

**IMPLEMENTATION OF EDUCATIONAL PROGRAMS AND SCREENING AIMED
TO REDUCTION OF CERVIX OF UTERUS CANCER IN SABAC MUNICIPALITY
Healthy Plan-it™ project**

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Project Background

Project titled "Implementation of Educational Programs and Screening Aimed to Reduction of Cervix of Uterus Cancer in Sabac Municipality" will be implementing in one year period (May 1, 2006 – April 30, 2007) in 30 enterprises (on sample of 1200 women) in Sabac municipality. Project will be implemented by members of the team employed in Public Health Institute and Health centre in Sabac with support of local authorities, enterprises and media.

Goal of the project is - to educate about importance of early diagnosis of cervix cancer (by screening) in connection with change of women behavior to result in regular medical checkups with colposcopy at gynecologist. Project benefit is reduction of the mortality rate from malignant neoplasms of cervix cancer for 10%, from 6,1/100 000 to 5,5/100 000 in 5 years period.

Cytology *Papa Nikolaou test* is the most successful test in cancer prevention. Thanks to very well organized screening programs in developed countries, mortality is reduced for 50%. In our country organized mass screening of cervix is not carried out, but there are some indications this program of cancer prevention will be put in practice.

BPRS

Macva region is located in northwestern Serbia. It has 3270 km². The administrative centre of the region is town Sabac.

According to statistical data of Public Health Institute Sabac for 2004, morbidity of primary health care is characterized (prevalence on 1000 residents) with: respiration system diseases (784/1000), digestion system diseases (318/1000) and circulation of the blood system diseases (261/1000). In hospital dominates these morbidities: muscular and osteomyelitis diseases (12,28/1000), circulation of the blood system diseases (11,45/1000) and digestion system diseases (9,41/1.000).

In 2004, 1460 persons newly sick from malignant neoplasms were registered on the territory of Macva region (standard rate of incidence is 383,3/100.000 for males and 275,4/100.000 for females). In the same year prevalence of tuberculosis in Macva region was 64,93/100.000.

Mortality in health statistics points out some main causes: (rate of mortality on 1000 residents) cardiovascular diseases (6,99/1000), malignant neoplasms (first of all lung cancer, breast cancer and cervix of uterus cancer) (2,40/1000) and respiration system diseases (0,77/1000).

At the same time, according to researches in Sabac main risk factors are: air pollution, inadequate nutrition, smoking, alcohol, and other addiction diseases, physical inactivity, stress and sexual relations without protection.

In tables 1, 2 and 3 below, please, find components of Basic Priority Rating System (BPRS), size of the problem, seriousness of the problem and intervention effectiveness, which are parts of formula for ranking the priority health problem. BPRS in practice shows priority health problem in Sabac and that is malignant neoplasms, and this is followed by: cardiovascular diseases, HIV/AIDS and other sexually transmitted diseases, cronical obstructive pulmonary disease and tuberculosis (table 4).

Intervention effectiveness - there are very effective interventions to solve problem of malignant diseases, such as, early diagnosis – screening (colposcopy, mammography); programs of primary prevention of cardiovascular diseases, HIV/AIDS are effective and programs of primary prevention of cronical obstructive pulmonary diseases and tuberculosis are less effective.

Health Problem Statement

High mortality rate (6,1/100 000) of women without regard to age from malignant neoplasms in Sabac municipality in 2004.

Health Problem Analysis

Health problem statement was analyzed in relation to determinants and contributing factors, direct and indirect, (diagram 1) to select the best available strategy.

Determinants – directly influence on level of the health problem statement and they are:

1. high rate of incidence from malignant neoplasms of cervix of uterus on defined population (women) 18,4/100 000
2. absence of national prevention programs for organized early diagnosis of malignant neoplasms

Direct contributing factors – influence on level of the first determinant – are:

1. absence of early diagnosis of cervix of uterus cancer
2. high level of risk factors

Direct contributing factors – influence on level of the second determinant – are:

1. lack of financial resources
2. absence and insufficient legal regulations in the mentioned field

The first direct contributing factor has these 2 main indirect contributing factors:

1. insufficient engagement of existing capacities of health care service on defined population
2. insufficient knowledge of women about importance of early diagnosis of disease

The second direct contributing factor has these 2 main indirect contributing factors:

1. bad socio-economic situation
2. low level of knowledge and women are not aware of risk factors

Selected intervention strategy - Insufficient engagement of existing capacities of health care service on defined population and insufficient knowledge of women about importance of early diagnosis of disease – on these indirect contributing factors we can influence mostly. Next step is direct contributing factor - absence of early diagnosis of cervix of uterus cancer, and determinant is - high rate of incidence on defined population 18,4/100 000, the next is health problem statement we should solve (diagram 2).

Objectives

Process objective, in relation to insufficient engagement of existing capacities of health care service on defined population, is to increase number of women examined preventively by gynecologist from 2-3 on 100 women per month (1200 per year). Increasing the knowledge about importance of early diagnosis (2000 women in 30 enterprises in one year period) is the second process objective – in relation to the second indirect contributing factor – insufficient knowledge of women about importance of early diagnosis of disease.

Impact objective, in relation to absence of early diagnosis of cervix of uterus cancer as direct contributing factor, is to increase participation of diagnosed pre invasive of cervix of uterus cancer in regard to total number of newly diagnosed malignant neoplasms of cervix, from 2-3% to 20%.

Impact objective, in relation to high rate of incidence of malignant neoplasms of cervix of uterus (18,4/100 000) as determinant, is to decrease incidence rate of cervix of uterus cancer for 15%, from 18,4/100 000 to 15,6/100 000 in 4 years period.

Outcome objective is to decrease mortality rate from malignant neoplasms of cervix of uterus for 10%, from 6,1/100 000 to 5,5/100 000 in 5 years period.

Please, find our objectives in diagram 3 below.

Intervention Decision Matrix

Intervention decision matrix helped us to select interventions.

Intervention Design Table

By implementation of intervention in health services, that is directed to promotion of efficiency of health services in one health centre, engagement of existing capacities of women health care service will be increased. Number of women examined preventively by gynecologist will be increased from 2-3 to 100 women per month by interventions in community, such as, informing women and fight against prejudices (campaigns in enterprises, distribution of educative material – leaflets) and women will be informed. According to our supposition around 60% of women will be checked up at gynecologist (table 5) at their own demand.

Work Plan

The project will last 1 year. Dates: May 1, 2006 – April 30, 2007. In the first half of May activities will be implemented in Dispensary for health care of women in Health Centre in Sabac. Permission from director and section head for medical checkups will be obtained with schedule – names of hospital staff and time table.

Each 15th in month members of the team will visit 2-3 enterprises and give lectures and 3 lectures will be organized in each enterprise till the end of the month when recorded material will be broadcasting on local TV and Radio station, and article will be published in newspaper.

Development of the work plan is in table 6.

Monitoring and Evaluation

Detailed description of the monitoring and evaluation is in table 7; data sources are Public health Institute “Dr Milan Jovanovic – Batut” and Annual Statistic Report from Public Health Institute Sabac. Also, please find indicators, responsible persons and report time in the same table.

Budget

Gynecological examination that consists of colposcopy, Papa Nikolaou test, vaginal secret and smear costs 2,653 YUD or around 30 EUR per person. Plan is to make an examination on around 1200 women. Total honoraria for the hospital staff will be 5,000 EUR (gynecologist, cytologist, nurse and members of the project team). 500 EUR will be used for transport and 3,000 EUR to print educational material (leaflets, posters, etc.) – table 8.

Table 1 Size of the problem (A)

Health Problem	Score(1 – 10)	
	Individual	Group
Cardiovascular disease		9
Malignant neoplasms (lung cancer, breast cancer and cervix of uterus cancer)		9
Tuberculosis		8
Cronical obstructive pulmonary disease		8
HIV/AIDS and other sexually transmitted diseases		5

Table 2 Seriousness of the problem (B)

Health Problem	Score (1 – 10)	
	Individual	Group
Malignant neoplasms		10
Cardiovascular disease		10
Cronical obstructive pulmonary disease		8
Tuberculosis		8
HIV/AIDS and other sexually transmitted diseases		8

Table 3 Intervention effectiveness (C)

Health Problem	Score (1 – 10)	
	Individual	Group
Malignant neoplasms		9
Cardiovascular disease		7
Cronical obstructive pulmonary disease		6
HIV/AIDS and other sexually transmitted diseases		7
Tuberculosis		5

Table 4 Basic Priority Rating System (BPRS)

Health Problem	Components			BPRS (A + 2B)x C	Rang
	A (1 – 10)	B (1 – 10)	C (1 – 10)		
Malignant neoplasms	9	10	9	261	1
Cardiovascular disease	9	10	7	203	2
Cronical obstructive pulmonary disease	8	7	6	132	4
HIV/AIDS and other sexually transmitted diseases	5	8	7	147	3
Tuberculosis	8	8	5	120	5

Table 2.

HEALTH PROBLEM ANALYSIS

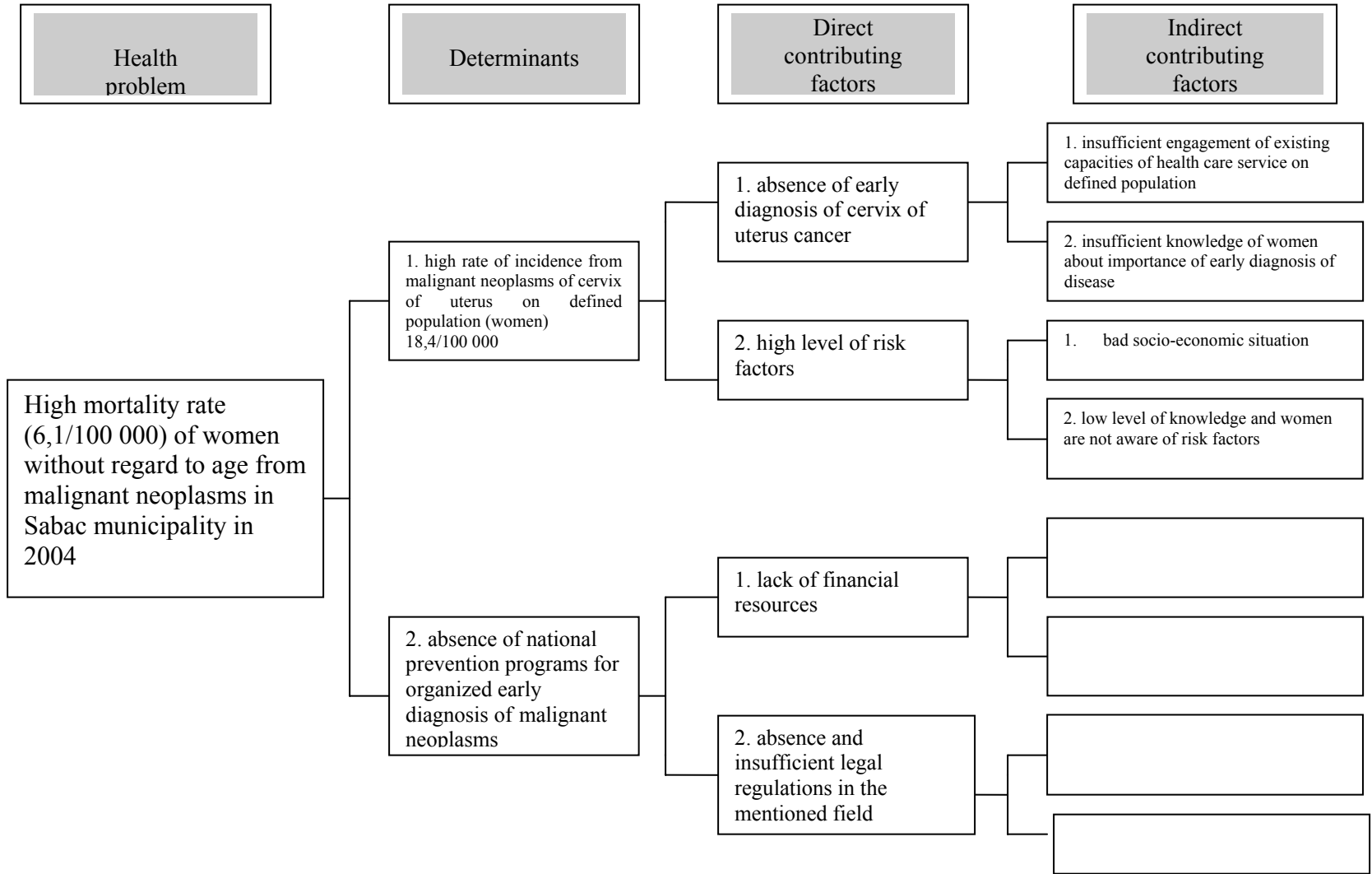


Diagram 1

INTERVENTION

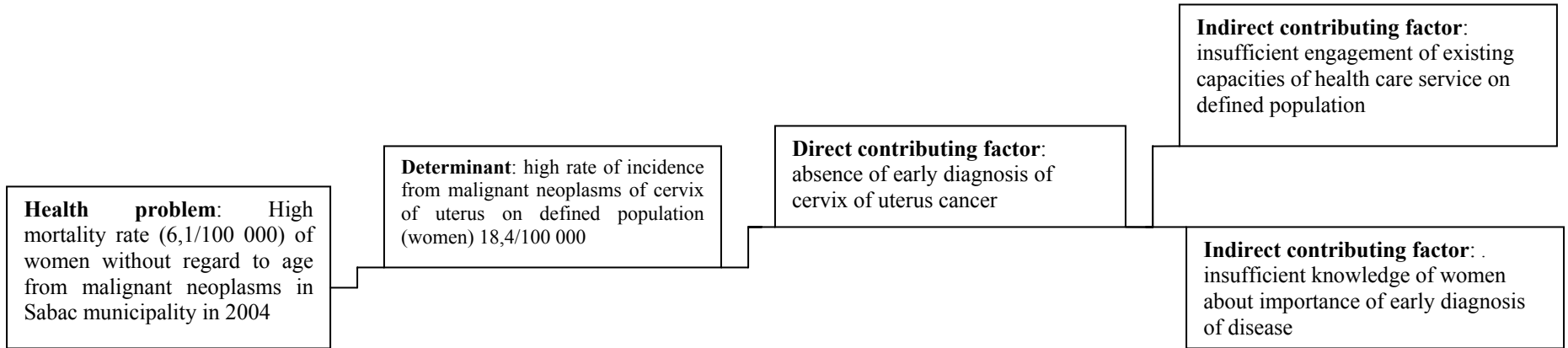


Diagram 2

INTERVENTION STRATEGY AND OBJECTIVES

Health problem: High mortality rate (6,1/100 000) of women without regard to age from malignant neoplasms in Sabac municipality in 2004

Outcome objective is to decrease mortality rate from malignant neoplasms of cervix of uterus for 10%, from 6,1/100 000 to 5,5/100 000 in 5 years period.

Diagram3

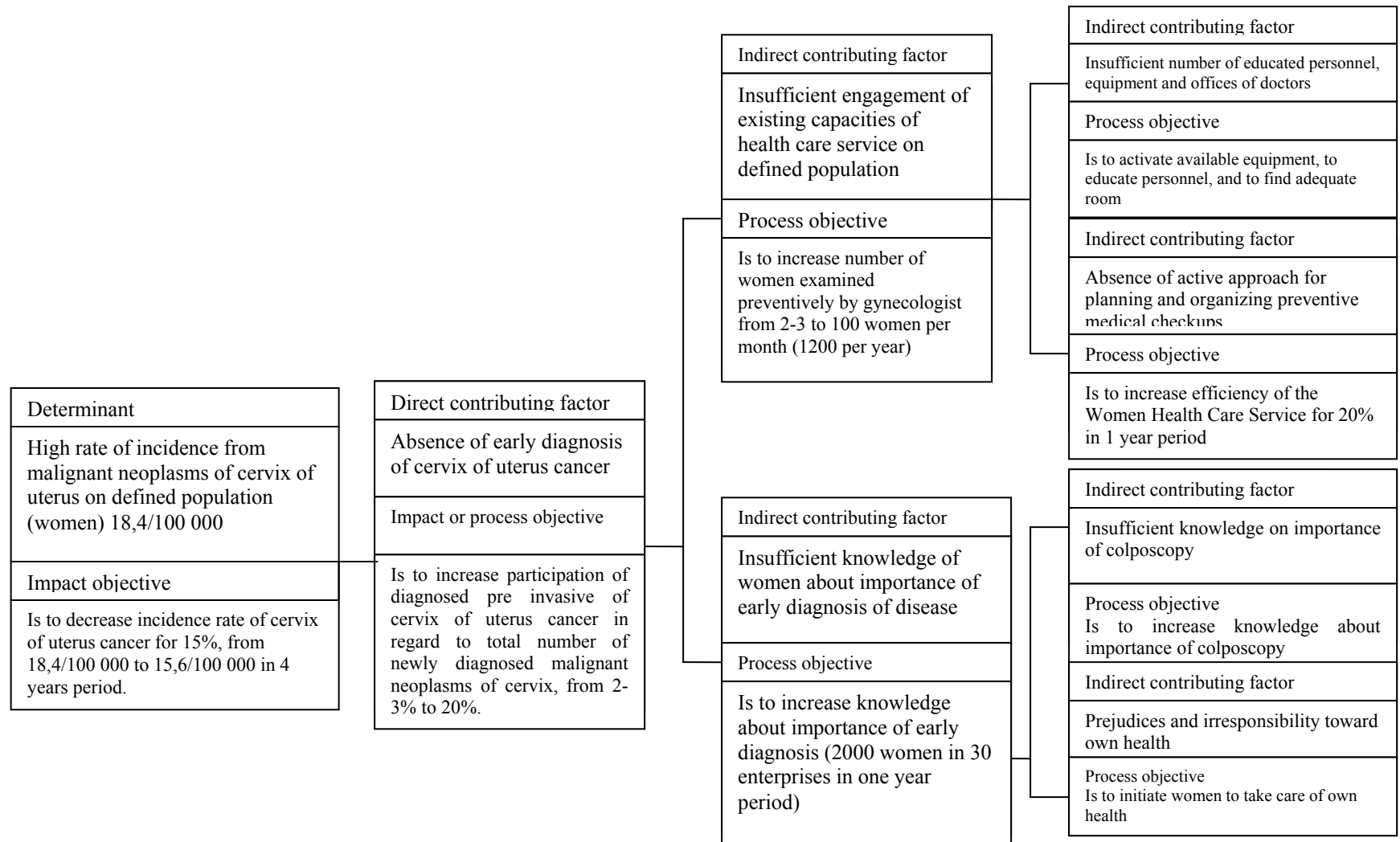


Table 5 INTERVENTION DESIGN TABLE

Health problem: High mortality rate (6,1/100 000) of women without regard to age from malignant neoplasms in Sabac municipality in 2004.

Determinant: High rate of incidence from malignant neoplasms of cervix of uterus on defined population (women) 18,4/100 000					
Direct contributing factor: Absence of early diagnosis of cervix of uterus cancer					
Indirect contributing factor (1): Insufficient engagement of existing capacities of health care service on defined population					
Intervention Strategy	Who is the target for change?	What will change?	Type	Intervention Location	Scope
Health centre - to invite - to organize preventive medical checkups - quality of service - waiting time	Hospital staff, Women Health Care Service	No. of preventive medical checkups at gynecologist from 2-3 to 100 women every month	New schedule (2 hours per day for preventive checkups)	Women Health Care Service Health centre Sabac	Only Women Health Care Service
Indirect contributing factor (2): Insufficient knowledge of women about importance of early diagnosis of disease					
Intervention strategy	Who is the target for change?	What will change?	Type	Intervention Location	Scope
Community - to increase knowledge - to fight against prejudices	Employed women	60% of women will be checked up at gynecologist at their own demand	- 2-3 lectures in enterprises in Sabac municipality - Thematic TV and Radio shows, once a month, articles in newspaper "Glas Podrinja", once a month	Enterprises in Sabac municipality	30 enterprises in 1 year period

Table 6 Work Breakdown Plan: Gantogram




Tasks	Schedule												Responsibility			Status of the project				
	Start date	End date													Responsible	Performer	Inspection	Date		
Intervention in Health centre																				
to increase accessibility and use of health services	3 May 2006															Section Head	Team	Director of HC		
to obtain permission from director and section head	3 May 2006	8 May 2006													Coordinator	Director and Section head	Director			
to organize medical checkups	9 May 2006	12 May 2006													Section Head	Team	Director			
to invite w omen	9 May 2006	12 May 2006													Head nurse	Team	Director			
w aiting time	9 May 2006	12 May 2006													Head nurse	Team	Director			
Quality of services															Gynecologist	Team	Director of HC			
New schedule (2h per day for preventive checkups)	9 May 2006	12 May 2006													Section Head	Team	Director			
Intervention in Community																				
Informative Campaign	15 May 2006	April 1, 2007													Svetlana	Olivera	Director of PHC			
Visit to enterprises	15 May 2006		2-3 enterprises per month												Svetlana	Olivera	Director of PHC			
Agreements w ith directors	15 May 2006		1 day												Svetlana	Olivera	Director of PHC			
To organize lectures	15 May 2006	April 29, 2007	that depends on no. of women / around 25												Svetlana	Olivera	Director of PHC			
Contact w ith media	31 May 2006		once a month												Svetlana	Olivera	Director of PHC			
TV and Radio show s	31 May 2006		once a month												Nebojša	Goran	Director of PHC			
Articles in new spacer	31 May 2006		once a month												Nebojša	Goran	Director of PHC			
To give lectures	22 May 2006														Svetlana	Olivera	Director of PHC			
Distribution of printed materials	32 May 2006														Svetlana	Olivera	Director of PHC			
Planned 			main activity 												PHC-Public Health Centre					
Carried out 																				

Table 7 MONITORING AND EVALUATION PLAN

Health problem: High mortality rate (6,1/100 000) of women without regard to age from malignant neoplasms in Sabac municipality in 2004.						
Outcome objective is to decrease mortality rate from malignant neoplasms of cervix of uterus for 10%, from 6,1/100 000 to 5,5/100 000 in 5 years period.						
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The no. of women died of cervix of uterus cancer in the last 5 years	Public Health Institute »Dr Milan Jovanović« Batut Report: Incidence and Mortality of Cancer in Central Serbia	Yearly	Epidemiologists of Public Health Institute »Dr Milan Jovanović Batut«	In the end of the project year	Head of Social Medicine	
Determinant: high rate of incidence from malignant neoplasms of cervix of uterus on defined population (women) 18,4/100 000						
Impact objective: Is to decrease incidence rate of cervix of uterus cancer for 15%, from 18,4/100 000 to 15,6/100 000 in 4 years period.						
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The no. of women diseased of cervix of uterus cancer in the last 5 years	1. Public Health Institute »Dr Milan Jovanović« Batut Report: Incidence and Mortality of cancer in Central Serbia 2. Public Health Institute Sabac – Register of cancer	Yearly	Epidemiologists of Public Health Institute »Dr Milan Jovanović Batut« Social Medicine Doctor in PHC in Sabac	In the end of the project year	Head of Social Medicine	
Direct contributing factor: Absence of early diagnosis of cervix of uterus cancer						
Impact or process objective: Is to increase participation of diagnosed pre invasive of cervix of uterus cancer in regard to total number of newly diagnosed malignant neoplasms of cervix, from 2-3% to 20%.						
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The no. of women in pre invasive phase	Reports of Women Health Care Service	Every 6 months	Section Head in Women Health Care Service	After 6 months and in the end of the project year	Head of Social Medicine	

Monitoring

Indirect contributing factor (1): Insufficient engagement of existing capacities of health care service on defined population		Process objective: Is to increase number of women examined preventively by gynecologist from 2-3 on 100 women per month (1200 per year)				
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The number of women examined preventively by gynecologist	Monthly reports of Women Health Care Service	Monthly	Section Head in Women Health Care Service	Twice a year	Project Coordinator	
Indirect contributing factor (1a): Absence of active approach for planning and organizing preventive medical checkups		Process objective: Is to increase efficiency of the Women Health Care Service for 20% in 1 year period				
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The number of scheduled and no. of organized medical checkups	Table of activities of health teacher	Monthly	Health teacher	Every week	Head of health education	
Indirect contributing factor (1b): Insufficient number of educated personnel, equipment and offices of doctors		Process objective: is to activate available equipment, to educate personnel, and to find adequate room				
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The number of doctors trained for colposcopy	Directors of HC Sabac	Twice a year	Director of HC, Gynecology Section Head	Twice a year	Project Coordinator	
Indirect contributing factor (2): Insufficient knowledge of women about importance of early diagnosis of disease		Process objective: Is to increase knowledge about importance of early diagnosis (2000 women in 30 enterprises in one year period)				
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The number of enterprises	Operations report	Monthly	Head of Health education and Head of Social medicine	Monthly	Project Coordinator	

Monitoring

Indirect contributing factor (2a): Insufficient knowledge on importance of colposcopy.		Process objective: Is to increase knowledge on importance of colposcopy.				
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The number of educated women about importance of colposcopy – lectures and/or printed material	Lecture Reports	Monthly	Lecturers	Monthly	Project Coordinator	
Indirect contributing factor (2b): Prejudices and irresponsibility toward own health		Process objective: Is to initiate women to take care of own health.				
Indicator	Source of Data	Frequency	Staff Person Responsible	Report due when?	Report to whom?	Comments
The number of TV, Radio and newspaper supplements	TV and Radio shows taped, newspaper clipping	Monthly	The person authorized for the contacts with the media and a Coordinator	Twice a year	Project Coordinator Director of PHI	

Table 8

**ESTIMATED PROGRAM COST
YEAR 1**

Budget Items	Planned Budget	Spent	Difference
Personnel Gynecologist, cytologist, nurse and members of the project team	5000 EUR		
Equipment Supplies	Printed material 3 000 EUR		
Facilities	Colposcopy = 1 530 YUD Papa Nikolaou= 297 YUD Vaginal secret= 213 YUD Vaginal smear= 213 YUD Medical checkup=400 YUD		
Contracts	TOTAL = 2 653 YUD or 30 EUR per women		
Travel	For 1200 women = per year 36 000 EUR		
Other	500 EUR		
TOTAL	44 500 EUR		