Evaluation of Croatian model of polycentric health planning and decision making

Šogorić, Selma; Džakula, Aleksandar; Vukušić Rukavina, Tea; Grozić-Živolić, Sonja; Lazarić-Zec, Danijela; Džono-Boban, Ankica; Brborović, Ognjen; Lang, Slobodan; Vuletić, Silvije

Source / Izvornik: **Health Policy, 2009, 89, 271 - 278**

Journal article, Accepted version
Rad u časopisu, Završna verzija rukopisa prihvaćena za objavljivanje (postprint)

https://doi.org/10.1016/j.healthpol.2008.05.015

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:105:242872

Šogorić, S., Džakula, A., Vukušić Rukavina T., Grozić-Živolić, S., Lazarić-Zec, D., Džono-Boban, A., Brborović, O., Lang, S., Vuletić, S. (2009) ***Evaluation of Croatian model of polycentric health planning and decision making.*** **Health Policy, 89 (3). pp. 271-278**

http://www.elsevier.com/locate/issn/01688510

http://www.sciencedirect.com/science/journal/01688510

http://dx.doi.org/10.1016/j.healthpol.2008.05.015

http://medlib.mef.hr/599

Evaluation of Croatian model of polycentric health planning and decision making

Selma Šogorić[1], Aleksandar Džakula[1], Tea Vukušić Rukavina[1], Sonja Grozić-Živolić[2], Danijela Lazarić-Zec[3], Ankica Džono-Boban[4], Ognjen Brborović[1], Slobodan Lang[5], Silvije Vuletić[1]

[1]Andrija Štampar School of Public Health, Zagreb, Croatia

[2]Istria County Administrative Department of Health and Social Welfare, Pula, Croatia

[3]Istria County Public Health Institute, Pula, Croatia

[4]Dubrovnik-Neretva County Department of Health and Social Welfare, Dubrovnik, Croatia

[5]Croatian National Institute of Public Health, Zagreb, Croatia

Correspondence to:

Selma Šogorić

Andrija Štampar School of Public Health

Rockefellerova 4

10 000 Zagreb

Croatia

Phone/Fax: + 385 46 84 213

ssogoric@snz.hr

Key words: decentralization; health policy; community health planning; health needs, health priorities; Croatia

Word count: 2 972 words

Background: During the 1990s, decentralization of health care system in Croatia neglected building capacity for health care planning and provision on a county level. The County Public Health Capacity Building Program was started in 2001 to increase county-level capacities for participative health needs assessment, health planning, and provision of health services tailored to the local needs.

Objective: To determine the progress in the development and implementation of health policies on a county level resulting from the learning-by-doing training provided through the Program.

Design: Modular training using management tools, public health theory and practice, and SMDP's Healthy Plan-*it*™ tool, followed by the self-evaluation of the progress made by county teams in health needs assessment and health policy development, implementation, and assurance.

Participants: Fifteen county teams consisting of politicians, executive officers, public health professionals, and community members.

Results: Twelve of 15 county teams completed the program. The teams made progress in the evaluated areas, although to a different extent, which did not depend on the amount of time they had or the governance experience. The differences in improvement depended on the differences in the strength of political, executive, and professional components of the teams. Teams with a strong political and/or executive component, but weak public health professional and community components made major improvements in policy development and/or assurance function, but performed less well in the health needs assessment and constituency building. The reversed was also true.

Conclusion: Learning-by-doing training program improved public health practices on a county level in Croatia.

Decentralization of health care system was a trend in Europe in the 1990s.[1] The pressure to reform and decentralize health care system was especially strong in the countries that inherited Semasko model of health care planning and management.[2,3] Croatian health care system, however, was organized differently.

During the last decades of socialism, Croatia developed a unique model of "self-managing communities of interest" based on both decentralization and citizen participation in health planning and decision making.[4] During the Homeland War, health care planning and provision were briefly centralized, but the inherited values of decentralization were embraced again in 1993 with the new Health Care Act.[5] The country was divided into 21 administrative units (counties), which became owners of health care institutions and thus legally responsible for health sector governance, but had no influence on the funding as it remained centralized and provided through the Croatian Institute for Health Insurance. In 1994, county governments established their own executive and administrative structure, including public services (education, health care, social welfare) departments. However, neither these administrative bodies, nor newly established county institutes of public health had a person or a team responsible for health care planning and provision.[6] In 1999, an expert panel reviewed the existing counties public health policy and practice and defined the framework for county capacity building.[7] After the Croatian Government set decentralization as the one of the priorities of the health care reform in 2000, Croatian Ministry of Health accepted the initiative by Andrija Štampar School of Public Health (the School) and Croatian Healthy Cities Network, as the main advocates of the bottom-up approach in health planning,[8,9] to develop a training program for the public health professionals, politicians, executive officers, and non-governmental organizations (NGOs) at county level. The "Health – Plan for It" County Public

Health Capacity Building Program (the Program) was approved in late 2001 and started in collaboration with the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, USA. The main goal was to increase county-level capacities needed for participative health needs assessment, health planning, and provision of health services tailored to the local health needs.[10,11] The assumption was that only through an active involvement of all key players, the process of development and implementation of county health policies could be improved (as prerequisite for a successful decentralization).[12]

Although the Program aimed to include all 21 counties, it had involved 15 counties and the city of Zagreb until February 2006. We present the impact of the Program on the development of the local public health policies and practice in these 15 counties.

METHODS

Fifteen teams, one from each county, entered the Program between March 2002 and April 2004, with a task to produce county health profiles and strategic frameworks with specific recommendations for addressing health care needs identified as priority. Each team consisted of 9-11 members – at least three political and executive representatives from county councils and departments of health and social welfare; 3-5 professional representatives from county institutes of public health, county hospitals and health centres, centres for social welfare, or elderly people homes; and three community representatives from NGOs, voluntary organizations, and the media. The counties were asked to select the team members themselves according to the guidelines provided by the training staff. As exchange of experience and creating partnerships was important part of the process, county teams were grouped in five

cohorts of three teams from different parts of Croatia and with different levels of experience in local governance.[10,11]

The program had the intervention phase (March 2002 – February 2006) and the evaluation (February 2006).

Intervention phase

The intervention phase of the Program consisted of modular training and follow-up with thematic gatherings (Figure 1).

Each cohort underwent four intensive four-day learning-by-doing training modules, which were held over an extended weekend once a month over a four-month period to minimize the participants' time away from job and allow them to assimilate the material and complete assignments between the modules. The material used for the training was a blend of management tools, public health theory and practice, and CDC's Sustainable Management Development Program "Healthy Plan-*it*™" tool.[13]

The training emphasized a multidisciplinary and inter-sectoral approach, community consultations ("bottom-up" approach), and use of naturalistic inquiry along with quantitative data analysis.[10,11]

After the fourth workshop, a tutorial system of guidance and monitoring was introduced for each cohort to help participants maintain their commitment to the training. Expert help and support during the development of county health profiles and strategic frameworks of the county health plan was provided by the School's faculty to each county team upon request. A county team was considered to have successfully completed their training after having written the county health profile and strategic framework of the county health plan and presenting them orally before the School's faculty, usually 3-6 months after the end of training.

The first three cohorts finished their modular training by mid-2003. The teams from these cohorts were then reduced to only three members – a political official, a civil servant, and a professional from a county public health institute. The reduced teams, called “troikas”, entered the follow-up stage. As the remaining cohorts were finishing the training, their teams were reduced to troikas and included in the follow-up. The teams had to be reduced to make the work during the follow-up possible, because trainers worked with all troikas together. Collaboration among troikas was strongly encouraged. From mid-2003 until the end of 2005, troikas regularly gathered to report on the progress and receive additional training and advice on how to steer the process of local change. In parallel to these meetings, thematic gatherings (workshops and joint applied research) were organized for extended troikas, which also included local experts in the field. The purpose of the thematic gatherings was to build capacity and ensure quality in the selection and implementation of public health interventions addressing the most frequently selected priority areas, such as breast cancer, quality of life of elderly persons, cardiovascular diseases, health care quality improvement, youth drinking, and mental health.

Evaluation methods and instruments

The Program’s impact was measured with the following instruments.

The Local Public Health Practice Performance Measures, or performance matrix, is a self-reporting instrument developed by the US CDC’s Public Health Practice Program Office.[14,15] It recognizes three main public health functions – assessment, policy development, and assurance – performed through 10 practices associated with 29 performance standards and indicators, which measure the effectiveness of local public health practices.[14] The School’s faculty translated the instrument into Croatian and adapted it to Croatian context. The instrument also allowed for commenting and

describing the existing practices. The performance matrix was applied at the beginning of the modular training to assess the existing public health practice (for the first cohort in March 2002, second in September 2002, third in January 2003, fourth in September 2003, and fifth in April 2004), and the second time at the evaluation workshop in February 2006 to assess the progress. The teams were briefed about the instrument and advised to take time, discuss thoroughly each practice, and come up with a numeric score and description of the present situation for each of the 10 practices. For non-existing public health practice, the score was 0; for an existing but unsatisfactory practice, the score was 1; whereas for satisfactory practice, the score was 2. Numerical scores from the first and second performance matrices were compared, as well as the results of content analysis of textual description of practices.[16]

Procedures are listed in chronological order that county teams had to carry out (Table 1). At the evaluation workshop, county teams were asked to indicate the procedures that were performed and provide written evidence to support it. The table was used to asses the overall progress and progress made in specific areas as follows (Table 1): (a) application of newly gained knowledge – procedures No. 1, 2, 4, 5, 6, 7, 8, 19, and 20; (b) development of new products – procedures No. 11, 12, 15, 16, 21, 22, and 24; and (c) establishment of a local project legitimacy – procedures No. 3, 9, 10, 13, 14, 17, 18, and 23.

Table 1 The list of procedures and the number of county teams completing a particular procedure during the "Health – Plan for it" County Public Health Capacity Building Program

No.	Procedure	Source of evidence	No. of counties	
1	Participatory health needs assessment conducted	county health profile	12/12	TRAINING PERIOD
2	Data used from routine health statistic, other information sources, equally qualitative and quantitative data	county health profile	12/12	
3	Project presented to general public at the beginning	newspaper clips, articles, radio / audio – video tapes	9/12	
4	Key stakeholders gathered and consulted	transcript from the consensus conference, press clippings	9/12	
5	Public health priorities chosen through the process of wider consultation (local politicians, professional groups, NGO-s)	county health profile	11/12	
6	Local experts panel convened around priorities (problem) analysis	county health profile, strategic framework of the county health plan	10/12	
7	Policies and programs to address priorities developed (clear program vision)	county health profile, strategic framework of the county health plan	11/12	
8	Implementation of agreed activities	progress reports	11/12	
9	Project legitimacy established – team members and coordinator formally appointed by the council	official letter	12/12	
10	Project articulated and formally (by the county officials) presented to the public	newspaper clips, articles, radio audio – video tapes	7/12	
11	County health plan completed as publication	paper copy of the county health plan	12/12	
12	Strategic framework of the county health plan completed as publication	paper copy of the strategic framework of the county health plan	11/12	
13	Key project documents (profile and strategic framework) accepted by the county government	official letter, transcript, minutes from the meeting	11/12	
14	Key project documents accepted by county council	official letter, transcript, minutes from the meeting	10/12	
15	Long-term health plan developed	paper copy of the long-term county health plan	2/12	FOLLOW UP
16	Short-term health plans developed	paper copy of the short-term (yearly) county health plans	4/12	
17	County health plan accepted by the county government	official letter, transcript, minutes from the meetings	3/12	
18	County health plan accepted by the county council	official letter, transcript, minutes from the meetings	3/12	
19	Implementation partners gathered and well informed about the project aims (have a clear "big" picture)	transcript, minutes from the meetings, press clipping, tapes	6/12	
20	Implementation partners specially trained in order to better perform their part	copy of training materials, press clipping, tapes	7/12	
21	Resources (county budget) allocated to the chosen priority activities	copy of the county budget for the fiscal year	11/12	
22	Yearly monitoring and evaluation in place	no evidence (no one did it)	0/12	
23	Yearly progress report to the county council exists	paper copy of the progress report	4/12	
24	Project integrated into the everyday routine of the county department of health and social welfare	paper copy of the department of health and social welfare program of work	5/12	

Tutorial notes for each county team were created from the written material collected during the Program and from the minutes from troika meetings. Written material consisted of county documentation (memorandums, appointments, meeting notes, publications, press clippings, and county assembly reports) and visual or written material produced by county teams (questionnaires, power point presentations, and written documents). Content analysis of the notes was performed and the results were used to verify the results obtained by the previous two methods.[16]

The evaluation workshop was held on February 20-25, 2006, one cohort a day. The teams from Bjelovar-Bilogora, Vukovar-Srijem, and Lika-Senj counties did not participate in the evaluation workshop and their data were not included in the final analysis. Of 12 county teams at the evaluation workshop (74 participants), half were almost complete in number, whereas half were reduced to 2-5 members.

To increase the validity of the data, data triangulation (numerical and textual), methodological triangulation (performance matrix, procedure chart, and tutorial notes analysis) and investigator triangulation (5 investigators from tutors group and 3 from county teams) were performed.[17,18]

RESULTS

The scores of each of the 12 county teams were higher on the second than on the first performance matrix, although not in all functions (Figure 2 and Figure 3). The radars showing team performance clustered in two basic shapes, one indicating the major improvements in the policy development function (2B and 2C) (Figure 2) and the other indicating major improvements in the assessment function (1A, 2A, 3A, and 1B) (Figure 3).

The analysis of textual responses in performance matrices showed the improvements that were made. In the assessment function, county teams introduced new participative methods of health needs assessment, used variety of data available from other sources in addition to health statistics, and performed investigations in health and social needs of vulnerable groups. In the policy development function, major improvements were made in constituency building by increasing the number of agencies and local authorities involved in health policy development; in priority setting by reaching consensus of all parties involved; and in policy development by comprehensive planning for health rather than only health services planning. Six teams also made some improvement in assurance function, especially in managing resources by allocating them preferably into the programs addressing health priority needs and education of the public (i.e. targeting selected audience).

Some counties made the greatest improvements in the methodological area (Dubrovnik-Neretva, Međimurje, and Virovitica-Podravina), whereas the others performed better in the area of political and legal recognition (Istria, Zagreb, and Krapina-Zagorje) (Figure 4). Međimurje County, which was in the last cohort, completed more procedures than half of the counties from the previous cohorts. County teams completed more procedures required during the training phase than during the follow-up (Table 1).

Tutorial notes indicated the influence of external political context (national elections in late 2003 and local elections in mid-2005) on the Program and local projects and provided a qualitative insight into county teams' performance matrix and procedure chart results. County teams that made major improvements in the assessment function, as shown in their radars, had a weak or non-existing executive and political component, but a strong professional public health component (Dubrovnik-Neretva, Split-Dalmatia,

and Osijek-Baranja counties). On the other hand, major improvements in policy development function were seen on the radars of the teams with strong executive and political component. However, due to weak professional and community components, these teams did not develop participative approach neither in needs assessment nor in constituency building (Zagreb, Varaždin, and Krapina-Zagorje counties). Three teams (Istria, Međimurje, and Primorje-Gorski Kotar counties) made improvements in all three functions.

DISCUSSION

The local public health policies and practices of 12 evaluated counties completing the County Public Health Capacity Building Program were improved, although to a various extent. The differences in improvement depended on the differences in the strength of political, executive, and professional components of the teams. Although team cohorts had presumably a different amount of time available from the start of modular training to the evaluation workshop, good results of Međimurje County from the last cohort suggest that time was not the main limiting factor. Participating counties also had different level of experience in local governance; however, counties with well-established departments of health and social welfare, such as Istria and Primorje-Gorski Kotar counties, did not achieve equally good results. Istria County had better results than Primorje-Gorski Kotar County. Zagreb County, with newly established Department of Health and Social Welfare, also did better than Primorje-Gorski Kotar Country.

A factor contributing to the overall local project achievements was local political stability. In 7 of 15 counties participating in the training, the officials changed during the local elections in 2005. This proved to be a drawback for project developments in

Osijek-Baranja and Brod-Posavina counties. For the same reason, the projects had been "frozen" for at least a year in Sisak-Moslavina, Dubrovnik-Neretva, Varaždin, and Virovitica-Podravina counties and completely abandoned in Vukovar-Srijem County, which did not take part in the evaluation. One the other hand, although no political changes occurred in Split-Dalmatia, Lika-Senj, and Bjelovar-Bilogora counties, no progress had been made in their projects after the modular training (the last two counties did not participate in the evaluation).

Personal or professional commitment seemed to be the crucial factor that made a distinction between more and less successful counties. County teams with strong and committed political/executive and/or professional/civil components made the greatest improvements in effectiveness and efficiency of local public health practices.

County teams with the strong executive and political component, such as Zagreb and Krapina-Zagorje counties, made major improvements in the policy development function and achieved the best results in project legitimacy building. Because of the weak professional and community components (inexperienced or under-resourced institutes of public health, no media representatives, and weak or medicalized NGO sector), these teams did not develop participative approach in needs assessment and constituency building. Zagreb, Varaždin, Krapina-Zagorje, and Brod-Posavina counties may have had well-articulated projects, but their projects were buried in the county administration, far from the public eye and knowledge. These counties did not form partnerships and they used centralized approach at the local level, which rendered the future of such projects strongly dependent on political or administrative support.

County teams with strong professional and civil components, such as Dubrovnik-Neretva, Split-Dalmatia, and partly Osijek-Baranja, made strong improvements in the

assessment function and achieved the best results in gaining and applying new knowledge. Their project movers were public health professionals from county institutes of public health, backed up by journalists and NGOs. However, they had no executive (no departments of health and social welfare) or political partners (changes in political leadership) to rely upon, which limited their project achievements in the policy development and assurance function, prevented the establishment of project legitimacy, and decreased the number of project outcomes.

Istria and Međimurje counties, having the most committed and balanced teams, made progress in all three functions.

The strong side of this Program was the involvement of political, executive, professional, and community members in the development and implementation of the county health policy.[19-22] The bare fact that 15 county health profiles and plans were developed proves that the Program improved counties public health capacity.[23,24] Such plans had neither existed before in participating counties, nor were developed outside the Program in non-participating counties. The Program involved many different community groups (youth, elderly, unemployed, farmers, islanders, urban families), hundreds of local politicians, and various institutions. Proposed interventions for health improvement have relied upon local organizational and human resources and have been financially (by free will rather than legal obligation) supported by the county budgets. For the first time, Croatian counties have clearly written health and quality of life improvement programs to compete for the resources at the national and international level.

There are several limitations to our study. The performance matrix we used was a rough, three-scale instrument based on self-evaluation (CDC improved it in the meantime).[25] Tutorial notes showed that county teams tended to over score their

performance at the beginning of training and underscore it at the evaluation workshop, when they had a better understanding of the public health practices. Increased criticism rather than objective assessment was the reason why the achieved results were underscored.

Another limitation stems from the politically rather than professionally motivated selection of county team members, despite clear guidelines on how to compose the teams, which were issued months before training. The consequences of such selection were felt during the modular training (loss of team members or lack of public health professionals) and at the evaluation workshop (low response rate).

The third limitation was the Program's "political vulnerability." Policy development is a political process, thus jeopardized by national and local political changes.[1,12] This limitation was predicted and counteracted by two "anchoring mechanisms", concentric (project) widening and legitimacy building, which helped local projects survive the political change in 6 (Dubrovnik-Neretva, Osijek-Baranja, Sisak-Moslavina, Varaždin, Virovitica-Podravina, and Brod-Posavina) of 7 counties. Decision to centralize or decentralize public services is made by political parties rather than scholars.[1] Opinions in the academic community are divided, and so is the evidence.[12,26] The present study did not attempt to resolve the dilemma which approach to health planning and resource governing is more efficient, the central or regional one. As Mosca concluded, based on the lessons learned from three European countries, "decentralization per se cannot be seen as a means to revamp the state and to automatically improve efficiency of services delivered".[12] Our findings corroborate this conclusion. Capacity building at a subnational level is a long and painful process and we, as members of public health academia, appreciate having an active role in designing it. It might take decades to build and develop polycentric

model of health planning and decision making. That is why further research is needed - to clarify direction and actions that are worthwhile taking.

Policy implications

- Without sufficient public health capacities, Croatian counties can neither plan for health, nor govern efficiently their own health care resources at the regional level.
- The pilot model of polycentric health planning and decision making may be used to increase the success of delegation process.
- Learning-by-doing is an efficient form of training for public health capacity building at the county level.

What this study adds

- Differences in the improvements in local public health policies and practice reflected the differences in the strength of political, executive, and professional components of the teams. County teams with balanced political/executive and professional/civil components made the greatest improvements in local public health practices efficiency and create collaboration among health policy stakeholders.
- Adequate community representation in county teams supported the project widening and constituency building, i.e. the “anchoring” process.
- County health teams with weak public health component were disadvantaged due to low capacity to utilize contemporary public health management knowledge and skills.

- Teams from the counties without established departments of health and social welfare could not develop their projects irrespective of their efforts. Without a stable executive component educated in public health, the teams could not achieve results in policy development and assurance functions.

Acknowledgments

We thank all the participants of the “Health – Plan for It” County Public Health Capacity Building Program for their time and effort. This program was performed by Andrija Štampar School of Public Health, Zagreb, Croatia in collaboration with Sustainable Management Development Program, Coordinating Office for Global Health, Centers for Disease Control and Prevention, GA, USA.

Competing interests

None declared.

Funding

The Program was financially supported by the Ministry of Health of the Republic of Croatia and Open Society Institute New York.

Ethics committee approval

Not required.

Figure 1. "Health – Plan for it" County Public Health Capacity Building Program

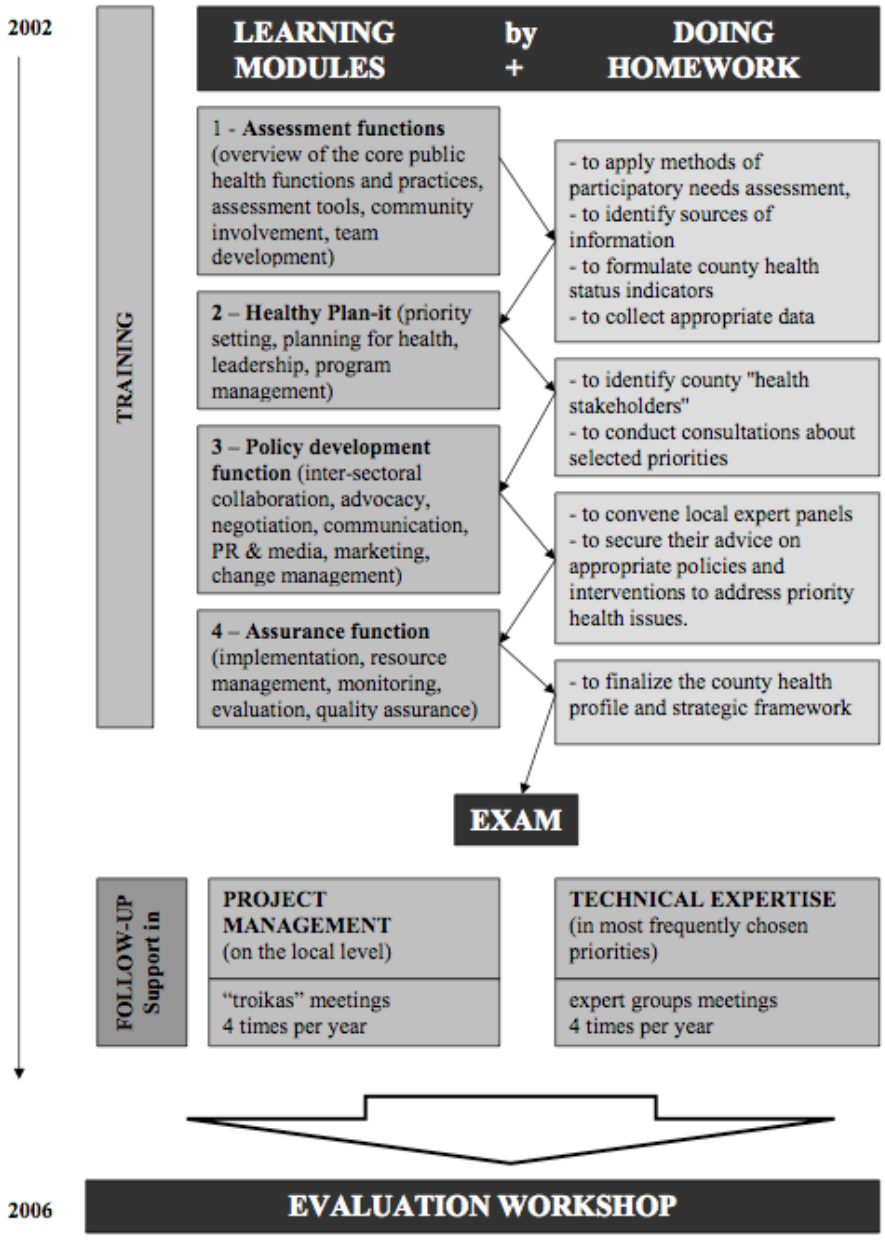


Figure 2. The Local Public Health Practice Performance Measures (the performance matrix) - major improvements in the policy development function

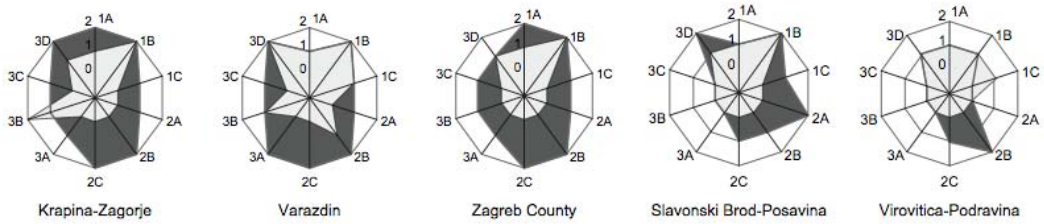
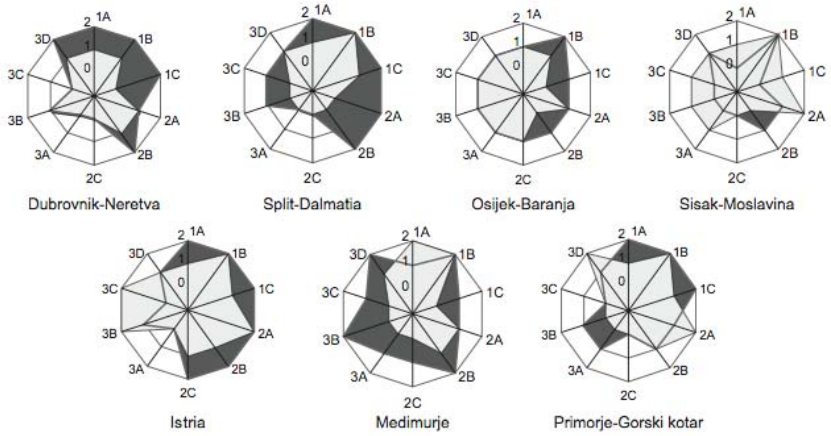


Figure 3. The Local Public Health Practice Performance Measures (the performance matrix) - major improvements in the assessment function



Legend to Figures 2 and 3:

Light gray area - results of 12 county teams at the beginning of modular training

Dark gray area - results of 12 county teams at the end of follow up of the "Health – Plan for It" County Public Health Capacity Building Program

0 – public health practice did not exist / was not developed

1 – public health practice does exist but is not satisfactory

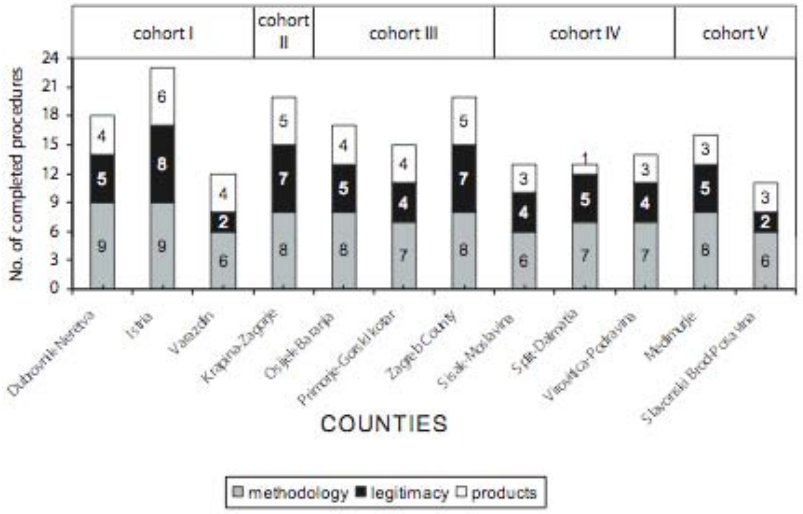
2 – public health practice does exist and is satisfactory

Assessment function: 1A – assessing community health needs, 1B - performing epidemiological investigations, 1C – analyzing the determinants of health needs.

Policy development function: 2A – building constituencies, 2B – setting priorities, 2C – developing comprehensive plans and policies.

Assurance function: 3A – managing resources, 3B – implementing or assuring programs to address priority health needs, 3C – providing evaluation and quality assurance, 3D – educating or informing the public.

Figure 4. Procedures completed by the teams from 12 Croatian counties at the end of "Health – Plan for It" County Public Health Capacity Building Program



Legend to Figure 4:

Grey bar: methodological improvement – procedures No. 1, 2, 4, 5, 6, 7, 8, 19, 20.

Black bar: establishment of local project legitimacy – procedures No. 3, 9, 10, 13, 14, 17, 18, 23.

White bar: development of products – procedures No. 11, 12, 15, 16, 21, 22, 24.

Numbered procedures correspond to those in Table 1.

References

1 **De Vries M.** The rise and fall of decentralization: A comparative analysis of arguments and practices in European countries. *Eur J Polit Res* 2000;**38**:193-224.

2 **Fuenzalida-Puelma HL**. *Health care reform in Central and Eastern Europe and the Former Soviet Union.* (Literature review). Budapest: OSI-Local government and public services reform initiative, 2002:81-8.

3 **Ham C**, Honigsbaum F. Priority setting and rationing health services. In: Saltman RB, Figueras J, Sakellarides C, eds. *Critical challenges for health care reform in Europe.* Buckhingam: Open University Press, 1998:113-34.

4 **Šarić M**, Rodwin VG. The once and future health system in the former Yugoslavia: myths and realities. *J Public Health Policy* 1993;**14**:220-3.

5 **Hebrang A**. Reorganization of the Croatian health care system. *Croat Med J* 1994;**35**:130-6.

6 **Džakula A,** Orešković S, Brborović O, *et al.* Decentralization and healthcare reform in Croatia 1980-2002. In: Shakarishvili E, ed. *Decentralization in healthcare – analyses and experiences in Central and Eastern Europe in the 1990s*. Budapest: Local Government and Public Service Reform Initiative and Open Society Institute, 2005:133-73.

7 Health and health policy – basic function of public health at regional level [in Croatian]. Motovunski glasnik 1999; No. 9. Available at: *http://www.zdravi-gradovi.com.hr/hrv/dokumenti_publikacije.asp.* Accessed on September 27, 2007.

8 **Šogorić S**. Application of the modified method of "Rapid appraisal to assess community health needs" for making rapid city health profiles and city action plans for health. *Croat Med J* 1998;**39**:267-75.

9 **Šogorić S**, Rukavina TV, Mujkić A, *et al.* Formulating a health strategy at the local level using the "Urban Health Profile" and "Urban Health Planning". *Liječ vjesn* 2003;**125**:334-8.

10 **Šogorić S.** Planning for health at county level: the Croatian experience. *Eurohealth*. 2004;**10**:30-3.

11 **Šogorić S,** Rukavina TV, Brborović O, *et al*. Counties selecting public health priorities - a "bottom-up" approach (Croatian experience). *Coll Antropol* 2005;**29**:111-9.

12 **Mosca I.** Is decentralization the real solution? A three country study. *Health Policy* 2006;**77**:113-20.

13 **Center for Disease Control and Prevention**. SMDP. *Healthy Plan*-it™. *A tool for planning and managing public health programs.* Workshop kit. Atlanta: CDC, 2001.

14 **Handler AS,** Turnock BJ, Hall W, *et al.* A Strategy for measuring local public health practice. *Am J Prev Med* 1995;**11**(Suppl 2):29-35.

15 **Richards TB**, Rogers JJ, Christenson GM, *et al.* Assessing public health practice: Application of ten core function measures of community health in six states. *Am J Prev Med* 1995;**11**(Suppl 2):36-40.

16 **Patton MQ**. *Qualitative evaluation and research methods*. 2nd ed. London: SAGE, 1990.

17 **Patton MQ**. Enhancing the quality and credibility of qualitative analysis. *Health Serv Res* 1999;**34**:1189-208.

18 **Šogorić S,** Middleton J, Lang S, *et al.* A naturalistic inquiry on the impact of interventions aiming to improve health and the quality of life in the community. *Soc Sci Med* 2005;**60**:153-64.

19 **Pappaioanou M**, Malison M, Wilkins K, *et al.* Strengthening capacity in developing countries for evidence-based public health: the data for decision making project. *Soc Sci Med* 2003;**57**:1925-37.

20 **Beaglehole R**, Bonita R, Horton R, *et al.* Public health in the new era: improving health through collective action. *Lancet* 2004;**363**:2084-6.

21 **Scutchfield FD**, Hall L, Ireson CL. The public and public health organizations: issues for community engagement in public health. *Health Policy* 2006;**77**:76-85.

22 **Thurston WE**, MacKean G, Vollman A, *et al*. Public participation in regional health policy: the theoretical framework. *Health Policy* 2005;**73**:237-52.

23 **Crisp** BR, Swerissen H, Duckett SJ. Four approaches to capacity building in health: consequences for measurement and accountability. *Health Promotion Int.* 2000;**15**:99-107.

24 **Handler A**, Issel M, Turnock B. A conceptual framework to measure performance of the public health system. *Am J Public Health* 2001;**91**:1235-9.

25 **Mays GP,** Halverson PK, Buker EL, *et al.* Availability and perceived effectiveness pf public health activities in the nation's most populous communities. *Am J Public Health* 2004;**94**:1019-26.

26 **Niessen LW**, Grijseels EW, Rutten FF. The evidence-based approach in health policy and health care delivery. *Soc Sci Med* 2000;**51**:859-69.