The Pozesko-Slavonska Healthy County

Health-- Plan for It project

Application for SMDP Applied Management Learning Project Award 2008

Submitted by
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7. Mira Ćosić, nurse, Pozesko-slavonska County Health Centre
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12. Davor Matić, informatician, Pozesko-slavonska County Institute of Public Health,
I. PROJECT BACKGROUND

At the end of 2001, the Ministry of Health, Ministry of Labor and Social Welfare, county governors, National Institute of Public Health and Andrija Stampar School of Public Health officials agreed to commence a "learning-by-doing" training program for public health capacity building at the county level. A four-module format spread over a 4 month period was selected to minimize participants’ time away from their jobs in any one month and to allow time to assimilate material and complete assignments between sessions. Each county team-in-training was expected to plan and conduct assessments, elaborate a County Health Profile and a County Health Plan. Ministries supported the direct costs of training (training packet development, teaching and staff expenses) while the counties covered trainee lodging and travel expenses.

At the end of 2006, Požeško-Slavonska County accepted participation in the Public Health Capacity Building Program – Health Plan for It (Healthy Counties), together with Sibensko-Kninska and Zadarska County. Members of the county training teams were selected from County Council, Administrative Department for Health and Social Welfare, Institute of Public Health, health centers, Center for Social Welfare and Institution for Youth with Special Needs.

Pozesko-Slavonska County is situated in the northeast of the Republic of Croatia with a land area of 1,815 km² (which accounts for 3.2% of total Croatian continental land area). The county includes 10 local self-governments, five towns (Pozega, Kutjevo, Lipik, Pakrac, Pleternica) and five municipalities (Brestovac, Čaglin, Jakšić, Kaptol, Velika).

According to a population census, there were 85,831 people living in Pozesko-Slavonska County in 2001 (14% less than reported in the 1991 population census), with an average population density of 47.1 inhabitants/km² (The Croatian average was 78.5 inhabitants/km²).

II. POZESKO-SLAVONSKA HEALTHY COUNTY PROJECT DEVELOPMENT

From January to December 2007, the Pozesko-Slavonska County training team undertook the following program:

Module 1 – Assessment Functions (Zadar, 24 – 27 January)

The county team reviewed core public health functions and practices and familiarized themselves with the participatory needs assessment approach, methods and tools. The team developed a framework for county health needs assessment and decided on methods to involve citizens.

Between modules the team was administered the questionnaire survey, which inquired into the health status of the county’s residents. Data collected through the questionnaire together with statistical health data was used to determine county priorities.

Module 2 – Healthy Plan-it™ (Sibenik, 07 - 10 March)

The county team began with presentation of results of the health needs assessment exercise. The team was guided through a health planning process, introduced to techniques for selecting priorities among community health needs, problem-solving and decision-making.
techniques. Healthy Plan-it™ was taught by Tea Vukusic Rukavina, MD (MIPH '01). The team selected the following thirteen county health priority areas:

- depopulation
- cardiovascular diseases
- mental health of adult population
- unemployment
- low level of education in population
- ambulance services (emergency medical assistance) organization
- breast cancer
- youth (adolescent) risk behaviors - special attention to binge-drinking
- poverty
- care for older and incapacitated persons (disabilities)
- social exclusion of persons with disability
- water supply system – capacity and quality
- areas with land mines

The team learned how to identify and analyze problems, find the root cause of problems and trace the possibilities for problem-solving inside complex, multi-organizational systems.

On 2 April 2007, a Consensus Conference was held with more than 120 participants. Priorities were established and participants selected the 5 following county health priority areas:

1. breast cancer
2. social exclusion of persons with disability
3. water supply system – capacity and quality
4. cardiovascular diseases
5. slow demining dynamics

Module 3 – Development Function (Pozega, 11-14 April)

The team presented results of the Consensus Conference and the selected health priorities. Further communication and analysis of intervention opportunities for education have been undertaken. Healthy Plan-it™ (part II) was taught by Aleksandar Dzakula, MD (MIPH '02). Activities for the next time period have been proposed (formation of expert teams).

Module 4 – Assurance Function (Sv.Martin na Muri, 30 May – 2 June)

At the beginning of the 4th module the county team presented the draft versions of the County Health Plan including priorities and intended activities.

Change was a key word during this module. Skills developed in this module include planning change, building institutional capacity for change, as well as conflict recognition and resolution. After training the County Health Profile was completed.

The Pozesko-Slavonska County successfully completed its modular education with an oral exam, presenting the County Health Profile to members of public health academia in Varazdin in October 2007.
PROBLEM STATEMENT

Before entry into the Health Plan for It (Healthy Counties) training program, Pozesko-Slavonska County did not have experience in assessing public health needs in a participatory manner, planning for health nor assuring provision of services tailored to local health needs. Existing public health programs were either those of national interest (like prevention of cardiovascular diseases, smoking or drug misuse) or those carried out by few cities and districts that had, from time to time, some interest in health promotion issues. The county did not possess a health plan to systematically address unhealthy behaviors and diseases of its population.

III. TOOLS

A) Needs Assessment: QUALITATIVE AND QUANTITATIVE DATA COLLECTION AND ANALYSIS

In 2006, only 35% of municipalities were connected to the public water supply system, providing fresh and clean water for 73% of the inhabitants in the county. The remaining 27% of the population used water well, mostly (83%) microbiologically substandard (unsatisfactory).

The most frequent causes of death in 2005 were diseases of the circulatory system and various cancers.

Mortality due to circulatory diseases for both sexes in 2000-2005 were consistently higher than the Croatian average despite observed trends of decreased incidence of circulatory diseases in the country. In 2005, the highest rates observed were for insult unspecified as bleeding or infarction (162), acute myocardial infarction (121) and chronic ischemic heart disease (122).

Death rates due to cancer in 1993-1995 followed a rising trend for both men and women. In 2005, the highest cancer rate for males was observed for those of the bronchi and lungs (104), while for females, breast cancer was of the highest incidence (43). In both cases mortality was found to be higher than the respective Croatian average.

The Fatherland War, 1991-1995, involved 47% of the county area. The towns of Pakrac and Lipik suffered great devastation, huge population migrations, depopulation, widespread landmine fields and 1,136 invalids of war. On 22 March 2007, 169 km² of suspected landmine areas still remained, with the Pakrac (16% of area) and Lipik (3% of area) towns being the most affected.

B) Consensus Building and Selection of Priorities: CONSENSUS CONFERENCE

The Consensus Conference was held on 2 April 2007 with more than 120 participants:
- Members of the county training team
- Representatives of non-governmental organizations
- Experts from various medical fields
- Heads of county hospitals and health centers
- Red Cross Organization representatives
- Members of County Council
- Members of County Assembly
C) Legislative institutional change through the County Assembly

Pozesko-Slavonska County accepted the proposal of Andrija Stampar School of Public Health for its involvement in the "Administration and Management for Health" program based on county government decision on 29 November 2006. In January 2008, the County Team for Health plans to present to the county government and assembly the Pozesko-Slavonska County Health Image (picture) and strategic framework for the adoption of the County Health Plan.

IV. HEALTH PROBLEM ANALYSIS

For every given priority determinants were analyzed, factors for successful problem-solving were specified, and a course of intervention was outlined.

BREAST CANCER

Definition of problem:
Mortality and incidence of breast cancer in women are on the rise and correlate with insufficient prevention and the possible influence of various risk factors.

Indicators (determinants):
In 2005, the proportion of deaths from breast cancer (relative to all cancer) was 19.6% for the county, a rate higher than 17.4% for all of Croatia.
The trend of breast cancer incidence rates during 1987-2005 was consistently lower, with the exception of 2005 when incidence was a bit higher than the Croatian average (99/10^5 vs. 93/10^5).
Breast cancer mortality rates during 1987-2005 were consistently lower, again with the exception of 2005 when rates were higher than the average of Croatia (43/10^5 vs. 40/10^5).
Mortality and incidence of breast cancer are found to rise with age, with the highest incidence occurring between 55 and 70 years. Prior to 35 years of age breast cancer is very rarely encountered.

Figure 1. Comparison of female breast cancer incidence rates between Pozesko-Slavonska County and Croatia during 1987-2005 period with linear trends.
Figure 2. Comparison of female breast cancer mortality rates between Pozesko-Slavonska County and Croatia during 1987-2005 period with linear trends.

Figure 3. Age-specific incidence rates of female breast cancer during 1987-2005 period in Pozesko-Slavonska County.

Figure 4. Age-specific mortality rates of female breast cancer during 1987-2005 period in Pozesko-Slavonska County.
Figure 5. Parallel display of female breast cancer incidence and mortality rates during 1987-2005 period in Pozesko-slavonska County.

Determinants:

- high disease incidence
- late detection
- insufficient treatment and rehabilitation

Among the most important factors directly influencing the high incidence of breast cancer are lifestyle and reproductive factors, along with numerous indirect factors (insufficient physical activity, unhealthy diet, obesity, smoking, alcohol consumption, contraceptive usage, advanced first child birth, hormonal substitution therapy, non-lactation, abortion, gender, age and heritage), life extension and over irradiation of females during puberty.

Late detection of disease is a product of rare and irregular preventive breast examinations (ignorance) together with insufficient diagnostics (equipment and its availability). Insufficient treatment and rehabilitation of diseased persons is influenced by personnel shortage (due to lack of political will, lack of finance and education) coupled with inappropriate care and treatment for cancer (absence of supportive patient groups and long wait times for chemotherapy and radiation treatments).

Goals:

- Preventive and early breast cancer detection
- Long-term reduction in mortality from breast cancer
- Provide education and awareness of the need for regular mammography screening to women

SHORT-TERM (UP TO 2 YEARS)

- Motivate and education physicians and nurses to enforce education, clinical breast examination and mammography.
- Empower Women with the knowledge of:
  - risk factors for breast cancer development
  - techniques of breast self-examination
o signs that warrant medical check up (breast cancer suspicion)
o the importance of self-health care
o individual behavior change
o regular breast self-examination
o importance of regular physical activity
o emotional support available to newly diagnosed women
o psycho-social support to newly diagnosed women and their families
  (counseling service for newly diagnosed)

LONG-TERM (2-5 YEARS)

• Detection of disease while in early stages (smaller tumor size, less spread to lymph nodes).

• Reduction of disease death toll by 25% during a 5 year period after regularly administrated screening programs (mammography).

• Target population:
  - primary care physicians (family MDs, gynecologists, school medicine MDs)
  - patronage nurses
  - post-adolescent women and older
  - newly diagnosed women
  - women 40 years of age and older:
    o according to 2001 census – 22,122
    o repeat of screening every 2 years – 11,061

Goals:

• To motivate primary care physicians and patronage nurses to enforce education of women, clinical breast examination and mammography
• Expert meetings
• Educational material drafting
• Education on population level (media, printed education materials)
• Specifically targeted education (individual education and counseling by means of seminars, workshops, etc.)
• Psycho-social support to newly diagnosed women (counseling services)
• Screening enforcement (mammography) on population level
• Gain public attention with goal of influencing health oriented politics
• Negotiation and advocacy
SOCIAL EXCLUSION OF INVALID PERSONS

Definition of problem
In Pozesko-Slavonska County 26% of 9,910 invalid persons are considered socially excluded.

Indicators
According to the 2006 UNDP Social Development Report for Croatia, Pozesko-Slavonska County topped the social exclusion ranking list (27.7%).

According to Croatian Employment Office data, persons with disabilities in the county represent 11.6% of the total population size.

Table 1. UNDP 2006 ranked data on social exclusion in several Croatian counties

<table>
<thead>
<tr>
<th>Poverty rang</th>
<th>Social exclusion</th>
<th>Biggest proportion of invalid persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Požeško-slavonska 27,7%</td>
<td>Krapinsko-zagorska</td>
</tr>
<tr>
<td>2</td>
<td>Virovitičko-podravská</td>
<td>Požeško-slavonska 11,6%</td>
</tr>
<tr>
<td>3</td>
<td>Brodsko-posavska</td>
<td>Sisačko-moslavačka</td>
</tr>
<tr>
<td>4</td>
<td>Vukovarsko-srijemská</td>
<td>Varaždinka</td>
</tr>
<tr>
<td>5</td>
<td>Osječko-baranjska</td>
<td>Šibensko-krnska</td>
</tr>
</tbody>
</table>

Poverty

Table 2. Persons with disabilities included in social welfare system in 2006.

<table>
<thead>
<tr>
<th>Persons with special needs</th>
<th>N of person in continuous treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CZSS Požega</td>
</tr>
<tr>
<td>Adults</td>
<td>1718</td>
</tr>
<tr>
<td>Children</td>
<td>166</td>
</tr>
<tr>
<td>Total</td>
<td>1884</td>
</tr>
</tbody>
</table>

According to 1991 statistical data, there were 9,910 invalid persons living in county territory. Under the assumption that numbers have remained stable thus far (2006), it can be concluded that 23.7% of invalid persons are included in continuous treatment provided by the social welfare center.

Unemployment
In September 2007, there were 86 invalid persons registered with the Employment Office. During March and April 2007, the Employment Office interviewed 122 employers in the county area about their willingness to offer employment to invalid persons. No employers showed interest in hiring an invalid person despite measures taken by the system to provide incentive to do so.

Social exclusion
Direct contact with 122 families with persons with disabilities revealed that 87 of those families (71.3%) cannot participate in offered activities of associations, schools and the local community because of deficient resources and traffic barriers (non-accessible public transportation and personal vehicles). Of the families 32 feel socially excluded (26.2%).
Physical barriers for approaching institutions, social stigma combined with lack of possibilities for employment, problematic relations, an ineffective and too professionalized health care system all lead to the exclusion of disabled persons.

**Determinants:**

- large number of disabled persons
- architectural barriers
- lack of community awareness
- unemployment
- poverty

**Limitations:**

- under adjustment of educational system
- under adjustment of interorganization of public institutions
- insufficient coordination and lack of partnership between civil associations
- unemployment of disabled persons
- poverty and isolation - reinforce one another and contribute to social exclusion
- dependence on social welfare centers

**Goals**

Aims are to improve inclusion of disabled persons in the system, establish associations and organizations to manage problems and provide care to disabled persons, public sensitization and acceptance on the county level.

Improved coordination of associations and professional services in a 5 year period will decrease social exclusion by 5%.

**Measures and activities**

- start procedures to create a coordinated team built of representatives from associations that provide care to disabled persons, representatives of social welfare centers, and representatives of the social councils of cities and the county.
- hold public lectures and campaigns to disseminate information to the general public and disabled persons.
- increase financial support and budget for inventive, quality projects and programs that manage the improvement of quality of life for disabled persons and minimize social exclusion.

**WATER SUPPLY– CAPACITY AND QUALITY**

**Definition of problem**

Inappropriate drinking water and inaccessible water supply are public health concerns of Pozesko-Slavonska County.
In 2006, 27% of the population in 65% of the settlements of the county did not have access to the public water supply, so therefore used water from wells which do not meet quality regulations.

**Indicators (determinants)**
In the towns of Pakrac and Lipik, 72% of the population is connected to the public aqueduct, but in only 14% of the settlements. The remaining get their water supply from occasionally matted, bacteriologically inappropriate open water holes.

*Figure 1. Aqueduct coverage of Pozesko-Slavonska county settlements in year 2006.*

In the area of the Pozesko-Slavonska valley, 73% of the population in 42% of the settlements is connected to the public aqueduct. Often water from local aqueducts is inappropriate for drinking because of being matted and bacteriologically contaminated, in addition to the absence of automatic water disinfection capability. Because the public aqueduct is old and battered there are significant losses on the distributive network, especially in the Pakrac and Lipik areas (up to 50% in 2000). Water from private wells is used by 27% of population, which in 2006 was microbiologically inappropriate in 86% of cases.

**Table 3. Results of water testing depending on type of water supply in 2006**

<table>
<thead>
<tr>
<th>WATER SAMPLES 2006.</th>
<th>MICROBIOLOGICAL SAMPLES</th>
<th>CHEMICAL SAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>TROUBLED</td>
</tr>
<tr>
<td>AQUEDUCT WATER</td>
<td>570</td>
<td>75</td>
</tr>
<tr>
<td>WELL WATER</td>
<td>328</td>
<td>282</td>
</tr>
<tr>
<td>TOTAL</td>
<td>898</td>
<td>357</td>
</tr>
</tbody>
</table>

**Table 4. Results of water testing from wells in 2006**

<table>
<thead>
<tr>
<th>WELLS WATER SAMPLES 2006.</th>
<th>MICROBIOLOGICAL SAMPLES</th>
<th>CHEMICAL SAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>TROUBLED</td>
</tr>
<tr>
<td>PRIVATE WELLS</td>
<td>289</td>
<td>266</td>
</tr>
<tr>
<td>PUBLIC WELLS</td>
<td>39</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>328</td>
<td>282</td>
</tr>
</tbody>
</table>
Table 5. Results of water testing from aqueducts according to organization of water works and method of water disinfection in 2006

<table>
<thead>
<tr>
<th>ORGANIZATION OF WATER WORKS</th>
<th>MEANS OF DISINFECTION</th>
<th>MICROB. SAMPLES</th>
<th>CHEMICAL SAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>TROUBLED</td>
</tr>
<tr>
<td>PUBLIC AQUEDUCT OF POZESKA VALLEY</td>
<td>AUTOMATIC</td>
<td>177</td>
<td>5</td>
</tr>
<tr>
<td>LOCAL AQUEDUCT PAKRAC-LIPIK</td>
<td>AUTOMATIC</td>
<td>296</td>
<td>20</td>
</tr>
<tr>
<td>LOCAL WATER-SUPPLY OF POZESKA VALLEY</td>
<td>MANUAL</td>
<td>97</td>
<td>50</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>570</td>
<td>75</td>
</tr>
</tbody>
</table>

Determinants:

- inadequate access to drinking water
- inadequate quality of drinking water
- nonexistent water works
- no attachment to existing water works
- poor maintenance of existing water supply system

Inadequate access to drinking water determines deficient water source capacity and significant losses in distribution because of damaged water supply installations. The quality of drinking water is directly limited by insufficient control over water sources, low quality water purification, old equipment and waste water. Nonexistent water works are determined by lack of projects for new aqueducts, bad traffic connections and depopulation in rural areas. No attachment to existing water works is directly determined by the use of private wells, high costs associated with connection to public aqueducts and theft of drinking water.

Goals

The main goal is to provide sufficient amounts of proper drinking water for all of the county population.

SHORT TERM (to 5 years)

- Building new water wells
- Building new tanks and pre-pump stations
- Connection of local aqueducts to public aqueduct
- Building new major routes for transportation of drinking water
- Incorporating automatic disinfection of water in stations that lack it
- Sanitation of existing transport system of drinking water
- Improved education of staff that maintain aqueducts
- Improved education of drinking water usage (via media, brochures and other appropriate action)
- Sanitation of legal and illegal waste repositories
LONG TERM
- Building of accumulation „Kamensko“ with suitable water processing, which will also improve water supply for neighbor counties through transport pipes, and solve problems of flooding and irrigation downward from accumulation. There is also the possibility of the production electric energy.
- Building of accumulation „Šumetlica,“ which will completely solve the problem of water supply in Pakrac and Lipik areas.
- Usage of water from accumulation „Londža“ for drinking water production.

Measures and activities
- Ending of Pozesko-Slavonska County water supply study
- Improved control over adequate of drinking water
- Request for building regional aqueduct in East Slavonia, which should include all existing water supply systems that satisfy water quality and other parameters, all being financed at the state level or through acquisition of concession.
- Improved control of water sources, tanks and transport pipes.
- Improved control of sanitary protected zones around water sources in water supply areas.
- Continue with systematic population education on every level.

CARDIOVASCULAR DISEASES

Definition of problem
In Pozesko-Slavonska County mortality rates of myocardial infarction and cerebrovascular insult during 2000-2005 have constantly been higher than in Croatia: myocardial infarction by 11 per 100,000 inhabitants and cerebrovascular insult by 50 per 100,000 inhabitants, respectively.

Indicators
Cardiovascular diseases are the leading cause of death in Pozesko-Slavonska County and Croatia alike. These diseases are the cause of 52% of all deaths in the county (similar in Croatia), but the total rate is even higher. This rate is indicative of infarction (where during 2000-2005 the death rate was higher by 11 per 100,000 persons compared with the national average) and stroke unspecified as ischemic or hemorrhagic, in which case the rate is higher by 50 per 100,000 inhabitants than expected from the Croatian average.

Table 6. Comparison of myocardial infarction death rates for 2005.

<table>
<thead>
<tr>
<th>MYOCARDIAL INFARCTION</th>
<th>TOTAL</th>
<th>MALES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>POŽEŠKO-SLAVONSKA COUNTY</td>
<td>121,17</td>
<td>140,10</td>
<td>103,53</td>
</tr>
<tr>
<td>REPUBLIC OF CROATIA</td>
<td>95,82</td>
<td>120,42</td>
<td>72,99</td>
</tr>
</tbody>
</table>

Table 7. Comparison of stroke death rates for 2005.

<table>
<thead>
<tr>
<th>STROKE</th>
<th>TOTAL</th>
<th>MALES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>POŽEŠKO-SLAVONSKA COUNTY</td>
<td>161,95</td>
<td>154,60</td>
<td>168,79</td>
</tr>
<tr>
<td>REPUBLIC OF CROATIA</td>
<td>129,07</td>
<td>107,00</td>
<td>150,20</td>
</tr>
</tbody>
</table>
This issue stands as most important in the prolongation of life expectancy (decrement of years of life lost), especially in light of death rates due to other causes that are either lower or comparable to the national average.

The mean life expectancy in the county is considerably lower than the Croatian average: only 69 years for males (RH=72) and 72 years for females (RH=79). Aggregated years of life lost during 2000 – 2005 due to circulation diseases amounted to 11,234 on average. Half of this figure is specifically related to myocardial infarction and brain stroke.

The problem is determined by atherosclerosis, propensity toward blood clotting with thrombo-embolism incidents, blood vessel spasm, together with insufficiently organized health care on all levels, especially urgent medical assistance. Factors directly influencing risk of disease are hyperlipidemia, hypertension, smoking and many other indirect factors such as alcoholism, poor diet, obesity, inactivity, diabetes, heredity, etc.

In health care organization, the most important factor is lack of financial resources for equipment, education and personnel. Other factors include poor interconnectivity of various levels of the health-care system and poor roads.

**Goals**

**SHORT TERM (2 years)**
1) In cooperation with family MDs, patronage services, medical schools, NGOs, volunteers and the Public Health Institute, wide educational campaigns and healthy lifestyle promotion should be implemented. Likewise, screening programs of high risk, yet untreated persons should be developed and implemented. (In order to determine the number of people not receiving medical care, detailed data on numbers of medically treated persons should be obtained).
2) Make an education plan for ambulance service personnel. Together with the county and ministry, work to ensure ambulance cars are equipped with all necessary accessories.
3) Provide telemedicine equipment to Pakrac and Pozega hospitals to enable contact with referral center.
4) Commence campaign for organizing helicopter transfer of emergency patients to Zagreb and Osijek county hospitals that are distant (farther than 100 kilometers).

**LONG TERM (10 years)**
- Reduce myocardial infarction and cerebrovascular insult mortality rates at least to the national average, and extend life expectancy to be on par with Croatian average.
- In cooperation with the Public Health Institute, service for addiction prevention should be enabled for treating food addiction, depressive disorders, etc.
- Enable capacity for tertiary care (treatment and education on healthy lifestyle behaviors).
- Deepen measures of education and promotion of healthy lifestyle together with a wide number of organizations and individuals to realize a network which will consistently work toward health enhancement.
• Work with county management and the Ministry of Education on construction of new playgrounds, trails and gyms.
• Ensure emergency medical helicopter transport (for all medical emergencies).

**Measures and activities**

• Education of population and health care workers.
• Screening of population under risk.
• Finding means and human resources for interventions
  1. Identify “silent patients”, those not yet treated but with elevated BP, hyperlipidemia, elevated blood glucose levels and other risk factors.
  2. Promote healthy lifestyle in all age groups with emphasis put on preschool and school population.
  3. Increase available number of playgrounds and gyms.
  4. Influence speed of transport to specialized centers where definitive treatment of the acutely diseased can take place (final goal is assuring helicopter transport).
  5. Organize telemedicine connection with cardiovascular disease referral centers (Osijek or Zagreb).
  6. Educate ambulance service personnel and equipped emergency vehicles with needed accessories.
  7. Establish a center for treating all sorts of addiction disorders, which might be linked with cardio-vascular diseases (psychological support).
  8. Establish a center for a long-term monitoring of cardio-vascular patients (tertiary level).

**SLOWNESS OF DEMINING**

**Definition of problem**
On the territory of Pozesko-Slavonska County, 12 years after the „Storm“ action and eight years after humanitarian demining there is still 69 km² of suspected mine areas largely because of the rather slow demining process. These areas are situated on territories of special state concern.
Because of this problem exploitation of agricultural land, lumber resources and freedom of movement are all limited. Economic and infrastructural projects cannot be realized.

**Indicators**

**Table 8. Area proportions in mine suspected areas by towns and municipalities**

<table>
<thead>
<tr>
<th>Town / Municipality</th>
<th>Total mine suspected areas (km²)</th>
<th>Forest area covered by mines (km²)</th>
<th>Other mine suspected areas (km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAKRAC</td>
<td>37.67</td>
<td>21.37</td>
<td>16.30</td>
</tr>
<tr>
<td>LIPIK</td>
<td>6.23</td>
<td>1.67</td>
<td>4.56</td>
</tr>
<tr>
<td>BRESTOVAC</td>
<td>4.74</td>
<td>2.94</td>
<td>1.80</td>
</tr>
<tr>
<td>VELIKA</td>
<td>0.73</td>
<td>0.10</td>
<td>0.63</td>
</tr>
<tr>
<td>TOTAL</td>
<td>49.37</td>
<td>26.08</td>
<td>23.29</td>
</tr>
</tbody>
</table>
Table 9. Demined areas in Pozesko-Slavonska County during 1999-2006

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DEMINED AREA (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999.</td>
<td>509,303</td>
</tr>
<tr>
<td>2000.</td>
<td>219,642</td>
</tr>
<tr>
<td>2001.</td>
<td>382,051</td>
</tr>
<tr>
<td>2002.</td>
<td>382,407</td>
</tr>
<tr>
<td>2003.</td>
<td>783,641</td>
</tr>
<tr>
<td>2004.</td>
<td>865,073</td>
</tr>
<tr>
<td>2005.</td>
<td>928,490</td>
</tr>
<tr>
<td>2006.</td>
<td>15,949,844</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20,020,451</strong></td>
</tr>
</tbody>
</table>

Note: in 2006, approximately 15,000,000 m² was skipped after general reconnaissance, while rest is demined.

Table 10. Area proportions in mine suspected areas by towns and municipalities

<table>
<thead>
<tr>
<th>CITY / MUNICIPALITY</th>
<th>TOTAL AREA OF CITY / MUNICIPALITY (km²)</th>
<th>MSA (km²)</th>
<th>PORTION OF MSA IN TOTAL AREA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAKRAC</td>
<td>358,08</td>
<td>57,20</td>
<td>15.97</td>
</tr>
<tr>
<td>LIPIK</td>
<td>208,54</td>
<td>6,50</td>
<td>3.12</td>
</tr>
<tr>
<td>BRESTOVAC</td>
<td>279,24</td>
<td>4,30</td>
<td>1.54</td>
</tr>
<tr>
<td>VELIKA</td>
<td>154,88</td>
<td>1,00</td>
<td>0.65</td>
</tr>
<tr>
<td>UKUPNO</td>
<td>642,66</td>
<td>11,80</td>
<td>1.84</td>
</tr>
</tbody>
</table>

To the HCR and Croatian government it was proposed that in next 3 year period 22.49 km² will be demined as the only way to meet the proclaimed deadline of a mine-free Croatia by 2010. However, on 9 March 2007, the Croatian government decided that during that year approximately 29.39 km² would be eliminated of mines. Pozesko-Slavonska County was estimated to be 2.2 km² (7.5%) of this area.

Mine pollution is seen as a problem by 9.7% of inhabitants interviewed younger than 19 years of age, 3.7% of inhabitants aged 20-65 and 3.1% of inhabitants older than 65 years. This data is only relevant for the Pakrac and Lipik areas, while inhabitants of other county parts don’t view mines as a problem.

**Determinants:**
1. large number of mine-polluted counties
2. lack of resources (insufficient assignment of budget finances, lack of search for alternative financing sources, underdeveloped economy)
3. lack of public awareness and attention (insufficient awareness, ignorance and decreased number of victims)
4. insufficient civil society initiative (insufficient work efficacy of existing civil society organizations).
Goals

The main goal is to completely demine Pozesko-Slavonska County and consequently provide safe conditions for life and work by 2010.

To accomplish this task the demining process needs to be accelerated until the entire county area is demined. Demining needs to be set as a top priority and as a question of development, the environment and security.

Measures and activities

Possible interventions:

- Approach Croatian government through the County Assembly for urgent and larger investment of resources on a yearly basis for demining in order to clear mine fields by 2010.
- Include new participants in the financing of demining activities.
- Better inform the general public about the problem of slow demining.
- Motivate NGOs.
- Promotional activities.

V. FUTURE PLANS AND BUDGET

In 2008, adoption of the Pozesko-Slavonska County Health Profile will commence together with a strategic framework for the County Health Plan. In this same year drafting of the County Health Plan is expected to begin.

The County Assembly has allocated 40,000.00 kn out of the 2008 Annual County Budget for this program.

VI. CONCLUSION

Through the Public Health Capacity Building Program – Health Plan for It (Healthy Counties) using Healthy Plan-it™ method, the Pozesko-Slavonska County team has learned how to recognize the health needs of its citizens, determine public health priorities and how to organize and finance health promotion and protection programs that will ensure improved health of all its residents.

Physicians, social workers, political officials and employees of the Administrative Department for Health and Social Welfare that participated in this project, together with hundreds of others who partook in research and the Consensus Conference, have developed the first County Strategic Plan. This plan is based on population health needs, selected (by consensus) health priorities, county financial abilities and human resources, county’s city and district resources, existing county institutions (health centers and centers of social welfare), as well as on various voluntary groups and organizations. Today, the County Strategic Health Plan is seen as the basic document that will guide all health promotion and protection activities targeting the county population.