

HEALTH PROJECT BETWEEN NEIGHBOURING COUNTRIES. THE CSOTI-HPV PROJECT

Sandor Ianos Bernad¹, Vássné Pálfi Mária², Elena Bernad³, Tibor A. Nyári⁴, Loredana Balosin⁵

INTRODUCTION

The cross-border health projects cover a wide spectrum of issues, e.g., education and training, patient care, prevention, and disaster control. Target groups were in most cases medical personnel, patients or decision-making bodies.

Historical development and framework conditions of the Euregios in Europe

In the border regions of the 25 Member States of the European Union (EU), about 32% of the population live on about 46% of the area³. Border regions are often economically weak areas. They differ in terms of population density, socio-economic development as well as economic characteristics. Depending on these characteristics, border regions are faced with specific problems owing to their border position in a Member State. Cross-border cooperation is intended to help reduce the disadvantages of the border regions, promote their integrated development

and improve the living conditions of the population in these areas. Cross-border projects cover a wide variety of thematic areas. The most frequently mentioned issues include education and further training, the joint use of resources, outpatient or inpatient treatment of patients as well as prevention and health promotion.

In accordance with regulation (EC) No. 1080/2006 of the European Parliament and of the Council of 5 July 2006 on the European Regional Development Fund and corresponding Regulation (EC) No. 1783/1999, operations selected for operational programmes aimed at developing cross-border activities shall include at least two partners from different countries.

Each operation should fulfil at least two of the following criteria:

- joint project development, i.e., the project must be developed by representatives of both states,
- joint implementation project, i.e., parallel activities in the neighbouring regions will not suffice,
- joint staffing (e.g., a joint project manager) as well as,
- joint financing, i.e., joint budget and only one contract

The CSOTI-HPV Project. The Romania-Hungary cross-border health project

The CSOTI-HPV project (Epidemiological modelling of risk factors of human papilloma virus and cervical carcinoma in county Csongrád and Timis)

BACKGROUND

Cervical carcinoma is frequently the second most common cancer among women in developing countries. In 2006, 493,000 women were diagnosed with cervix carcinoma. The mortality rate published by WHO is more than 50%. The incidence of HPV varies among different countries and even between

¹ Romanian Academy, Timisoara Branch

² University of Medicine and Pharmacy "Albert Szent-György" Szeged, Ungaria, Department of Medical Informatics

³ University of Medicine and Pharmacy „Victor Babeş”, Department of Obstetrics and Gynaecology, Timisoara, Romania

⁴ University of Medicine and Pharmacy "Albert Szent-György" Szeged, Ungaria, Department of Medical Informatics

⁵ University of Medicine and Pharmacy "Victor Babeş", Department of Scientific Research, Timisoara, Romania

Correspondence to:

Sandor I. Bernad, Eng., PhD., Romanian Academy - Timisoara Branch
B-dul Mihai Viteazul 24, RO-300223, Timisoara, Romania
Tel: +40-256-403698, Tel/Fax: +40-256-403692
E-mail: sbernad@mh.mec.upt.ro

Received for publication: Apr. 03, 2009. Revised: Sep. 14, 2009. .

different populations within countries and between 15-30% in young women worldwide ².

The importance of the studied aspect in this project is sustained by the efforts made at European level, for the study of distribution of HPV types among adult women diagnosed with invasive cervical cancer and the distribution of the HPV types among adult women diagnosed with CIN 2+ [EPI-HPV-ICC, EPI-HPV - CIN2]

The European Commission will publish the second edition of the European Guidelines for Quality Assurance in Cervical Cancer Screening, which are in line with the recent WHO guidelines recommendations [WHO].

The project purpose

The aim of this cooperation is to determine the prevalence of genital HPV infection in asymptomatic women in both Csongrád and Timis counties and to assess the potential impact of screening for exposure to HPV infection. The estimated sample size 100-100 women in both counties and pelvic examination for the collection of cervical cells for cytological testing and for the detection of HPV DNA will be also carried out in all cases in both counties. Then a cost-effectiveness analysis will be performed to investigate the effectiveness of a screening method for HPV infection at the country level. The main findings of the screening and cost-effective analysis will be published.

Common interest of the partner countries for the project proposed

Both Szeged (Hungary) and Timisoara (Romania) are regional capitals and Csongrád and Timis counties are neighbouring counties and could be regarded as an international region in European Union. There is an increasing rate of population mixing and migration here, thus the demographic and social characteristics of the population are similar to each other in both counties. However, we have no comparable figures for neither sexually transmitted diseases (STDs), nor any other in these counties.

There is no special treatment for HPV infection, thus prevention of HPV is a key factor in the prevention of cervical cancer. The incidence of the disease should be estimated as the first step in prevention. There is no figure about the incidence of HPV in county Timis, thus HPV screening will be carried out in both Timis and Csongrád counties. Then data from these screening studies will be analysed by the research groups. Main findings will be published then. The preventive strategy will be conceived and it could be applied at national level in both countries and at European Union level also.

Medical background of the CSOTI-HPV Project

Genital human papilloma virus (HPV) infection is currently the most common sexually transmitted disease worldwide. Lifetime chance of HPV infection is proposed to be as high as 80% to 85% in sexually active individuals. Acute infection is common soon after the initiation of sexual activity and is highly prevalent among women of reproductive age.

HPV infects the genital epithelium and is spread via skin-to-skin contact ^{1,2}. Condoms reduce but do not eliminate the risk of transmission, and infection may occur through genital contact without intercourse. Some strains of HPV cause genital warts, but more often HPV infections produce no signs or symptoms. As a result, infected persons are frequently unaware that they are carriers, and transmission occurs unknowingly. The most significant risk factor for infection with HPV is the number of lifetime sexual partners. Adolescent sexual activity has also proved to be associated with increased risk of HPV infection, yet other factors also influence this risk. The correlation between younger age of first intercourse and subsequent HPV infection is mediated by the number of sexual partners in the last 6 months, a history of sexually transmitted infections, alcohol and drug use related to sexual behaviors, and the number of sexual partners ^{7,8}. HPV is a small, non-enveloped, double-stranded circular deoxyribonucleic (DNA) tumor virus, classified in the genus *papillomavirus* of the *Papoviridae* family of viruses. More than 100 distinct types of HPV have been identified to date and approximately 50 of these infect the epithelial membranes of the anogenital tract. HPV DNA incorporates itself into the target cell genome, exerting effects through activation of oncogenes and suppression of host cell immune response. HPV protein products prevent DNA repair and programmed cell death, which leads to instability and unchecked cell growth.

HPV Infection

Almost all strains of HPV that infect the anogenital tract are capable of causing abnormal cervical cytology. A clear causal relationship has been established between HPV infection and cervical cancer, and HPV is found in nearly 100% of cervical malignancies worldwide. The latency period between initial HPV exposure and development of cervical cancer may be months to years. Although rapid progression is possible, average time from initial infection to manifestation of invasive cervical cancer is estimated at up to 15 years. Genital HPV strains are divided in two groups, based on their oncogenic potential and ability to induce viral-associated tumors 4,8.

Certain “high-risk strains” (HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 68) are associated with intraepithelial neoplasia and are more likely to progress to severe lesions and cancer. Despite the significant correlation between high-risk HPV and cervical cancer, 80% of infections are transient, asymptomatic, and resolve without treatment (Figure 1).

Cervical Cancer

Worldwide, approximately 500,000 new cases of cervical cancer are diagnosed annually. Incidence and mortality have dropped dramatically during the 20th century in developed nations due to high rates of Papanicolaou (Pap) screening and treatment of cervical cancer precursors, but recent trends indicate a slow resurgence over the last decade, particularly in women under the age of 50. Only one fifth of all HPV-associated lesions will ultimately cause cervical cancer if no intervention occurs.

Treatments for HPV-associated disease are both costly and time consuming and significantly affects quality of life. Diagnoses of LSIL and HSIL have been estimated to cost \$1275 and \$2349, respectively. Moreover, treatment durations for LSIL and HSIL are lengthy, average 7.2 physician visits during a 20-month period. Treatment of invasive cervical cancer carries the largest financial burden with an estimated cost of \$33,000 per person per year ⁸.

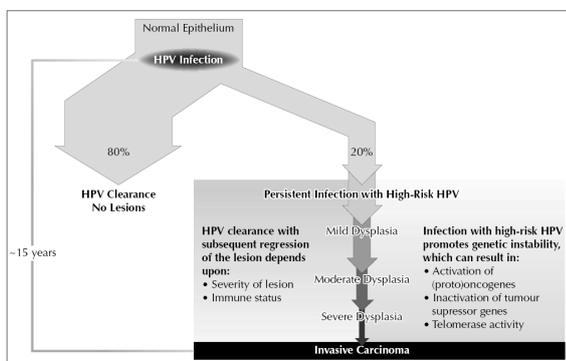


Figure 1. Framework summarizing the relation between high-risk human papillomavirus (HPV) infection and the pathogenesis of cervical cancer [1].

Aspects regarding to the Project management

A key objective of the paper was to understand the relationship between project management factors and project performance on different types of projects; so that best practices for cross-border health projects might be identified.

A project is defined in the *Project Management Book of Knowledge* (PMBOK) ¹¹ of the Project Management Institute (PMI) as ‘a temporary endeavor undertaken to create a unique product, service, or result’. The

effort to provide lifelong health care assistance to any individual in a given population can be regarded and managed as a programme, and particular services that are necessary during the life of that individual can be regarded as projects.

Project management

Project management is the discipline that deals with the management of projects, forgive the tautology. In the PMBOK, PM (Project Management) is defined as ‘the application of knowledge, skills, tools and techniques to project activities to meet project requirements. PM is accomplished through the application and integration of the PM processes of initiating, planning, executing, monitoring, controlling and closing. The project manager is the person responsible for accomplishing the project objectives’. The PMBOK goes on to specify that managing a project includes:

1. Identifying requirements.
2. Establishing clear and achievable objectives.
3. Balancing the competing demands for quality, scope, time and cost.
4. Adapting the specifications, plans, and approach to the different concerns and expectations of the various stakeholders.

Management excellence fundamentally affects project success or failure (Figure 2).

Individual projects will vary in scope, methodology, and scale but the principles of project management will remain common to all.

- For any project, a team must be assembled that has the relevant knowledge and skills to achieve the project aims. It is a basic principle of good management practice, and fundamental to the success of a project that all the members of the team should have a common understanding of the project objectives and communicate effectively with each other. For all but the simplest of projects a suitably experienced project manager must be appointed.
- A project must have at least one formal review cycle. A large project may require several reviews, where interim findings are considered against the aims, objectives, and agreed resources, so that any necessary changes can be instigated as required. All change to a project must be documented and will normally result either in an updated project programme or a revised project design.
- A project should be internally monitored as part of the day-to-day progress within the project management programme. There will also normally be an agreed level of external

monitoring. Any change to the project design must be agreed via the monitoring process and also recorded and communicated to all concerned. A system of quality control and risk management must also be in place to ensure that the work is carried out to acceptable professional standards.

In any project, a team is assembled to carry out a number of defined and linked tasks to achieve predetermined objectives. These tasks will be planned to occur in a specific order within time and cost parameters. The purpose of project management is to ensure that the tasks undertaken are organised and monitored to best achieve the required outputs.

To set up and run any project effectively it is necessary⁹:

1. to formulate clearly defined aims and objectives with a specified output;
2. to determine an appropriate timeframe;
3. to determine an appropriate methodology;
4. to establish soundly based estimates of the resources required to achieve the project objectives;
5. to establish an appropriate and visible method of project management;
6. to assemble an appropriately sized and resourced project team with the requisite knowledge and skills to carry out the project;
7. to establish and maintain effective communication between all team members and project partners;
8. to establish and operate a system of quality control, which includes at least one review cycle;
9. to identify and agree clear roles for all members of the team and the end user of the products of the project and to ensure that both interests are represented throughout the management of the project;
10. to identify any risks which might adversely affect the smooth running of the project and manage them effectively;
11. to resource the management and implementation of the project adequately;
12. to monitor progress against the project programme.

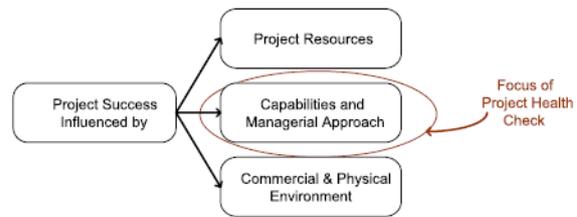


Figure 2. Role of project health check [5].

Project Planning

Project management begins when a decision has been taken to initiate a project. Whatever the planned scale or scope of the project, a decision on whether to proceed is usually taken on the basis of priority, need, and resources, which together express the value of the project. This is usually set out in a costed outline or brief. This should be a fairly high level document which outlines the whole project with projected (but at this stage not necessarily accurate) costs, timescales, and resources. There should be enough detail in the proposal to allow those authorising or funding the project to make an informed decision on whether to proceed with it or not.

The main stage of planning ends with the production of the detailed Project Design. This defines the objectives of the whole project, the methodology by which the outcomes will be achieved, the resources necessary to achieve them, and the means by which the project results will be disseminated. The project design should be written with the input and agreement of the core project team. The core team should include a project manager, representatives of all relevant specialisms, and any external partners.

Project Execution

It should be part of the project manager's role to ensure that the role of the team in achieving the project goals is made clear and that the entire team is fully familiar with the project design. Particular attention should be paid to ensuring that:

- there is a common understanding of the project objectives and of each individual's role in achieving them;
- individuals are clear about their own role, their relationship to other team members, and the time and resources available to them;
- policy, procedures and practice are explained and any necessary training (collective or individual) is provided.

Management of the project throughout its duration should draw on standard project management techniques that will include project team meetings, monitoring by the project manager; review by the project team, communication between project team

members, and appropriate external liaison (with steering or user groups). It is essential that resources and timescales to be kept realistic and that everyone to be kept fully informed about changes and developments as they occur and also be consulted about decisions which will affect them.

Project Review and Redesign

Project review evaluates the quality and performance of the project to reach its stated aims and objectives within the parameters of time and resource identified in the project design.

Review can take place at any point in the project but it is more effective if it is programmed at the planning stage and if it coincides with another project milestone, such as the transition from one phase of activity to another.

A Project Review will:

- measure the performance of a project against its stated objectives, milestones and any internal or external factors;
- provide a formal point at which the continuing evaluation of the potential of the project to answer the stated research or management question can be expressed and challenged;
- reinforce commitment from the project team, partners and sponsors to the project;
- provide a mechanism for formal replanning or redesign of the project as necessary or appropriate.

Project Delivery

Appropriate dissemination of results is fundamental to the success of any project. The products of the project and the means of dissemination must always be agreed by the project team and set out in the original project design. The appropriate means of dissemination may change over the course of the project and this should be considered as part of the review cycle.

Project Evaluation

Project evaluation is a fundamental tool of project management which provides a formal framework for the examination of the successes and failures of the project, and a mechanism to document the lessons learnt. These experiences are then available for future projects.

A project evaluation should be systematic and the success criteria should be clearly defined. It should ask the following questions:

- has the project achieved the aims and objectives required in the project design?
- what project processes worked successfully and why?
- what project processes encountered problems

and why?

- did quality assurance procedures work well? If not why not?
- was the project team sufficiently skilled, empowered and trained?
- were sufficient risk strategies in place and managed?
- were the allocated time and resources sufficient?

CONCLUSIONS

The author demonstrates that health care services in general, and medical services in particular, fit the category of projects. This is accomplished through a comprehensive study of the main features of projects and medical services and a comparative analysis.

ACKNOWLEDGEMENT

This work has been supported by Romanian National Authority for Scientific Research, The National Plan for Research, Development and Innovation for the period 2007-2013, Programme III - CAPACITIES, grant no: 54/2008.

REFERENCES

1. Bosch FX., Lorincz A., Muñoz N., Meijer C.J.L.M, Shah K.V., The causal relation between human papillomavirus and cervical cancer, *J. Clin. Pathol.* 2002; 55: 244-265.
2. Sue J. Goldie; Louise Kuhn; Lynette Denny; et al., Policy Analysis of Cervical Cancer Screening Strategies in Low-Resource Settings: Clinical Benefits and Cost-effectiveness, *JAM*, 2001; 285(24): 3107-3115.
3. Helmut Brand, Alfons Holleder, Ulrike Wolf, Angela Brand, Cross-border health activities in the Euregios: Good practice for better health, *Health Policy* 86 (2008): 245–254.
4. Molly C. Fey, Margaret W. Beal, Role of Human Papilloma Virus Testing in Cervical Cancer Prevention, *Journal of Midwifery & Women's Health*, Volume 49, No. 1, 2004.
5. Jaafari A., Project and program diagnostics: A systemic approach, *International Journal of Project Management* 25 (2007): 781–790.
6. David Justham, Planning your research and audits, *Journal of Orthopaedic Nursing* (2008) 12: 45–49.
7. Anna-Barbara Moscicki, Impact of HPV infection in adolescent populations, *Journal of Adolescent Health* 37 (2005): S3–S9.
8. Chris J.L.M. Meijer, Peter J.F. Snijders, Adriaan J.C. van den Brule, Screening for cervical cancer: Should we test for infection with high-risk HPV?, *JAMC*, 2000; 163 (5).
9. Joaquim Sa Couto, Project management can help to reduce costs and improve quality in health care services, *Journal of Evaluation in Clinical Practice* 14 (2008): 48–52.
10. Annika Zika-Viktorsson, Per Sundstrom, Mats Engwall, Project overload: An exploratory study of work and management in multi-project settings, *International Journal of Project Management* 24 (2006): 385–394.
11. PMBOK (2004) A Guide to the Project Management Book of Knowledge. Philadelphia: Project Management Institute.