the electronic health records and it is user-friendly. Furthermore, it is consistent with the Central Health Information System (CEHIS) of the Republic of Croatia. It enables processing and delivery of the feedback recorded by family physicians. The configuration of the information system for the CVD prevention programme is similar to the information system for chronic diseases follow-up (hypertension, diabetes, COPD), which are integrated in electronic health records.

These information systems are used in family medicine physicians' everyday practice and they are colloquially named "panels of chronic diseases". Information system for the CVD prevention programme (CVD risk panel) is based on the system of data entered by the physician for every patient included in the CVD prevention programme. The data include the most important risk factors for CVD and data necessary for the follow up and further referral of the patient. Within the information system for the CVD prevention programme, physicians can follow up referrals of patients to additional diagnostics or cardiologist's examination and to workshops where patients are educated about acquiring healthy life habits and about the prevention of risk factors.

This contract/Project main objectives

The main objectives of the Project are to educate and support the family physicians/GPs around the County of Istria to provide CVD prevention services to their patients by using the newly developed cardiovascular disease prevention information support system within the LOVE YOUR HEART Project; to monitor their work and to evaluate and present the results to other professionals.



Experts included in the Project implementation

Professor Biserka Bergman Marković, Team Leader – Project coordinator
Professor Milica Katić, Monitoring and evaluation – Project supervisor
Ksenija Kranjčević MD, PhD, Senior lecturer - Teacher
Davorka Vrdoljak, MD, PhD, Assistant professor Teacher
Jasna Vucak MD, PhD, Teacher
Dragica Ivezić Lalić, MD, PhD Teacher
Valerija Bralić-Lang, MD, Teacher
Suzana Maltar Delija, MD - Teacher
Professor Josipa Kern - Expert in the field of medical informatics
Professor emeritus Silvije Vuletić - Expert in the field of medical statistics and public health
Karmela Bonassin MD - Trainer
Morena Butković, MD - Trainer

Planned activities in the TOR

I. RECRUITMENT OF GPs

The Contractor should contact all the contracted family physicians/GPs in Istria (114 at the moment), explain them the Project objectives and activities, and encourage them to participate in the Project by using the new software.

II. FAMILY PHYSICIANS/GPs TRAINING AND CERTIFICATION

The Contractor should organize few workshops with family physicians/GPs (and prepare handouts) in order to present the LOVE YOUR HEART Project (CVD prevention centres, educative materials, workshops); to present the recent professional guidelines for CVD risk factors prevention and treatment; and to teach about the usage of the newly developed “LOVE YOUR HEART information system” (along with the preparation of a short Manual for the family physicians/GPs). After completing the training, each family physician/GP should receive a certificate of participation with the appropriate number of points by the Croatian Medical Chamber, which will confirm that s/he is trained to participate in the CVD prevention Project.

III. PROFESSIONAL SUPERVISION AND MONITORING

The Contractor should appoint a Project Coordinator, Mentors and/or Tutors who will monitor the family physicians/GPs Project implementation from 01/11/2014 to 30/4/2015. They will have access to the information system for this Project reporting on the family physicians/GPs work and will check their screening and interventions services. They will observe the changes in the patient’s CVD risk factors (considering family physician/GPs interventions and different workshops delivered) and the quality of the management of CVD risk patients as well. The reported data should be used for scientific processing and for the inclusion in peer consultations which should be organized after the first month of the family physicians/GPs Project implementation (early enough to detect faults and make improvements) and again after three months of work.



IV. PILOT PROJECT EVALUATION

A professional evaluation should be done after six months of the Project implementation, which should include the process evaluation as well as the results and outputs evaluation (family physicians/GPs interventions, workshops, short-term efficiency, results of risk patients, underwent diagnostic interventions in General hospital). Professional evaluation is postponed to January 2016 by an Addendum.

V. DISSEMINATION OF PROJECT RESULTS AMONG PROFESSIONALS

The Contractor should present the achieved results on a professional meeting organized in Istria in Spring/Summer 2015. National stakeholders should be invited to the meeting. This activity is postponed by the Addendum too.

VI. PRESENTATION OF PROJECT RESULTS AT THE NATIONAL LEVEL

The Contractor should present the Project results to stakeholders at the national level (e.g. the Minister of Health, the President of the Croatian Health Insurance Fund) and try to ensure the sustainability of the Project.

Implementation of the planned activities

I. RECRUITMENT OF FAMILY PHYSICIANS/GPs

Information about the Project LOVE YOUR HEART and an invitation to participate in the Project "Implementation of the information system LOVE YOUR HEART among the family physicians/GPs of the County of Istria" was prepared and organized by the ATGP/FM and the official invitation was sent by the Administrative Department of Health and Social Care of the Region of Istria to e-mail addresses of all 114 family physicians/GPs of the County.

After that, local coordinators of the Project "Implementation of the information system LOVE YOUR HEART among the family physicians/GPs of the County of Istria", Morena Butković, MD and Karmela Bonassin, MD, sent letters and invitations to 86 family physicians who had already information systems MCS or Vegasoft in their offices.

After that, every family physician/GP was individually invited by telephone to participate in workshops for the inclusion in the Project "Implementation of the information system LOVE YOUR HEART among the family physicians/GPs of the County of Istria".

II. GPs TRAINING AND CERTIFICATION

All family physicians/GPs who wanted to participate in the Project had to be specifically educated. The aim of training was a revision and expansion of their knowledge about the prevention of CVD, recommendations about detecting and preventing risk factors, early diagnosis of CVD and efficient treatment and systematic planned follow-up of the patient. An



equally important aim of this specific training was learning how to work with the information system for the CVD prevention programme.

Necessary training materials were prepared for the specific training delivered in the form of interactive workshops. These materials were written by ATGP/FM, and included a manual about the prevention of CVD, a user manual IN 2 for the information system for this Project and a brochure with all educational leaflets prepared in the County of Istria for the LOVE YOUR HEART Project.

A comprehensive approach to the prevention of CVD was developed in the LOVE YOUR HEART Project. This approach included the population, the community and the health sector. Family physicians/GPs were especially educated about the integral Project in workshops. They were informed about the possibilities of including their patients in the CVD prevention programme by direct referrals to the specialised cardiology facility LOVE YOUR HEART established for this Project in the Pula General Hospital, and to the Centre for CVD Prevention of Istrian outpatient facilities. For this purpose, local coordinators prepared samples of patients for the physicians to practice in the program of CVD prevention, i.e. CVD risk panel and in using the integrated approach in patient management.

Training workshops for family physicians/GPs:

All family physicians/GPs in the County of Istria were invited. Training workshops for those who agreed to participate were organized by ATGP/FM. Local coordinators Morena Butković and Karmela Bonassin managed technical organization of these workshops and coordinated and provided professional support to family physicians/GPs in practice.

Training workshops and number of participants

Date of workshops	Place of workshops	Number of participants
18.10. 2014	Pula	23
19.10.2014	Pazin	25
25.10.2014	Poreč	10
Total		58

A total of 58 physicians participated in the group training in the Project initial phase. All educated physicians received a certificate about the training they completed and a certificate that they participated in the Project LOVE YOUR HEART. Every physician who participated in the Project received an office label which informed their patients that a Project was being conducted in that office.

III. PROFESSIONAL SUPERVISION AND MONITORING

Besides this basic training, additional training was delivered to those family physicians/GPs who required it and to those who joined the Project later. This training was delivered in small groups or individually, and was conducted by Morena Butković and Karmela Bonassin.

Additional training

Time	Place	Number of participants
1– 23. 12. 2014	Pula	26
1- 23. 12. 2014	Pula surroundings	10
12.2.2015	Pula	9
4.3.2015	Rovinj	7
6.3.2015	Umag	6 physicians and 1 community nurse
11.3. 2015	Labin	6
1- 31.3 2015	Pula	15
Total		80

Having completed their training, 69 family physicians started working in the Project "Implementation of the information system LOVE YOUR HEART among family physicians/general practitioners (GPs) in the County of Istria".

At the start of working in the CVD risk panel, local coordinators were in contact with the physicians on a daily basis. They explained how the panel should be filled in. At that time all software solutions had not been completely operational yet, resulting in difficulties in filling in the panels.

In order to follow up the Project and synchronize activities, a meeting of family medicine physicians/GPs, the Region of Istria representatives, the Project leaders and other participants in the Project. Every physician who participated in the Project was personally invited by local coordinators. Work and Project results were presented at the meeting. Invitation for the meeting with the topics of lectures and lecturers' names is enclosed.

The conclusion was that family physicians/GPs would refer their patients to workshops because the information system enabled direct connections between the physician and the Centre for CVD prevention in Istrian health centres. Workshop leaders (community nurses, a nutritionist, a physiotherapist and a psychologist) would then invite patients to workshops after they formed an organized group.



The work of the cardiology outpatient facility LOVE YOUR HEART in the Pula General Hospital was also presented. Good communication and cooperation between the family physician and the cardiologist was emphasized and the outpatient facility results were presented.

The next meeting with the participants in the Project was held on 16 September 2015. Invitation for the meeting with the topics of lectures and lecturers' names is enclosed.

The meeting was preceded by telephone calls to all 39 physicians who filled in five or more CVD risk panels. They were presented with notes of gratitude for participating in the Project. The aim of the meeting was also to motivate the physicians to continue with their work on CVD risk panels, and to explain that the project continued till the end of 2015.

IV. PILOT PROJECT EVALUATION

The total of 58 family physicians filled in the CVD risk panel and gathered information about 2,561 patients in the period from 1 October 2014 until 15 December 2015.

In the LOVE YOUR HEART CVD risk panel, it was necessary to enter the data about CVD in the family, diagnosed CVD, CVD diseases, peripheral vascular disease and diabetes for each patient. The following CVD risk factors were included: BMI, abdominal obesity, smoking, alcohol consumption, systolic arterial blood pressure, physical activity, stress, triglycerides, total cholesterol, LDL and HDL cholesterol. Based on the presence and the extent of CVD risk, total CVD risk was determined for each patient following the Score table.

For 2,561 patients, physicians entered 19,036 risk factors, i.e. 7.43 risk factors per patient.

Distributions of family physicians/GPs according to the number of patients included in the CVD panel:

Number of physicians	Number of patients
7	More than 120
3	100-119
8	51 -99
7	21- 49
33	1-20

Structure of patients according to their age and sex:

Gender	Age of patients included in the Project								Total
	-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94	
M	6	37	210	453	436	53	12	3	1,210
% per row	0,50	3,06	17,36	37,44	36,03	4,38	0,99	0,25	100
% per column	37,50	49,33	52,50	47,53	45,18	50,00	28,57	75,00	
F	10	38	190	500	529	53	30	1	1,351
% per row	0,74	2,81	14,06	37,01	39,16	3,92	2,22	0,07	100
% per column	62,50	50,67	47,50	52,47	54,82	50,00	71,43	25,00	
Total	16	75	400	953	965	106	42	4	2,561

Distribution of patients according to their age and sex corresponds to epidemiologic indicators for Croatian population. Most patients are 45 to 64 years old, while women prevail in older groups. Workshops for weight loss, physical activity, counseling with nutritionists and the workshop LOVE YOUR HEART are a new form of work in the prevention of CVD risk factors. The success of non-pharmacological interventions which require changes in life habits is relatively moderate, since the motivation of patients for these changes is a problem, which is in compliance with the findings of many studies. In the Project LOVE YOUR HEART, the Centre for CVD prevention in Istrian health centres was established in Pula, while for the patients from other parts of Istria, workshops were organized in the branch offices of Istrian health centres.

Out of the total of 117 patients registered for workshops, 62 (53%) attended these workshops, while others are on the waiting list.

Distribution of patients referred to workshops according to workshop types and attendance:

Type of workshops	Number of workshops	Number of sessions	Number of registrations	Number of attendants
Counseling with the nutritionist	15	42	15	12
Physical exercise	5	143	8	8
Love your heart	6	42	34	19
Weight loss	6	34	60	23
Total	32	261	117	62



Detailed professional evaluation of the Project was done by Professor Josipa Kern - expert in the field of medical informatics and Professor emeritus Silvijs Vuletić - expert in the field of medical statistics and Public Health. Please find the evaluation report enclosed (Annex 3).

V. DISSEMINATION OF PROJECT RESULTS AMONG PROFESSIONALS

Dissemination meetings about project results of the professionals in the County of Istria were held as described above on 7 February and 16 September 2015 for family physicians/GPs and other professionals in Pula.

At the round table during the ATGP/FM Congress from 13 to 15 March 2015 in Zagreb, titled "Work organization in family medicine", Prof. Sc.D. Biserka Bergman Marković, MD, reported about the "Implementation of the information system LOVE YOUR HEART among family physicians/general practitioners (GPs) in the County of Istria", especially emphasizing that the project is a good basis for the National programme of CVD prevention.

At the Congress of the Croatian Association of Family Medicine of the Croatian Medical Association held in Vodice, Croatia from 1 to 3 October 2015, in the concluding discussion about the prevention panel and chronic diseases panes, Prof. D.Sc. Milica Katić, MD, reported about the project "Implementation of the information system LOVE YOUR HEART among family physicians/general practitioners (GPs) in the County of Istria", emphasizing that the project was valuable because of its comprehensive character which includes the work of family physicians, community nurses, cardiologists and public health activity in the community.

Morena Butković, MD, presented the course of the positioning of family physicians in Istria in the LOVE YOUR HEART Project at the Congress Health and Health Protection 2015-2030 FUTURE in Opatija, Croatia on 28 November 2015.

Representative of the ATGP/FM will present the results of this project at the Final meeting of the Project LOVE YOUR HEART in Pula, Croatia on 21 January 2016.

VI. PRESENTATION OF PROJECT RESULTS TO THE NATIONAL LEVEL

A meeting related to the activities of the prevention of cardiovascular (CVD) diseases, where ATGP/FM presented work on the Project LOVE YOUR HEART was held at the Croatian Ministry of Health in Zagreb on 8 January 2015.

Results of work in the Project LOVE YOUR HEART were presented at the meeting of the Team in charge of the Action plan for the prevention of chronic non-infectious diseases, held at the Ministry of Health on 10 July 2015. A similar presentation was delivered at the meeting held in the Ministry of Health on 14 July 2015. The meeting was about the improvements in following up cardiovascular diseases where the population approach compared to individual approach was discussed in panels intended for family medicine physicians/GPs.

The symposium "Early detection and prevention of cardiovascular diseases in family medicine" was held in Zagreb on 14 December 2015. It was organized by the Croatian Public Health Institute, Croatian Health Insurance Fund and the Association of Teachers in General Practice /Family



Medicine, under the auspices of the Ministry of Health of the Republic of Croatia. At this symposium, the results of the Project LOVE YOUR HEART were presented in two presentations.

ANNEXES

- Annex 1. - Reports of the information system as on 15 December 2015.
- Annex 2. – PPT Presentations by ATGP/FM from congresses
- Annex 3. – Professional statistical evaluation from 31 December 2015.
- Annex 4. – Invitations to meetings and programmes

Prof. Biserka Bergman Marković