

Research Implementation Plan Croatia

What is the most appropriate payment system to increase access, availability, competency and outcome indicators of family medicine in Croatia?

Background and significance

Facts about Croatia¹

CROATIA	2017
Population, million	4.1
GDP, current US\$ billion	54.9
GDP per capita, current US\$	13,297
School Enrolment, primary (% gross)	98.0
Life Expectancy at Birth, years	78.1

Currently there are around 2300 family medicine doctors (GPs), 50% of whom have completed family medicine residency. They care for about 4 million citizens. Primary health care also includes paediatricians and gynaecologists. Family medicine doctors are not involved in care for the sexual health of women, nor provide antenatal care. In rural areas they do care for pre-school children, but not urban. About 75% work in private practice under the control of Croatian Health Insurance Fund (CHIF) (the only health insurance agency in Croatia). All others work for primary health care centres. In Croatia there are five Associations with family doctors as members, one foundation and four family medicine departments.

Croatia is the cradle of modern family medicine, with the first postgraduate course initiated by Dr Zivko Prebeg in 1951.² This was among the first courses of that type in the world. Prof Ante Vuletic devised and promoted the three-year training course for general practice which started in Zagreb in 1961, and this course influenced family medicine education in Great Britain.³

During the Communist era, primary health care (PHC) was within the state sector organised in a similar way to the Soviet Russia Semashko model.^{1,2}

In 1952 the first primary health center was established in ex-Yugoslavia, in Zagreb, Croatia. During the late eighties of last century patients were given the right to choose their preferred doctor. Health insurance was granted to every citizen of Yugoslavia. Citizens were entitled to equal health insurance and the primary health network covered the whole country, which remains the case today in Croatia. At the time, cost-effectiveness of the primary health centre was not a priority, nor was the number of teams of GPs nor the quality of care provided. All costs were covered by the state. The numbers were not public knowledge. With changes of the social system and introduction of free market mechanism into the public sector, the primary health care system also changed. In 1997 it was decided to privatise primary health care. At first, primary care doctors were financially compensated according to number of patients seen, with little done to monitor the quality of health care services.⁴ By this process, doctors were given independency, and team work was brought to a minimum.

From 2013 the financial structure was changed to a fixed income for running a practice, which made up 43% of total income (including salary for the nurse, minimal wages for the GP and other material expenses and variable income). The latter includes capitation fee (20%) and diagnostic and therapy procedures (DTP) (29%). DTP includes advisory work and

extended medical examinations (treatment of patients with three or more diagnoses) and intramuscular injections. In 2015 1,500,000 muscular injections were administered, mainly for pain treatment, whereas only 37,000 spirometry were administered.⁵

Four percent of medical practice revenue is generated by key indicators of success and work effectiveness: number of allowed sick days (by CHIF), prescribing antibiotics (according to quantity and price and not according to prescribing the antibiotics according to guidelines). Follow-up on patients with chronic non-communicable diseases (hypertension, COPD, diabetes mellitus type 2) through follow up of laboratory parameters, BMI, arterial blood pressure, life style check. There is no autonomous follow-up of patients referred to hospital. GPs who refer all their patients to hospital doctors may earn the same as those who provide all the treatment within their own practices, and hence many refer directly to the hospital, a fact to which the World bank drew attention.⁶ Patients also provide pressure to be referred to hospital doctors.⁷ Long waiting lists for certain specialists is a significant problem, plus the inability to make direct referral for services such as colonoscopy, gastroscopy, and MRI, which require mandatory recommendations from hospital specialists. This reduces accessibility to medical care and increases the cost of medical treatments for citizens for treatment in private clinics.

The common public perception of family doctors is that they serve to refer patients to hospital doctors, and provide therapies prescribed by hospital doctors. Local politicians rarely mention the need for strengthening the position of family medicine, and more often they mention the importance of easier access to hospital doctors.

Available data is an issue. For example, it is not possible to obtain the data about the numbers of asthma and COPD patients, as they fall within the same group of diagnosis according to Croatian Institute for Public Health, who collects the data. Therefore we cannot know how many family doctors autonomously treat these two conditions. On the other hand, according to OECD one of the indicators of quality of work of PHC is a number of patients needing to be hospitalised for these conditions.⁸

Currently there are discussions regarding a new law regulating health care in Croatia. It is proposed that all CPs should run private practices. It is not known how many doctors working for primary care centres are satisfied with this proposal, because this has not been researched. Views are being expressed by certain interest groups and patient associations. Some are motivated by sustainability of their positions (eg directors of primary medical centres), and others by fear of losing present public health benefits. Doctors working for primary health centres have lower income, are unable to choose medical equipment for their practices, and it is far more difficult for them to attend special education.

This study aims to determine the most appropriate payment system to increase access, availability, competency and outcome indicators of family medicine in Croatia.

Specific Aims:

1. To assess the attitude and knowledge of patients, doctors (family medicine, public health, hospital doctors), directors of primary care centres, insurance companies, local and state politicians, non-government associations about the role, involvement and placement of family medicine in the health system.
2. Develop proposed financing plan for general practitioners, based on results from the first aim.

Study Design

Targeted population (stakeholders)

1. Family doctors, other medical doctors in the health system
1. Patients
2. Local and state politicians
3. Directors of primary care medical centres and insurance representatives

Note: the Association of Employers in Healthcare operates in Croatia, as well as an Association of Mayors and the Croatian County Association are enabling quality data collection.

Methodology

Mixed method design

1. *Analysis of existing data and comparative analysis of different payment systems in the world* (literature review)⁸
2. *Questionnaires for target groups*⁹
3. *A self-administered questionnaire* will be designed and develop according to International Association for Medical Education (AMEE) Guide.¹⁰ Following the literature review, the interviews with prospective family physicians will be performed to receive valuable expert input during design process. Questionnaire items will be written, but in order to improve the overall quality and representativeness of the questions, three methodology experts will be asked to systematically review the questionnaire's content.
4. *Focus groups for target groups* Consolidated criteria for conducting and reporting qualitative research (COREQ) will be used for conceptualising the study.¹¹ At the beginning of each focus group meeting, the topics to be discussed will be introduced. Discussions will be conducted in a closed-door room, around a circle seating conference table. A semi-structured question interview guide will be used in the study to elicit FPs' opinions, beliefs and attitudes. The discussion will commence by asking open-ended questions about the payment methods.
5. *Analysis of surveys and focus group data*
6. *Development of proposal for general practice financing*

Appropriate statistical methods will be used for all quantitative data sets. Ethical approval will be gained as relevant.

Potential research team

1. Tanja Pekez-Pavlisko – Project design and survey, PhD student, family physicians
2. Dinka Jurisic – dissemination, article design, PhD student, family physicians; dinka.jurisic@hotmail.com
3. Maja Racic – Study Design, methodology, Phd, Professor, former Vice Dean of Medical school East Sarajevo, Bosnia and Hercegovina; porodicnamedicina@gmail.com

4. Nemanja Rancic – Methodology, Statistics; Assistant Research Professor , MD, PhD, Faculty of Medicine of the Military Medical Academy, Belgrade, Serbia
nece84@hotmail.com
5. All – survey and article preparation

The project implementation will be carried out by students of medicine, political science and economics.

Partners

Associations of Family Medicine doctors in Croatia, patients, Croatian Medical Chamber

Overview of the work plan

1. Survey design 1st and 2nd quarter
2. Survey distribution 1st and 2nd quarter
3. Survey analyses 3th and 4th quarter
4. Design of proposal for financing Family Medicine doctors, design of survey 5th quarter
5. Text design for policy makers and the public – 5th quarter
6. Publishing at conferences, journals 3-5th quarter

Barriers to implementation

1. Low rate of response to survey by various groups
2. Need to convince policy-makers on the significance of this project

Dissemination of results

1. Pamphlets and articles for policy makers
2. Articles in scientific journals
3. Collaboration with journalist and results announcements
4. Implementing project awareness through conferences

References

1. The World Bank. The World Bank in Croatia. 2018.
<http://www.worldbank.org/en/country/croatia> (accessed Jun 2018).
2. Borovecki A BB, Oreskovic S. 75th Anniversary of Andrija Štampar School of Public Health – What Can We Learn from Our Past for the Future? *Croatian Medical Journal* 2002; **43**(4): 371-3,.
3. Horder J. Professor Ante Vuletic, MD. *J Royal Coll Gen Pract* 1977; **27**(185): 766.
4. Bergman-Markovic B, Katic, M., Blazekovic-Milaković, S., and Petric, D. Ten Years after “Privatization” in Primary Health Care *Acta Med Croat* 2007; **61**(1): 1-6.
5. Vrdoljak D, Bergman-Marković B, Cikač S. Family medicine team administrative and medical scale of work. *Medica Jadertina* 2012; **42**(1-2): 5-12.
6. The World Bank Group. World Bank – Croatia Partnership Country Program Snapshot, 2016.
7. Kolozsvári LR, Orozco-Beltran D, Rurik I. Do family physicians need more payment for working better? Financial incentives in primary care. *Atencion primaria* 2014; **46**(5): 261-6.
8. OECD. Health Care Quality Indicators - Primary Care. 2015.
<http://www.oecd.org/els/health-systems/hcqi-primary-care.htm> (accessed Jul 2018).
9. Croatian Public Health Institute (HZJZ). HZJZ: Periodical Publications. 2018.
<https://www.hzjz.hr/cat/periodicne-publikacije/> (accessed Jul 2018).

10. Artino AR, Jr., La Rochelle JS, Dezee KJ, Gehlbach H. Developing questionnaires for educational research: AMEE Guide No. 87. *Medical Teacher* 2014; **36**(6): 463-74.
11. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007; **19**(6): 349-57.