

Country Profile Croatia

Community-based Mental Healthcare Networks: Key Facts and National Priorities

Author(s):	Lead author: <i>Ana Ištvanović, Danijela Štimac Grbić</i> Co-authors: <i>Petra Čukelj, Maja Silobrčić Radić, Lara Petković, Roberto Mužić</i>
Version:	1.1
Date:	09.10.2023

Contents

Introduction.....	2
1 Situation Analysis (SA).....	3
1.1 Country, Health and Social System at national level.....	3
1.2 Mental Health System at national level.....	3
1.3 Health and social structure in pilot area.....	5
1.4 Community-based mental health care at pilot level.....	6
2 Needs Assessment (NA).....	8
3 Reflection on SANA results.....	9
4 Prioritized measures for pilot implementation.....	10
5 References.....	11
6 Corresponding authors.....	13

This report arises from the Joint Action on Implementation of Best Practices in the area of Mental Health, which has received funding from the European Union through the European Health and Digital Executive Agency (HaDEA) of the European Commission, in the framework of the Health Programme 2014-2020, GRANT NUMBER 101035969 — JA-02-2020. The content of this report represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the HaDEA or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

Introduction

The EU-Co-funded “Joint Action on Implementation of Best Practices in the area of Mental Health”, short **JA ImpleMENTAL** has a duration of 3 years, lasting from October 2021 to September 2024. Detailed information can be found at the project’s website [JA ImpleMENTAL \(ja-imental.eu\)](https://ja-imental.eu). It aims to promote and improve mental health structures, services, capacity and outcomes in participating countries in 2 specific areas:

- mental health reform (promoting community health services) and
- suicide prevention.

Two national best practices - mental health reform in Belgium and the Austrian suicide prevention programme SUPRA - serve as best practice examples. Selected components of these should be prioritised and implemented over the course of the JA in 14 i.e. 17 participating EU-countries. JA ImpleMENTAL comprises six Work Packages (WPs), four horizontal WPS and one for each best practice. WP5 on community-based mental healthcare aims to implement elements from Belgian Mental Health Reform, which is based on the principle of deinstitutionalization, i.e., the transition from care primarily provided in institutions to community-based care in order to improve mental health outcomes and quality of life and avoid unnecessary hospitalizations. In addition, the reform is based on the principles of rehabilitation and inclusion, decategorization, i.e., multisectoral cooperation, strengthening care in hospitals to make stays shorter, but with more intensive treatment, and the principle of consolidation, providing funds for pilot projects.

The present country profile is one of the major deliverables of the JA, presenting key facts of the national and local mental health system. It summarizes results of the recent situation analysis and needs assessment (SANA), lists lessons learned, recommendations, challenges and opportunities as well as outlining next steps necessary to scale-up, promote national/regional community-based mental health care services. The country profile forms a basis for strategy formulation, decision-making and commitment.

This country profile is based on a situation analysis conducted in two parts and subsequent needs assessment. For the situation analysis, two questionnaires have been developed by WP5, one for the analysis of the situation regarding the overall health system and community-based mental health care at national level, and another one for the analysis at implementational level. Following the data collection, a SWOT analysis was conducted by the countries to assess the needs in terms of community-based mental health care.

SANA part 2 was conducted in the months before the trainings for the implementation of the selected intervention in order to gain a better insight and ensure the best possible outcome of the pilot intervention.

1 Situation Analysis (SA)

1.1 Country, Health and Social System at national level

Localized centrally in Europe, Croatia is a republic consisting of 4 regions and 20 counties, with the capital City of Zagreb acting as the 21st county.

The Croatian War of Independence from 1991 to 1995 led not only to an increase in exposure to traumatic events, but also to an increased number of unlegalized firearms (2). The pandemic of COVID-19 in 2020 occurred simultaneously with a devastating earthquake in Zagreb in March of the same year, followed by an even stronger earthquake in Petrinja in December, which put further strain on the healthcare system.

Table 1: Mid-year population estimates for 2021, number of persons by age and sex (1)

Age group	Sex		Total
	Male	Female	
<18	343,666	325,028	668,694
18 - 64	1,163,872	1,179,188	2,343,060
65+	360,417	506,810	867,227
Total	1,867,955	2,011,026	3,878,981

Healthy life expectancy is low when compared to other EU countries, 58.5 at birth, and 5 at age 65 (3). A total of 19.9% of the population is at risk of poverty and social exclusion (4). The proportion of numbers of YLD due to mental and substance abuse disorders to number of YLD due to all causes in 2019 in Croatia was 4.85% (5). Income inequality, expressed as the Gini coefficient, was 29.2 in 2021, close to the EU27 value of 30.1 (6), and total healthcare expenditure relative to GDP was 7.8% in 2020, lower than the EU value of 10.9% (7). The Croatian Health Insurance Fund (CIPH) provides mandatory health insurance, financed by the mandatory contributions of 16.5% of gross salary paid by the employer for each employee (8) and voluntary complementary health insurance of around 10 € a month, depending on the provider. Access to healthcare is free for most of the population, but the number of healthcare professionals is lower than in the EU (9) leading to long waiting times.

1.2 Mental Health System at national level

In the end of 2022, the Croatian government adopted the Strategic Framework for Mental Health Development for 2022-2030 period. There are five main areas in this document for which measures have been listed. These areas are: Preservation and improvement of mental health, Prevention and early recognition of mental health problems, Increasing the availability of effective psycho-bio-social interventions with respect for human rights, Community mental health care and Ensuring efficiency. On the basis of this document and list of measures, action plans can be developed for different aspects of care provision and organization (10). An action plan for Community based mental health has already been drafted but is still not in effect. In 2017 a Twinning project named “Ensuring optimal health care for people with mental health disorders” ended in Croatia. Guidelines for Community Mental Health Care, early Recognition and Child and Youth Mental Health Care were published as a result (11). There is no standalone policy, strategy or plan for child and/or adolescent mental health and no procedures for a smooth transition between child/adolescent to adult mental health services at this point, but the development of a mental health action plan for children and youth is planned for the future. Beside the Healthcare Law, which defines rights and obligations of persons in the use of health care in Croatia

there is also a law on the Protection of Persons with Mental Disabilities (12). All collaboration between government mental health services at national level and other ministries, services and sectors is on voluntary basis. Mandatory health insurance in Croatia covers over 95% of the population. Services and hospitals are contracted by the Croatian Health Insurance Fund. Citizens of the republic of Croatia have the right to free health insurance, which is used by the majority. All treatments in public hospitals are covered and Croatian insurance fund has contracts with some private polyclinics for certain medical services. There is no published data, and therefore no reference, for total government expenditure on mental health. However, according to an internal report made by CHIF (Croatian Health Insurance Fund) in 2019, their total expenses (as the only insurance fund in Croatia) were 26,526,450,572 HRK, and expenses made by CHIF for mental health were 628,856,415.44 HRK, 2.3 % of total expenditure on health. Persons with severe mental health conditions that have the status of persons with disability, have several forms of support available, according to the degree of disability and their specific situation. This includes the right to financial allowance for disability, right to housing or organized housing, domestic assistance, psychosocial support or personal assistance (13). According to results of the European Health Information Survey, 2.9% of the population with mental health care needs in 2019 could not access mental health services due to financial reasons, which is an increase from 1.7% reported in 2014, but still under the EU27 average of 3.2% (14).

Mental health care in Croatia is organized on the primary, secondary, and tertiary level. On primary level, family physicians can refer patients to a psychiatrist or a clinical psychologist. County health institutes also have services for mental health protection, prevention, and outpatient treatment of addiction with multidisciplinary teams, that can be used without a physician’s referral. Hospital resources for mental health are presented in Table 2.

Table 2: Facilities, number of beds and hospital admissions related to mental health (15)

Indicator at national level		Number	Rate per 100,000 adult/minor population
Mental health hospitals	Facilities	7	0.22
	Beds	2,975	92.67
	Admissions	15,908	495.53
Psychiatric wards/units of general hospitals	Wards/units	22	0.69
	Beds	701	21.84
	Admissions	12,072	376.04
Mental health community residential facilities	Facilities		
	Beds		
	Admissions		
Mental health inpatient facilities specifically for children and adolescents	Facilities	1	0.15
	Beds	37	5.53
	Admissions	750	112.16
Mental health community residential facilities specifically for children and adolescents	Facilities		
	Beds		
	Admissions		

*Included in this number are also beds for minors, although a very small fraction with no official data on the number

**There are no Mental health community residential facilities in Croatia. In the social welfare system of the Republic of Croatia, there are homes for adults with mental disorders (mentally ill persons) and state homes of social care for children and younger adults with behavioral problems

Table 3: Mental health workforce (16)

	In MH service (all)		In child & adolescent MH services (totals of government and non government services)	
	Total number	Rate per 100.000 adult/minor population	Total number	Rate
Psychiatrists	529	12.81	-	-
Child psychiatrists	-	-	53	6.6
Mental health nurses	1,831	44.33	-	-
Psychologists	234	5.67	-	-
Social workers	55	1.33	-	-
Speech therapists	-	-	-	-
Occupational therapists	-	-	-	-
Others	153	3.7	-	-
Total	2,802	67.84	289	35.96

*All the data on this table is from the Mental Health Atlas 2020

1.3 Population profile in pilot area

The city of Zagreb is the largest city in Croatia and the capital. According to the data from 2021 population of Zagreb is 767,131. City of Zagreb is the cultural, scientific, economic, political and administrative center of Croatia with the seat of Parliament, President and Government of the Republic of Croatia (17). The pilot area is defined as the west part of the City of Zagreb (city areas Črnomerec, Trešnjavka, Podsused-Vrapče).

Table 3: Population structure in 2021 of pilot area expressed as number of persons, by age and sex (18)

Age group	Sex		Total
	Male	Female	
<18	17,726	16,714	34,440
18 - 64	59,210	65,185	124,395
65+	16,609	25,848	42,457
Total	93,545	107,747	201,292

* Croatian Bureau of Statistics, mid-year population estimates for 2021.

The unemployment rate for the city of Zagreb in the last three months of 2022 was 5.5% in the age group from 15-74 (19). The life expectancy is **79.6** years on average for women and **73.4** years for men on the national level (20).

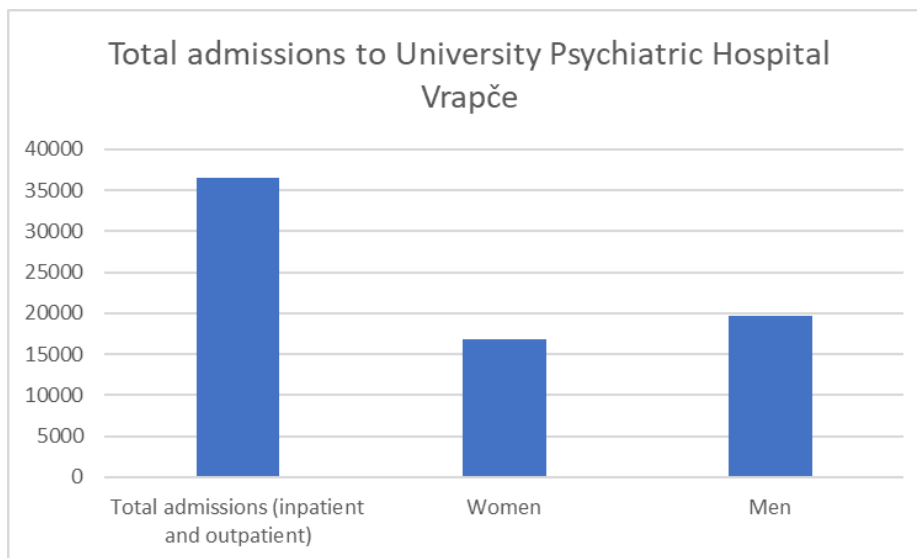
Our pilot area is densely populated urban area in Croatia. Although there are differences between different parts of Zagreb, they are negligible when it comes to differences between the city of Zagreb and the Croatia as a whole. According to the data available, the unemployment rate was lower in city of Zagreb than at the national level. Unemployment rate in the City of Zagreb in 2019 was 5.4%, which is its lowest level since 2013, when it was 11.9%. Never the less, population that is aimed to be targeted within this project (people with mental health disorders after the discharge from mental health hospital) is of significantly lesser socioeconomic status/profile than the average member of the whole population of the piloted area (west part of the City of Zagreb) - in terms of - lower educational level (overall and health related in terms of literacy), poorer living conditions (both physical and social ones), greater rates of unemployment, lower overall health, higher rates of comorbidity (both in terms of physician and mental [including substance abuse] disorders), etc.

1.4 Community-based mental health care at pilot level

As described earlier, all services in Croatia are defined on the national level. The New Strategic Framework for mental health has been adopted in Croatia in 2022. On the basis of this document action plans can be developed for different aspects of care provision and organization. An action plan for Community based mental health has already been drafted but is still not in effect. Urban areas, especially the city of Zagreb, have more available services than rural areas of Croatia. A new action plan for mental health of children and adolescents is currently under development. Furthermore, a working group for the protection of mental health of young people of the Youth Council of the Government of the Republic of Croatia has been established and has been working on the development of the overview of the situation, trends and recommendations for the creation and improvement of policies and actions in the field of mental health protection of young people. One of the main mental health care providers in the pilot area is the University Psychiatric Hospital Vrapče (UPHV), the oldest and biggest, in clinical, academic and research sense, self-standing psychiatric institution in the Republic of Croatia. It cares only for adult patients and was founded in 1879. On a daily basis it serves around 1,200 patients (for half of them within inpatient services while for another half within outpatient services). Beside UPHV there is also University Psychiatric Hospital 'Sveti Ivan' for care provision on the tertiary level and one general hospital for care provision on secondary level. Care on the primary level is provided by the Institute of public health of the City of Zagreb by its department for mental health and addiction prevention. The institute has offices on four locations in the city. Also, on the primary level provision of care is provided by the health care center Zagreb West. From the last data available online (2016) there were 49 teams of general practitioners. In the western part of Zagreb, there are day hospitals, a polyclinic, an outpatient department within the UPHV, and there is a community mental health care center in the health care center Zagreb West (only Community based mental health care center in Croatia). Most of our outpatient services are hospital based. According to the data from UHPV for 2022 there was 7.7% of involuntary admissions to number of total admissions in this institution. Follow-ups are most often conducted as an outpatient service in UPHV. Patients are given instructions to contact their GP after the discharge from the hospital to get the prescription and follow-up referral. After that, the patient goes to follow-up following the instructions given to him/her on the discharge paper. According to the data from UHPV 51% - 75% of discharged inpatients received a follow-up outpatient visit within one month. For now, cross-sectoral collaboration and also vertical and horizontal connection of the system is missing. Most often the connection between these two levels is patient her/himself. In order to improve collaboration with the service users as well as NGOs and ensure their participation their representatives are included in working groups for the development of strategic documents in the field of mental health. School

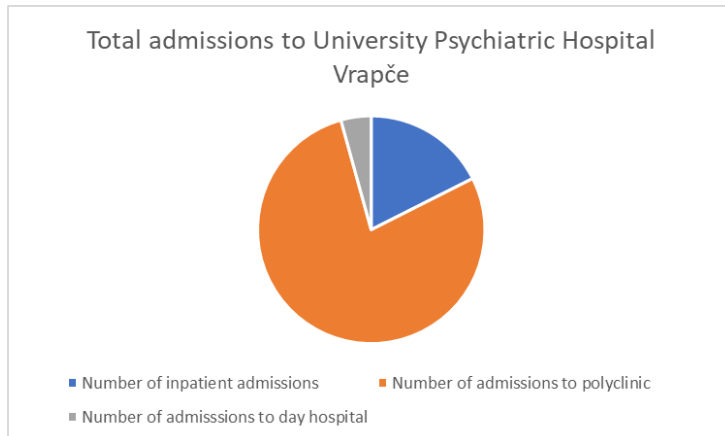
medicine doctors do regular check-ups of students in their care. In 2020, as a part of this check-ups (for certain age groups), screening for risks in mental health of students at systematic examinations was implemented as a pilot. Screening is carried out with a short standardized YP-CORE questionnaire that every student fills out during the systematic examination. If the school doctor determines a risk in the area of mental health, he refers the student to further processing and treatment. By virtue of the 2022 Health Care Act, the Croatian Institute of Public Health is the responsible institution for public health statistics. Data is collected from primary, secondary and tertiary health care institutions for all services funded by the Croatian Health Insurance Fund (CHIF). Data that are collected are closely connected with services rendered (diagnosis, therapy, length of stay etc.). Health databases and registries that are held at CIPH which have data related to mental health and provision of care are: Croatian Registry of Psychoses (state register and is a special health-statistical instrument for long-term individual monitoring; it tracks data on persons residing in the Republic of Croatia who suffer from schizophrenia or schizoaffective disorders (dg. F20. * and F25. *, ICD, X rev.), and are treated in inpatient health care institutions), Croatian Registry of Committed Suicides, register of persons treated due to the abuse of psychoactive drugs (data is collected using the Pompidou form), Register of Healthcare Professionals, Healthcare Institutions and Equipment, Register of Persons with Disabilities. Monitoring of the use of primary health care using data collected through Central health information system of the Republic of Croatia (CEZIH), and specialist and hospital healthcare (secondary and tertiary level) through patient-statistical form (BSO forms). This way, it is possible to assess the use of health care due to diagnoses related to mental disorders that were recorded during the contact with health care, either as the main diagnosis, or as an additional diagnosis.

Figure 1: Number of annual inpatient admissions by gender



*Data for 2022 for University Psychiatric Hospital Vrapče

Figure 2: Number of annual admissions by type



*Data for 2022 for University Psychiatric Hospital Vrapče

Table 4: Total number of MH workers in your pilot area

	In MH services (all)		In child & adolescent MH services	
	Total number	Rate per 10.000 total population of pilot area	Total number	Rate per 10.000 total population of pilot area
Psychiatrists	79	3.9	----	----
Child psychiatrists	---	---	-	-
Mental health nurse	342	17.0	-	-
Psychologists	11	0.5	-	-
Social workers	11	0.5	-	-
Speech therapists	0	0.0	-	-
Occupational therapists	0	0.0	-	-
Others	6	0.3	-	-
Total	449	22.3	-	-

*Data for 2022 for University Psychiatric Hospital Vrapče

2 Needs Assessment (NA)

Based on the results of the Situation Analysis, we performed a Needs Assessment using the SWOT table methodology to explore strengths, weaknesses, opportunities, and threats related Community-based MH in Croatia. Needs Assessment was done by the Implemental JA team at CIPH.

Table 5: SWOT Analysis

Factor	Contents				
Strengths	1. Long tradition of social medicine concept of healthcare	2. Many educated psychiatry professionals	3. Existing network on primary, secondary and tertiary level of care	4. Universal, free health care, including mental health care	5. Adoption of the Strategic Framework for Mental Health Development
Weaknesses	1. Vertical and horizontal connection of the system is missing: there is no communication, and quite often the knowledge about the existence of some services is not widespread	2. Communication Algorithms are not clear/well-defined: Early recognition; efficient treatment at the primary healthcare level; hospital treatment only for those who are really in need of it	3. Waiting times for psychological and psychiatric help, dependency on NGOs for service provision in mental health	4. Bureaucratization	5. Inadequate funding that often does not guarantee sustainability of the system: associations, project funding
Opportunities	1. Small country (more manageable)	2. Opportunity to disseminate results at national level	3. Changes in Croatian Health Low Act	4. Adoption of the Strategic Framework for Mental Health Development	5.
Threats	1. Resistance from the CHIF	2. Resistance from hospitals with large number of beds if there is no alternative	3. Slow administration	4. Bureaucratization and ensuring sustainability (financing)	5.

3 Reflection on SANA results

SANA results have confirmed what has already been known in regards to the mental health system in Croatia. As in most hospital-based systems, there is a lack of services on primary level of care. Care in the community should be organized in a way that facilitates and promotes participation and recovery. It is important to ensure continuity of care and follow up. Services should be transparent enough for service users to find them and understand how to approach them easily. The importance of mental health has been recognized and highlighted in Croatia in previous years, which led to, among other, to the adoption of the Strategic Framework for Mental Health Development. However, the efforts for implementing concrete, measurable actions in for provision of care on community level are still lacking. There are many established NGOs that provide free counselling and even psychotherapy to various vulnerable populations; e.g., people with cancer and their families, parents and children, young people, war veterans. However, they depend on sponsorships, EU projects and renewal of government funding, and are often situated in Zagreb or other large cities and therefore not widely available. There is even an NGO that has its own mobile team which consist of peer workers.

As stated earlier there is a lack collaboration between primary and secondary level. There are no specific protocols for collaboration and it usually depends on the individual provider of care. Very often there is almost no collaboration and these two levels function almost completely separately. There is lack of multidisciplinary care as well as continuity of care. Furthermore, people with mental health

disorders are still stigmatized in Croatia although progress has been made during the years. Stigma maybe higher with people who were hospitalized.

Box 1.

POTENTIAL SUCCESS FACTORS

- ✓ Community based mental health care centre in the health care centre Zagreb West

4 PRIORITIZED MEASURES FOR PILOT IMPLEMENTATION

1st Strategic Area: Ensure (strong) governance structures/mechanisms

- **Sub-strategic area 1.1.: Governance conditions (at pilot site)**
 - a) Sustainability: an action plan for Community based mental health, which has already been drafted, should be put effect and provide good basis for implementation of mobile teams on national level in the future and sustainability of the mobile team in the pilot area
- **Sub-strategic area 1.2: Building (consolidating or extending) and sustaining networks based on intersectoral, multidisciplinary and recovery-oriented approach (at pilot site)**
 - a) Stakeholder Collaboration and Engagement: *striving to establish a multidisciplinary team consisting of psychiatrists, psychologists, social workers, nurses and peer workers. Engage with healthcare authorities to ensure their active participation in planning, decision-making, and implementation. Regular communication and feedback mechanisms should be established to address concerns and ensure the intervention aligns with patients needs.*
 - b) coordination of the intervention: *Structure the local implementation process and implementation team at local level*
 - c) Improve participation of users/families in care provision - *recruitment, involvement of peer workers*

2nd Strategic Area: Development or transformation of MH services and interventions (incl. multidisciplinary approach)

- Sub-strategic area 2.1: Developing new (non-existing) OR transforming/adapting existing MH services (incl. reinforcement of multi-disciplinarity and improvement of evidence-base, quality, efficiency and continuity of services) in the areas of (five functions of the Belgian BP):
 - a) establishment of two mobile teams by the UPHV in summer of 2023
 - b) first patient follow-up in Autumn of 2023
- Sub-strategic area 2.2: Developing/strengthening a human-rights based and user-centred recovery approach in service delivery
 - a) Participation of users/families in definition of their "recovery pathway": provision of recovery-oriented care and involvement of users in the definition of the individual service plan
 - b) Nomination of a " case manager" as individual contact person of the user: to achieve the best possible coordination, advocacy or if need be crisis intervention individual case managers will be appointed to the persons using the services of mobile teams

- c) Definition and use of "Individual Service Plans: *Individual service plans will be used in community based mobile according to the implementation project*

3rd Strategic Area: Extensive global training programme of stakeholders (in support of the reform & cultural change in service provision)

- a) Distributing information on all relevant stakeholders on training & capacity building for (incl. training sessions, workshops, conferences, reflection days, seminars, thematic meetings, briefing, on-the-job training, internships abroad and coaching) if the same will be provided through out the project.
- b) Capacity Building: training on the FACT model was held online on 17th of March by the Institute "Mario Negri" for the mobile team members.

4th Strategic Area: Intensive continuous communication, information and awareness raising among/towards stakeholders and users (in support of the reform and a culture of change)

- a) Internal communication, information and awareness raising (i.e. among stakeholders/partners) : *Dissemination at regional level about the project to the relevant stakeholders*
- b) External communication, information and awareness raising (i.e. towards users and general public): *dissemination to general public about the project at regional level*

5th Strategic Area: Data collection, monitoring & evaluation

- a) Monitoring the implementation process at pilot level: *The progressive implementation of the best practice will be monitored*

5 References

- (1) Croatian Bureau of Statistics. Mid-year estimates of population, by age and sex. Retrieved on March 4, 2023, from:
https://web.dzs.hr/PXWeb/Menu.aspx?px_db=Stanovni%u0161tvo&px_language=hr
- (2) U Hrvatskoj ima najmanje pola milijuna komada raznog ilegalnog oružja?! Glas Slavonije n.d.
<http://www.glas-slavonije.hr/337218/1/U-Hrvatskoj-ima-najmanje-pola-milijuna-komada-raznog-ilealnog-oruzja> (accessed May 11, 2023).
- (3) Eurostat. Healthy life years by sex. 2020. Retrieved April 2, 2023, from
https://ec.europa.eu/eurostat/databrowser/view/HLTH_HLYE_custom_6169072/default/table?lang=en
- (4) Eurostat. People at risk of poverty or social exclusion. 2022. Retrieved May 10, 2023, from
https://ec.europa.eu/eurostat/databrowser/view/sdg_01_10/default/table?lang=en
- (5) Hrvatski zavod za javno zdravstvo. Odjel za mentalne poremećaje. Available at:
<https://www.hzjz.hr/sluzba-epidemiologija-prevencija-nezaraznih-bolesti/odjel-za-mentalne-poremecaje/> (Accessed: 17 May 2023).
- (6) Eurostat. Gini coefficient of equalized disposable income – EU-SILC survey.2021. Retrieved April 2, 2023, from
https://ec.europa.eu/eurostat/databrowser/view/ilc_di12/default/table?lang=en
- (7) Eurostat. Total health care expenditure.2021. Retrieved April 2, 2023, from
<https://ec.europa.eu/eurostat/databrowser/view/tps00207/default/table?lang=en>

- (8) Official gazette. Law on contributions. Available from: <https://www.zakon.hr/z/365/Zakon-o-doprinosima>. Accessed May 10,2023
- (9) OECD, European Observatory on Health Systems and Policies. Croatia: Country Health Profile 2021. OECD; 2021.
- (10) Ministry of Health. Strateški okvir razvoja mentalnog zdravlja do 2030. godine. Zagreb, November 2022. Available from: <https://zdravlje.gov.hr/UserDocImages/2022%20Objave/STRATE%C5%A0KI%20OKVIR%20RAZVOJA%20MENTALNOG%20ZDRAVLJA%20DO%202030..pdf>
- (11) Osiguravanje optimalne zdravstvene skrbi za osobe s mentalnim poremećajima - HZJZ. Available at: <https://www.hzjz.hr/wp-content/uploads/2018/04/Osiguravanje-optimalne-zdravstvene-skrbi-za-osobe-s-poremecajima-mentalnog-zdravlja-CRO-MHD.pdf> (Accessed: 17 May 2023).
- (12) Zakon o zaštiti osoba s duševnim smetnjama - Zakon.hr. Available at: <https://www.zakon.hr/z/181/Zakon-o-za%C5%A1titi-osoba-s-du%C5%A1evnim-smetnjama> (Accessed: 17 May 2023).
- (13) E-citizens. Social Welfare rights and services for persons with disability. [Internet]. 2023. Available from: <https://gov.hr/hr/prava-i-usluge-za-osobe-s-invaliditetom-iz-sustava-socijalne-skrbi/252>
- (14) Eurostat. Unmet needs for health care. 2019. Retrieved April 2,2023 from https://ec.europa.eu/eurostat/databrowser/view/hlth_ehis_un2e/default/table?lang=en
- (15) Croatian Institute of Public Health. Yearly report on a healthcare institution database. 2021. Retrieved in May 2023.
- (16) Mental health atlas 2020 - member state profile - world health organization. Available at: https://cdn.who.int/media/docs/default-source/mental-health/mental-health-atlas-2020-country-profiles/hrv.pdf?sfvrsn=6ea03878_6&download=true (Accessed: 17 May 2023).
- (17) Zagreb in brief (no date) Grad Zagreb službene stranice. Available at: <https://www.zagreb.hr/en/zagreb-in-brief/185627> (Accessed: 17 May 2023).
- (18) Popis stanovništva, kućanstava i Stanova (no date) Grad Zagreb službene stranice. Available at: <https://www.zagreb.hr/popis-stanovnistva-kucanstava-i-stanova/1043> (Accessed: 17 May 2023).
- (19) Rad-2022-3-1/4 Aktivno Stanovništvo u Republici Hrvatskoj U IV. Tromjesečju 2022. (no date) Državni zavod za statistiku. Available at: <https://podaci.dzs.hr/2022/hr/29254> (Accessed: 31 May 2023).
- (20) O'Neill, A. (2023) Croatia - life expectancy at birth by gender 2011-2021, Statista. Available at: <https://www.statista.com/statistics/970619/life-expectancy-at-birth-in-croatia-by-gender/> (Accessed: 31 May 2023).

6 Corresponding authors

Ana Ištvanović

Public health specialist

Division for School Medicine, Mental Health and Addiction Prevention

Croatian Institute of Public Health

ana.istvanovic@hzjz.hr

<https://www.hzjz.hr/en/>

Danijela Štimac Grbić

Public health specialist

Division for School Medicine, Mental Health and Addiction Prevention

Croatian Institute of Public Health

danijela.stim@gmail.com

<https://www.hzjz.hr/en/>