



# CLINICAL HEALTH PROMOTION

Research & Best Practice for patients, staff and community

## Welcome to the very first issue

We would like to warmly welcome readers to this, the very first issue of the Official Journal of the International HPH Network, entitled: "Clinical Health Promotion – Research and Best Practice for Patients, Staff and Community".

We look forward to providing you with and helping you share new health promotion knowledge, insights and experiences from all corners of the world – in this issue and in those to come.

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Editorial Office, WHO Collaborating Centre  
for Evidence-Based Health Promotion  
in Hospitals & Health Services  
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The Official Journal of the  
International Network of  
Health Promoting Hospitals  
and Health Services



# CLINICAL HEALTH PROMOTION

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## Aim

The overall aim of the journal is to support the work towards better health gain by an integration of Health Promotion into the organisational structure and culture of the hospitals and health services. This is done by significant improvement of a worldwide publication of clinical health promotion based on best evidence-based practice for patient, staff and community.

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## Editorial

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# A new era begins

Clinical health promotion to provide evidence for the benefit of patients, professionals and communities.

Zsuzsanna Jakab and Hanne Tønnesen

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It is a great pleasure to launch the new scientific journal; Clinical Health Promotion – Best Research and Practice for patients, staff and community, the official journal for the International Network of Health Promoting Hospitals and Health Services (HPH). The HPH Network was initiated by the World Health Organization (WHO) 25 years ago, and its development reflects the emphasis that WHO places on evidence-based decision-making in health. If we know what works, then we know what we should be doing.

The WHO Regional Office for Europe has revitalized this in many ways in the last year, including appointing a Chief Scientist, setting up the new European Advisory Committee on Health Research, and underlining specifically a real commitment to and investment in disease prevention and health promotion. So it is hoped that this new journal will significantly improve the way in which evidence-based practice, professional experience and patient preference on clinical health promotion is published worldwide.

The overall aim of the new journal is to support work towards better health gain by integrating health promotion into the organizational structure and culture of hospitals and health services and to support closer links and integration between individual preventative health services and population-based public health services. The goal is to establish a high quality, referenced journal for all health professionals in contact with patients in need of, undergoing or receiving follow-up through health promotion activities in hospi-

tals and health services. The journal will also serve managers, researchers, policy makers, patient organizations and others with an interest in targeting patients, staff, community and the environment in the field of health promotion.

The WHO Regional Office for Europe has launched the development, with Member States, of a new European policy for health and wellbeing, called Health 2020. Health inequalities exist both within and among countries, at significant human and economic cost – and action is needed. Health 2020 will be underpinned by a range of new evidence, including a specially commissioned European study on social determinants of health, whose preliminary report will be published later this year.

Health 2020, which will be presented for endorsement by European Member States in 2012, reflects a renewed commitment to public health – with considerable emphasis on prevention – while at the same time advocating for stronger health systems and the appropriate development of national health policies and strategies. It supports action to strengthen public health capacities and services at all levels of health systems, and across sectors, with the objective of scaling up prevention of diseases, health promotion and improvement. It is hoped therefore that this journal will be important in ensuring an evidence-based approach to implementing the key principles of Health 2020. Communication of all kinds will be key in gaining the involvement of all in formulating and implementing this policy from patients to professional health

Clin Health Promot 2011;1:3-4.



## Editorial

workers to decision makers, with the expert patient playing an especially crucial role.

All health care services providers, both at primary, secondary and tertiary level of care, have a crucial role to play in improving health, and the WHO Regional Office for Europe considers the International Network of Health Promoting Hospitals and Health Services an important partner for implementing Health 2020. HPH and WHO have therefore recently signed a memorandum of understanding for improved collaboration in order to increase preventive services to the citizens and to improve their health and quality of life. Noncommunicable diseases, such as cardiovascular diseases, cancer, diabetes, chronic respiratory disease and mental disorders account for about 86% of the Region's deaths, and 77% of the disease burden; yet within Europe, investment in non-communicable disease prevention and mental health remain very low. You may ask why hospitals and health services should be involved with health promotion – and the simple answer is that patients benefit significantly. Health promotion may be an integrated part of their clinical pathway, such as smoking cessation intervention in relation to surgery, or in the longer term, keeping them healthier for a longer time.

Health professionals have a responsibility to provide the best evidence-based practice for their patients and this includes health promotion activities. They usually collect new knowledge from scientific journals and apply this when implementing. Scientific journals are well-accepted ways to disseminate new evidence and best practice. This new scientific journal will aim to meet the needs in this field. Although many fine health journals exist, no other scientific journal has its main focus on clinical health promotion. This is a growing clinical area with a huge need for fast publication of good research that is currently being rejected. This is a problem, not only for the International HPH Network, but also for other networks and research groups within this field.

Scientific publication of high quality research is important documentation that will stay visible and be useful in the work with reaching better health gain. We hope that all clinicians, researchers and other health professionals will read and support this journal, and that it will become a significant international scientific journal. Thus, by implementing the best evidence-based health promotion practices in hospitals and other health care facilities, they will contribute to the regional and global effort to fight preventable noncommunicable diseases and to improve the health and quality of life of citizens throughout Europe.

*Clinical Health Promotion is an open access journal and all issues can be downloaded free of charge at [www.clinhp.org](http://www.clinhp.org)*



# Patient experienced side effects and adverse events after cancer treatment - Patient initiated research

Sune Høirup Petersen, Bodil Feldinger, Niels Jessen, Helle Kaufmann, Bolette Pedersen, Hanne Tønnesen

## Abstract

**Background** In the literature radiation of head and neck cancer (HNC) is followed by late side effects for more than a third of the patients. However, nearly all patients seem to experience side effects. The aim was to collect the multitude of these experiences through a patient-developed detailed questionnaire.

**Methods** 77 of 117 patients responded to a validated questionnaire from the Danish HNC patient network, age 61 (32 - 90) with 5 years (0 to 32) post treatment period.

**Results** 99% of the patients experienced at least one side effect, 67% more than twenty symptoms categorised into mouth complains, swallowing and eating problems, affected speaking ability, pain and fatigue during their daily living. Ten years survival was the only significant prognostic factor OR 0.13 (CI 0.02-0.81). Only swallowing and eating problems were significantly reduced over time ( $p=0.048$ ) and in relation to calendar period (0.049), but not with increasing age.

**Conclusion** The patients experienced pronounced sequelae, independent of gender, age and treatment/intervention.

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## Introduction

Head and neck cancer is 6th worldwide and among the ten most frequent cancers in Denmark with about 1000 new cases each year (1). Head and neck cancer encompasses a variety of specific diagnosis defining the treatment modality. Since 2003 the treatment strategy has been standardized in national guidelines. In 2008 fast track pathways were guaranteed by a political decision for this patient group as well as other groups of cancer patients in Denmark. The most common treatment is radiation therapy, either alone or in combination with surgical intervention. Several side effects have been described after radiation therapy, the most common being dysphagia, xerostomia and hoarseness (2). The patients are informed that the symptoms are most pronounced two weeks after the end of radiation therapy reducing to about one to two thirds over the years (3). Relevant tools have been developed to

measure the side effects focusing on objectivity and the observer's registration of the patient's experience (4-8). However, patient complains and consequences in a broader perspective are not included in these tools. The patients' own description of their experience indicates more and longer-lasting symptoms, which may require more detailed information and especially improved counselling on how to handle these in daily life.

Therefore it was relevant to collect these experiences through a detailed questionnaire developed by patients with neck and oral cavity cancer (NOC).

## Patients and methods

### The patients

The patients originated from a network of 117 patients with NOC, which is a network under the Danish Cancer Association; a patient-driven organisation aiming at providing a platform for



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exchange of experiences and advices among patients as well as lectures from health professionals and others relevant to the treatment and rehabilitation of head and neck cancer patients.

### Development of the questionnaire

The detailed questionnaire was based on brainstorming sessions among the patients at a network meeting. When the questionnaire was developed, it was decided not to ask questions about psychological, social and sexual conditions, which are derived from the side effects. In stead the decision was made only to ask to direct side effects. Two questions were included, however, which touch on social conditions (“to eat in the company of others” and “to be understood when you speak”). The questions were then categorized in themes and formulation/wording and appropriate scales were chosen in collaboration with health professionals. It was validated among a group of patients with NOC cancer and adjusted according to the comments and experiences.

The final questionnaire ‘regarding lasting side effects after radiation therapy due to cancer in neck and mouth’ contain 79 questions detailing problems regarding pain, speech, swallowing, taste, fatigue, infection, and others (Appendix) was sent to the members of NOC Network.

### Ethical considerations

There were no ethical barriers in this study, which was initiated, decided and performed by the members of the patient network themselves. The questionnaires were sent to the members without personal identification or number, and the responses were therefore completely anonymous. Because of anonymity, there were no personal reminders sent out. Participation was voluntary, so filling in and submitting the questionnaire, was understood as acceptance of publication.

The members were generally informed at the meetings and written information was distributed with the questionnaire declaring the intent of publicizing the results.

### Analysis

Chi2 test and logistic regression analysis was performed among the categories to identify prognostic factors over time (age, survival and calendar year) and presented by odds ratio (OR) and confidence

intervals not including the value one was considered. The changes in sequelae over time were evaluated, P value below 0,05 was considered significant.

### Results

The questionnaire yielded a response rate of 66% (77/120).

The median age of patients was 61 years (range 32 to 90) with median of 5 years post treatment (range 0 to 32). Respondents were 58% female and 42% male with 90% treated at one of two hospitals in the capital region. Patient characteristics are given in Table 1.

**Table 1 Characteristics of patients from the survey**  
Given as median (range), frequencies (%) or numbers

	Women n=45	Men n=32	Total n =77
Age (years)	60 (32 to 86)	62 (47 to 90)	61 (32 to 90)
Follow-up (years)	4 (0 to 32)	5 (0 to 11)	5 (0 to 32)
<b>Irradiation</b>			
Unilateral	33 %	19%	27 %
Bilateral	67 %	81%	73%
<b>Location of cancer</b>			
Oral cavity/palate/tongue	14	9	23 (30%)
Salivary gland	4	0	4 (5%)
Neck/vocal chord/ pharynx	5	4	9 (12%)
Naso-pharynx	4	1	5 (6%)
Thyroid gland	0	1	1 (1%)
Lymph nodes/tonsils	17	12	29 (38%)
Unknown primary	1	2	3 (4%)
Unspecified	0	3	3 (4%)

The patient reported side effects are summarised in Figure 1. 99% patients experienced at least one side effect, 67% more than twenty symptoms categorised into mouth complains, swallowing and eating problems, affected speaking ability, pain and fatigue during their daily living. Analysis was performed to identify prognostic factors with 10 years survival as the only significant prognostic factor OR 0.127 (CI 0.020-0.807).

Only swallowing and eating problems were significantly reduced over time ( $p=0.048$ ) and in relation to calendar period (0.049), but not with increasing age.

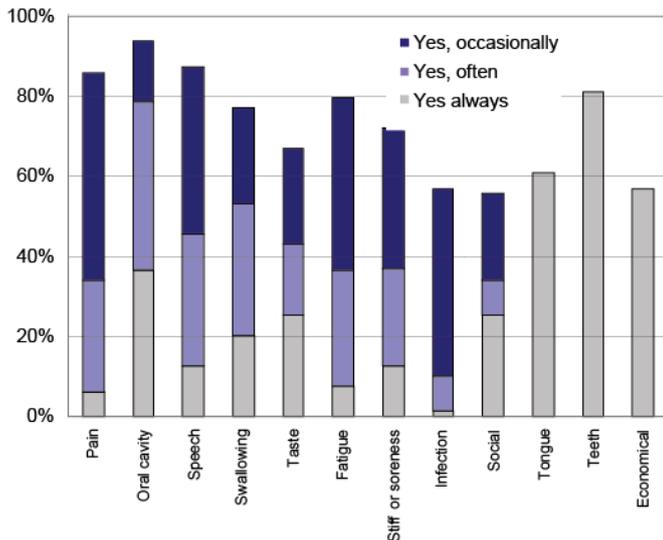
### Discussion

We found that the frequency of side effects was very high and had no clear relation to the cancer site, bilateral or unilateral radiation therapy, gender or age. A few symptoms were reduced over time. But the side



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Figure 1 Patient experienced side effects  
Grouped according to origin and theme



effects were distributed all over the patient group and exceeds other reviews and studies by comparison (2;9-13). The reason why difficulties with eating and swallowing were reported as reduced over time, could result from patients getting used to the problems over time – and adapt. They may choose food they are able to eat and the adapted way of eating, by drinking water to down food for example, becomes the norm.

Direct comparison with other studies is difficult due to differences in reporting and categorisation, but our patient-developed study shows more pronounced sequelae compared to the literature/self-reported side effects independent of the differences in criteria and definitions. The questions in the questionnaire are more specific than in other studies (2;9-13). The NOC Network has shown where the problems are, and this may be one of the reasons for a higher rate of side effects.

Our results are in accordance with the conclusion from another Danish study that addresses the need for patient reported side effects, which are not sufficiently detected by the objective side effects measurement tools as well as common quality of life instruments (8).

### Bias and limitations

This study contains a few general problems. The number and detail of questions increase the risk or possibility of getting positive response by chance, but on the other hand also enhances the possibility of generating new knowledge. A response rate like ours

yields the risk of both overestimations because those with most complications may feel more obliged to respond and may therefore contribute with a relatively higher part of the results. In complete contrast, they may also feel too ill to be able to respond at all; thereby adding to an underestimation.

The study is based on a limited cohort with specific interests, i.e. patient network aiming to improve patient perspective/conditions, thus focusing more on problems in patients than the case would be outside the network. Furthermore, the issue of co-morbidity that could be at least part of or the reason of side effects was not registered. One other limitation is the sample size, and another the representational value of a patient network. Thirdly is the gender issue, i.e. overrepresentation of women in contrast to gender specific incidence rate. Fourthly there is an overrepresentation of socio-economically advantaged patients in the NOC Network. The disease is socially imbalanced as it in many cases is caused by a high intake of alcohol and tobacco. Fifthly, the treatment is standardised after Danish Head and Neck Cancer Group (DAHANCA) guidelines(14), but rehabilitation initiatives are diverse and therefore the possibility of local issues in relation to rehabilitation in Denmark may limit the generalisability of the findings.

On the other hand it's probably like any general patient network, advocating the need for patient involvement. Consumer involvement is desirable and already proactive patients will seek information outside the local care setting, wanting to make an educated assessment of own treatment. In the future further consumer involvement seems likely and desirable. A patient driven evaluation of patient information material, which could lead to further cooperation in the developing process, is beneficial to all involved

### Conclusion

Independent of gender, age and treatment/intervention, almost all patients experienced pronounced sequelae after radiation treatment for cancer in head and neck.



## Research and Best Practice

### Contributors

Conception and design: SHP, NJ, HK, BF, HT

Acquisition of data: NJ, HK, BF

Analysis and interpretation of data: SHP, BP, HT

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Revising the article critically for important intellectual content: NJ, HK, BF, BP

Approving the article: SHP, NJ, HK, BF, BP, HT

**Competing interests:** None declared.

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### Appendix: Questionnaire

#### At present, are you experiencing any of the following

- Dryness of the mouth, insufficient saliva, sensitive mucous membranes in your mouth, sore mucous membranes in your mouth, thick or viscous mucus in your throat, thick or viscous saliva in your mouth, pain in your tongue.
- Pain in your jaw joint (right in front of your ears), pain in your lower jaw.
- Swelling of the neck, stiffness in the muscles at the front of the neck, stiffness in the neck muscles, pain in the throat when swallowing.
- Problems with speaking clearly, that you become hoarse, that you have trouble with speaking loud, that you have difficulties making yourself understood when speaking.
- Problems with swallowing, choking on your food, getting food in your nose.
- A loss of appetite, not feeling full, food getting stuck in your food pipe, problems with swallowing pills, that you don't want to eat with people you don't know very well.
- Problems eating acidic food, problems drinking acidic beverages (juice, wine), problems eating spicy food (curry etc.), problems eating rye bread, problems eating white bread, which is not, toasted, problems drinking fizzy drinks.
- Problems eating raw vegetables, problems eating hard raw fruit like apples, problems eating soft raw food like melon and banana, problems eating beef which isn't minced, problems eating other kinds of meat which isn't minced, problems drinking thin liquids like water, that your food tastes different from before the radiation, that your sense of taste is diminished.

#### At present, what kind of food are you eating?

- I eat through a tube, I drink protein shakes, I am on a liquid diet, I eat blended or mashed food, I prefer soft food, I avoid certain foods, as they are difficult for me to eat.

#### Within the last year, have you experienced any of the following.

- Pain in your teeth, oral thrush, sores in the corner of your mouth.
- Pains in the mouth and throat which have been hard to treat, feeling unusually tired, that it takes longer for sores to heal in the radiated area, infection of the skin in the radiated area – with high fever, more gastric acid than usual (a burning in the stomach and heartburn), bad memory that you don't believe is due to ageing.

#### Have you after a year has passed since the radiation noticed any of the following.

- A change in the mobility of the tongue, a change in the size and shape of the tongue, a change in the surface of the tongue. Since the completion of the radiation, have you experienced any of the following.
- More cavities than usual, teeth that crumble, teeth that break, parodontosis, reduced ability to open your mouth wide, a change in your voice.

#### Additional questions.

- Have you or your physician applied for subsidies for precautionary dental work?
- Have you been granted a subsidy for dental work extending 1500 DKK a year?
- Have you since the radiation been treated for low metabolism?
- Was your hearing impaired due to the radiation?
- Do you suffer from tinnitus since the radiation?
- At the present, are you seeking any treatment for pain in the mouth-throat area?
- Did you receive radiation on both sides?
- Since the completion of the radiation, have you had any problems keeping you weight up?
- Since the completion of the radiation, have you had any problems keeping you weight down?
- Since the radiation have you experienced that some of the jaw bone has decomposed (osteoradionecrosis)?
- Where in the throat and/or mouth did you have cancer?
- When was your last radiation treatment?
- At which hospital were you treated?
- Gender, age and additional comments?



# A model and selected results from an evaluation study on the International HPH Network (PRICES-HPH)

Jürgen M. Pelikan, Christina Dietscher, Hermann Schmied, Florian Röthlin

## Abstract

**Background** There is agreement in the literature that the work of national / regional networks and member hospitals of the International Network of Health Promoting Hospitals and Health Services (HPH) is under-documented and lacking systematic description and evaluation. A reaction to this deficit was PRICES-HPH (Project on a Retrospective, Internationally Comparative Evaluation Study).

**Methods** This paper presents the PRICES-HPH evaluation model which was developed for theoretical guidance of the study. It includes capacity building efforts of networks and hospitals in form of specific infrastructures, resources and strategies. 35 national/ regional networks were invited to fill in a comprehensive online questionnaire for networks, and 529 member hospitals to fill in a hospital questionnaire. The network and hospital coordinators reported the data retrospectively. The outcomes were the degree of implementation of HPH strategies and to which degree participation in HPH had strengthened this implementation.

**Results** The response rate was 80% for networks and 34% for hospital members. There was a pronounced variety in both the degree of implementation and the degree of perceived strengthening – both for specific HPH strategies and for member hospitals belonging to different networks. Most of the responding hospitals had implemented at least some of the HPH standards and strategies. About half had perceived that the implementation was strengthened by participation in HPH.

**Conclusion** Overall, the national / regional HPH networks and their member hospitals have implemented HPH strategies to a substantial degree and they see participation in HPH networks as a relevant influence for that purpose. The extents varied by type of HPH strategy and by affiliation to networks.

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**Clin Health Promot 2011;1:9-15.**

## Introduction

In some respect, the International Network of Health Promoting Hospitals and Health Services (HPH Network) can be described as a success story. It is a network of national and regional HPH networks, and it also includes individual member hospitals and health services in geographic areas not yet having established a national or regional network. (1).

However, critique both from outside and inside HPH (2;3) agrees on a deficit of data for HPH networks and member organizations. While there is evidence available on individual interventions targeting patients and staff, only limited systematic documentation has been produced about the organization of the International HPH Network and the national / regional HPH networks and their member hospitals (2-6). Data

at the organizational level of member hospitals are available for only the early phases of the HPH Network (7;8).

The HPH critics also have to take this lack of data into consideration, thus their conclusions are, to some extent, rather speculative. Therefore, systematic descriptive data on what HPH networks and member organizations are actually doing are needed as a first step to more refined evaluations.

PRICES-HPH (“Project on a Retrospective, Internationally Comparative Evaluation Study”), a systematic empirical evaluation study was established to take this first step.

## Methods

### Theoretical PRICES-HPH Evaluation Model

The PRICES-HPH evaluation model (see figure 1) was developed to guide



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evaluations of health promotion implementation in member hospitals within national / regional HPH-networks and to find out which role networks play in supporting this implementation. This model applies and integrates concepts from various discourses: quality in health care, evaluation and capacity building in health promotion and specific HPH documents. The model distinguishes between two kinds of actors, firstly the member hospitals of national / regional HPH networks, and secondly, the networks themselves.

This model allows observation and evaluation of their structures, processes and outcomes (following Avedis Donabedian's quality paradigm) (9) regarding their health promotion qualities. Donabedian's paradigm and Nutbeam's hierarchy of outcomes (10) were included to evaluate impacts of health promotion structures and processes of HPH hospitals and networks. The model relates to the capacity building debate in health promotion (e.g.

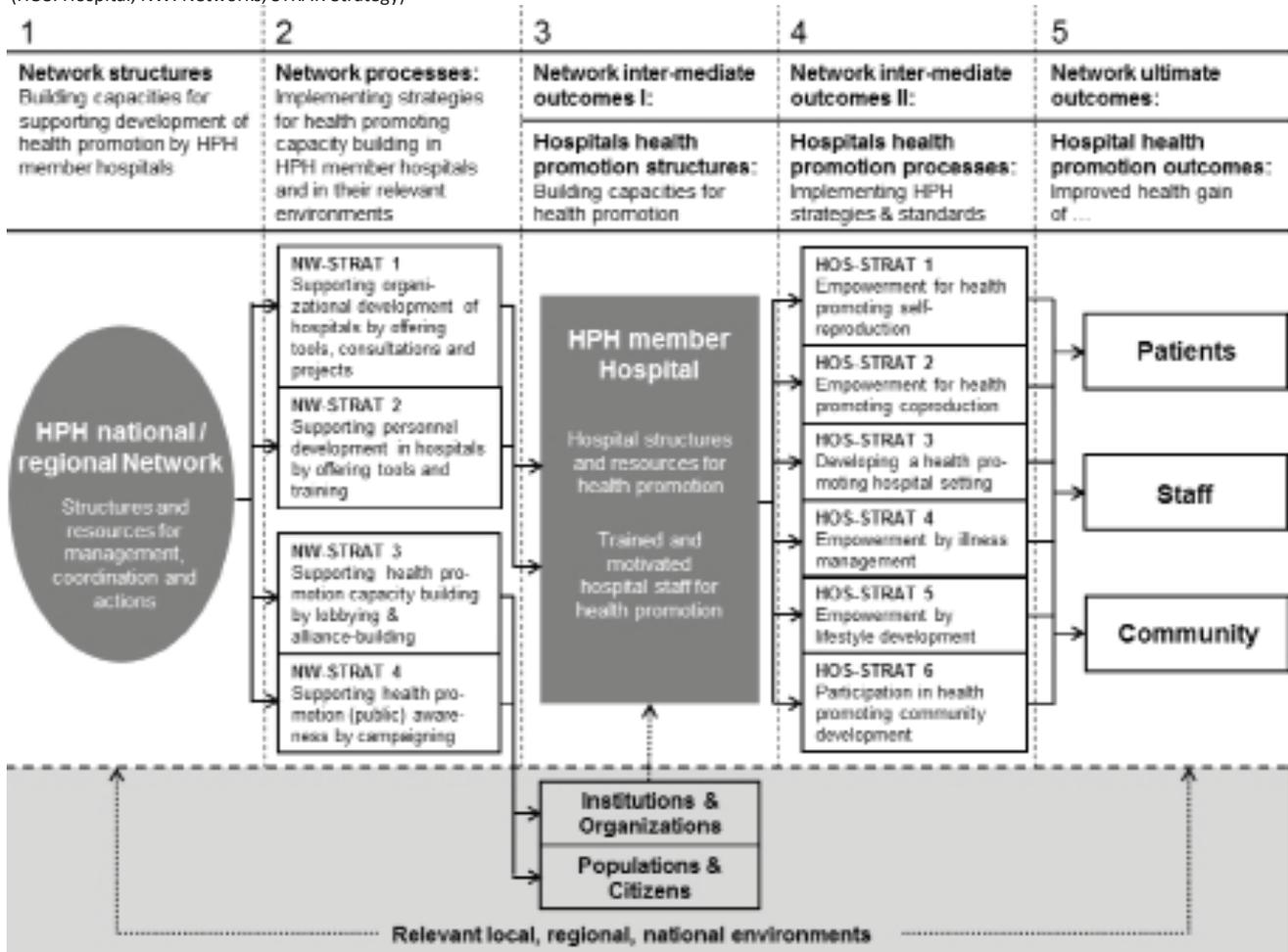
11;12) by acknowledging that effective health promotion interventions need adequate infrastructure and resources to be successful in the first place. It also relates to the Vienna organizational health impact model (VOHIM) of LBIHPR (1;13).

The outcomes were the self-reported degree of implementation of 18 previously described core strategies for putting health promotion into action (14) and the perceived strengthening by participation in HPH.

In line with the main goal of HPH, the ultimate outcome of the model is defined as improved health gain (15) of patients and their relatives or carers, staff and their relatives and members of the community whose health interests are served by hospitals.

The health promotion processes needed to achieve this goal have been described as 18 HPH core strategies, which stem from six general hospital strategies for each of the three target groups patients, staff and community (3;16;17). The first three strategies

**Figure 1** The comprehensiveness and framework of the PRICES HPH Evaluation Model for national / regional networks and member hospitals (HOS: Hospital, NW: Networks, STRAT: Strategy)





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relate to improving the health promotion quality of core structures and processes within hospitals. The other three strategies define additional health promotion services that should be offered by HPH hospitals, two targeting illness management / patient education and lifestyle development / health education and one for the community setting. The 18 core strategies related to selected parts of the standards for HP in hospitals (18)

### Participants and Data Collection

At the network level, a self-administered, model-based and theory-informed questionnaire in English was developed for data collection. It comprised 132 questions, most of which combined closed and open answer possibilities. Data was collected from coordinators of HPH networks between February 2009 and July 2009. Coordinators of all 35 networks that nominally existed at that time were sent an invitation to participate. Four of these networks did not respond and were regarded as inactive at this time. Three of the coordinators of the remaining active 31 networks did not want to participate. Finally 28 completed questionnaires were received, which equals a return rate of 80% of all networks. At the hospital level, a questionnaire was developed and pre-tested in due consideration of existing health promotion assessment instruments. The final (English) version of the tool comprised 110 mainly closed questions and was translated into twelve languages (19). The main focus of the questionnaire was on the institutionalized health promotion structures and on the implemented strategies. Based on the provided lists, 529 coordinators of member hospitals were invited to participate in the online survey, and 180 returned a completed questionnaire, which equals a response rate of 34%. Data collection started by the end of October 2009 and was completed by the end of February 2010.

## Results

### Network structures and processes

The 28 networks had 23 members on average (between 2 and 99 members). The networks were funded from different sources including public funds and membership fees. Those 19 networks with specified HPH budgets had a mean annual budget of € 3.575 (between € 278 and € 7.923) per member. 21 networks reported a mean weekly

working time of 36% for coordinators, which varied from 5 to 100 %.

While all networks had, as required by the constitution of HPH (15), a coordinator, an explicit coordinating office with dedicated staff and infrastructures, a governance board and a general assembly were reported by 43% of networks each. 39 % had a chair, 25% an advisory board and 36% had other administrable structures (e.g. a treasurer).

All 28 networks reported some form of capacity building activity, NW-STRAT 1. Of these 71% used projects, 64% implementation tools and 54% evaluation tools. Concerning NW-STRAT 2 – supporting personnel development in member organizations – 68% offered implementation training, 36% vocational training. In addition, the networks supported capacity building in member organizations by task forces (46%), by defining annual themes (32%) and by organized peer support (18%).

Another source of support for capacity building was enforcement of international and additional national / regional organization-related membership requirements to become a full member of the network; 86% required the identification of a coordinator, 61% an HPH action plan, 54 % the implementation of WHO Standards (18) or other adequate means, 43% a written HPH policy. In addition, 36% of networks asked their members to perform a standard self-assessment, 11% to meet specific HPH quality criteria and 7% to set up a HPH management structure.

Furthermore, networks support health promotion capacity building by impacting on the supportiveness of conditions in the relevant environments of national / regional networks and their members (NW-STRAT 3) by regular cooperation or partnerships with different institutions and organizations: 89% cooperate with health policy, 57% with patient organizations, 46% with thematic movements (e.g. baby-friendly hospitals) 36% with media, 32% with accreditation organizations, 25% each with staff unions, health care professionals, and the industry, and finally 11% with insurance companies.

Networks also used a number of media to inform the wider public about their activities (NW STRAT 4); 79% used websites, 64% had presentations, 57% publications, 50% open conferences for a wider audience, 36% e-newsletters, 29% printed newsletters, 21% sent out info packages and 11% had a telephone hotline.



## Research and Best Practice

**Table 1** Basic characteristics of the responding HPH member hospitals (number and per cent)

	Shares (%)
<b>Type of hospital services<sup>a</sup></b>	180 (100%)
General hospital (mainly acute)	76.7%
Specialised hospital/facility	23.3%
<b>Profit orientation of hospital<sup>b</sup></b>	177 (100%)
Non-profit organisation	94.4%
For-profit organisation	5.6%
<b>Owner of the hospital<sup>a</sup></b>	180 (100%)
Government, federal	43.8%
Government, non-federal	34.7%
Privately owned	12.5%
Religious order	6.3%
Welfare association	2.3%
Insurance fund	0.6%
<b>Location of the hospital<sup>b</sup></b>	179 (100%)
Small town (less than 15.000 inhabitants)	14.0%
Town (15.000 to 99.999 inhabitants)	34.6%
City (100.000 to 999.999 inhabitants)	36.3%
Large City (1.000.000 and more inhabitants)	15,1%
<b>Number of hospital beds<sup>b</sup></b>	162 (100%)
Up to 400	50.6%
Between 401 and 800	29.0%
More than 801	20.4%
<b>Administrative status of hospital<sup>b</sup></b>	176 (100%)
Hospital is a standalone organisation	46.6%
Hospital is part of a trust or alliance	53.4%
<b>Years of membership in the HPH network</b>	174 (100%)
3 years or less	20.6%
Between 4 and 6 years	21.8%
Between 7 and 9 years	16.7%
Between 10 and 12 years	19.5%
13 years or more	12.6%

<sup>a</sup>P<0.00 (Chi<sup>2</sup>-Test) between responders and non-responders

<sup>b</sup>No significant differences between responders and non-responders

### Hospital structures and processes

The majority of hospitals in the sample were general hospitals (see table 1 for further characteristics). The representativeness of the sample was also tested for the 349 non-responding hospitals (see footnotes table 1).

When asked to describe the HPH implementation strategy of their hospital by ticking the most suitable one from a list of four pre-defined approaches, three of these, i.e. “Occasional specific health promo-

tion projects”, “Regular health promotion projects and organization-wide programs” and “Systematic integration of health promotion in existing quality management systems” were ticked by about 30% of hospital coordinators each, while only about 10 % chose “Establishing an own health promotion management system”, and just 2 % indicated another approach.

An earmarked budget for health promotion existed in only 35 % of HPH hospitals. Overall, 32% of participating HPH hospitals had an official HPH unit, 46% an official HPH team, 57% an explicit HPH steering committee and 59% had developed further explicit roles or groups for health promotion (e.g. permanent working groups). All hospitals had a HPH coordinator, although a full-time position was available in only 11 % of hospitals. 62% had a part-time coordinator (with 7.7 working hours per week on average). Only 46% of coordinators had officially allocated working time for health promotion.

A total of 29.0% self-rated their health promotion implementation approach as “systematic integration of health promotion in existing quality management systems” A linkage between health promotion and quality management became visible for more specific indicators: 63% of the hospitals used quality management systems on the level of the whole organization and 77% on the level of units / departments.

In 47% of hospitals, outcomes of health promotion and prevention activities were routinely captured, and in 64% there was a health promotion quality assessment routine in place, which included the “HPH Self Assessment Tool for Health Promotion in Hospitals” (18) for 46% of the hospitals. A high percentage reported to train staff to increase health promotion skills (69%) or had, as defined in Standard 1, written policies / strategies / standards in place (72%).

The degree of implementing HPH core strategies varied from 2.72 to 4.19 on a five-point scale. The mean degree of perceived strengthening the implementation by participation in HPH was 51% across criteria for all strategies, with a range from 32% to 69% for the 18 strategies (see table 2).

According to aggregated means, the three health promotion quality improvement strategies (HOS-STRAT 1-3) were clearly better fulfilled than the three health promotion service strategies (HOS-STRAT 4-6) (see table 2).



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**Table 2** Degree of implementation of 18 core strategies and the degree of perceived strengthening by participation in HPH - hospital level (numbers, mean and SD)

	Criteria (n)	Implementation <sup>a</sup>	Hosp (n)	Strengthening <sup>b</sup>	Hosp (n)
<b>Patient-oriented strategies (PAT-1 – PAT-6)</b>	<b>44</b>	<b>3.66 (0.73)</b>	-	<b>54.1% (40.6%)</b>	-
Empowerment of patients for HP self-reproduction (PAT-1)	11	3.87 (0.66)	166	44.6% (40.8%)	163
Empowerment of patients for HP coproduction in treatment (PAT-2)	12	3.70 (0.67)	165	52.3% (38.9%)	163
Developing a HP hospital setting for patients (PAT-3)	11	4.15 (0.56)	172	48.1% (36.9%)	164
Empowerment of patients by developing a HP illness management (PAT-4)	4	3.64 (0.78)	175	60.7% (43.4%)	165
Empowerment of patients to lead a HP lifestyle (PAT-5)	3	3.19 (0.82)	177	68.6% (42.7%)	163
Participation in HP community development for patients (PAT-6)	3	3.42 (0.87)	179	50.0% (41.1%)	158
<b>Staff-oriented strategies (STA-1 –STA-6)</b>	<b>30</b>	<b>3.36 (0.86)</b>	-	<b>51.6% (40.6%)</b>	-
Empowerment of staff for HP self-reproduction (STA-1)	5	3.62 (0.82)	175	52.2% (40.9%)	160
Empowerment of staff for HP coproduction in work processes (STA-2)	7	3.35 (0.83)	166	54.4% (40.0%)	158
Developing a HP workplace setting for staff (STA-3)	7	4.19 (0.63)	175	49.3% (39.4%)	161
Empowerment of staff by developing a HP illness management (STA-4)	5	3.28 (0.83)	175	49.4% (40.8%)	161
Empowerment of staff to lead a HP lifestyle (STA-5)	3	2.99 (1.02)	175	66.0% (42.8%)	156
Participation in HP community development for staff (STA-6)	3	2.72 (1.01)	175	38.3% (39.6%)	156
<b>Community-oriented strategies (COM-1 – COM-6)</b>	<b>31</b>	<b>3.31 (0.89)</b>	-	<b>47.7% (42.4%)</b>	-
Empowerment by HP access to the hospital (COM-1)	6	3.71 (0.71)	160	37.8% (41.8%)	157
Empowerment for HP coproduction with services in the region (COM-2)	7	3.79 (0.70)	170	39.7% (42.5%)	156
Developing the hospital as a HP environment for the community (COM-3)	7	3.43 (0.86)	158	31.9% (40.7%)	153
Empowerment of citizens by developing a HP illness management (COM-4)	4	3.05 (0.96)	167	54.3% (43.4%)	154
Empowerment of citizens to lead a HP lifestyle (COM-5)	3	2.80 (1.09)	170	59.7% (43.2%)	149
Participation in HP community development for citizens (COM-6)	4	3.08 (1.02)	158	62.6% (42.5%)	153
<b>Total</b>	<b>105</b>	<b>3.44 (0.82)</b>	-	<b>51.1% (41.2%)</b>	-
<b>General strategies</b>					
Empowerment for HP self-reproduction (HOS-STRAT 1)	22	3.73 (0.73)	-	44.9% (41.2%)	-
Empowerment for HP coproduction (HOS-STRAT 2)	26	3.61 (0.73)	-	48.8% (40.5%)	-
Developing a HP hospital setting (HOS-STRAT 3)	25	3.92 (0.68)	-	43.1% (39.0%)	-
Empowerment by illness management (HOS-STRAT 4)	13	3.32 (0.86)	-	54.8% (42.5%)	-
Empowerment by lifestyle development (HOS-STRAT 5)	9	2.99 (0.98)	-	64.8% (42.9%)	-
Participation in HP community development (HOS-STRAT 6)	10	3.07 (0.97)	-	50.3% (41.1%)	-

<sup>a</sup>Degree of implementation of single criteria was assessed by Likert item "In how far does your hospital meet the following criteria?" With answer categories: not at all (1), hardly (2), partly (3), widely (4), fully (5). For each strategy index, the values of included criteria were summarized to a Likert scale.

<sup>b</sup>Degree of strengthening for single criteria was assessed by item "Are these criteria strengthened by your hospital's participation in HPH?" with 3 answer categories: 1: "No influence", 2: "Yes, encouraged by HPH", 3: "Yes, specific HPH initiative". The "Yes" % (= answer categories 2 and 3) for the included criteria were summarized and mean % calculated.

The networks differed considerably concerning their degree of implementation and for the reported strengthening by participation in HPH (see table 3). Interestingly enough, degrees of implementation and degrees of strengthening were correlated negatively (-0.48, N = 18) over all HPH core strategies.

### Discussion

The PRICES-HPH study collected data at the organ-

izational level of the HPH networks and the member hospitals. The majority of networks were able to acquire at least basic resources for their work, although to considerably varying extents. Less than half of the networks had dedicated infrastructure to support their function.

The study showed a considerable variety of the degree of strategy implementation and the perceived strengthening through participation in HPH. Hospital coordinators attributed a strengthening of imple-



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**Table 3** Degree of implementation of 18 core strategies and the degree of perceived strengthening by participation in HPH - network level (numbers, mean and SD)

	Implementation (n) <sup>a</sup>					Strengthening (n) <sup>b</sup>					Networks (n) <sup>c</sup>
	Very low	Low	Mid- dle	High	Very high	Very low	Low	Mid- dle	High	Very high	
<b>Aggregation by type of general strategy</b>											
Empowerment for HP self-reproduction (HOS-STRAT 1)	0	0	5	12	1	4	7	4	2	1	18
Empowerment for HP coproduction (HOS-STRAT 2)	0	1	7	9	1	3	5	5	4	1	18
Developing a HP hospital setting (HOS-STRAT 3)	0	0	4	13	1	4	6	5	2	1	18
Empowerment by illness management (HOS-STRAT 4)	0	3	11	3	1	3	3	7	4	1	18
Empowerment by lifestyle development (HOS-STRAT 5)	1	4	12	0	1	3	2	4	5	4	18
Participation in HP community development (HOS-STRAT 6)	0	5	12	0	1	3	6	7	1	1	18
<b>Aggregation by target groups</b>											
Patient-oriented strategies (PAT-1 – PAT-6)	0	0	4	13	1	2	6	1	8	1	18
Staff-oriented strategies (STA-1 – STA-6)	0	2	10	6	0	3	4	7	3	1	18
Community-oriented strategies (COM-1 – COM-6)	0	1	13	3	1	4	5	6	1	2	18
<b>Aggregation of all 18 HPH core strategies</b>	0	1	10	6	1	3	6	6	2	1	18

<sup>a</sup>Constructed categories of degree of implementation are defined by mean ranges of the five-point Likert scale: Very low = 1-1,8; Low = 1,81-2,6; Middle = 2,61-3,4; High = 3,41-4,2; Very high = 4,21-5

<sup>b</sup>Constructed categories of degree of strengthening by participation in HPH are defined by ranges for mean percentages of answers "yes, strengthening": Very low = 0-20%; Low = 21-40%; Middle = 41-60%; High = 61-80%; Very high = 81-100%

<sup>c</sup>Only networks with more than three valid cases in the sample were included. These are 18 of the 29 networks that participated in the survey.

mentation by their hospitals' participation in HPH to every second measured strategy criterion. Degrees of strengthening varied considerably for types of strategy. Patient oriented strategies were more fully implemented than staff and community oriented strategies, and strategies aiming at the improvement of health promotion quality of traditional core functions of hospitals were better fulfilled than health promotion strategies offering specific services. Thus the international HPH network is not homogeneous, but belonging to a specific national / regional network makes quite a difference.

PRICES-HPH had the advantage to be nearly all inclusive for the national/regional networks of the international HPH network, and by its detailed questionnaires, which captured very comprehensive sets of relevant characteristics of HPH networks and their member hospitals. Thereby, PRICES-HPH is an important source for the systematic documentation of HPH networks and member organisations and significantly reduces the data deficit that has been criticized hitherto (2;3;20-22).

The study has quite a number of limitations, as well. The data collection was obtained as self-reported and self-estimated information, which was based on the memory, experience and attitudes of the individual

coordinators. No validation procedures were added. Although the PRICES-HPH evaluation model described the framework including specific outcomes, such as better health gain, the study did not intend to measure this possible health gain. The study has no control groups, neither for networks nor for hospitals. Information for rather complex issues had to be provided and assessed by one informant (the coordinator) although hospital coordinators were encouraged to get some support by a team for answering the questionnaire. The response rate for networks was good (80%), but the response rate for hospitals was only 34 %, thus systematic bias has to be expected.

This article is the first PRICES-HPH publication describing the model and the initial results. Further analyses will focus on how capacities influence the networks' provision of supportive strategies and the hospitals' implementation of HPH structures and processes. PRICES-HPH discovered an interesting negative correlation between implementation and strengthening: the better implementation, the less perceived strengthened by HPH participation. Additional analyses are needed here as well.



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### Conclusion

Overall, the national / regional HPH networks and their member hospitals have implemented HPH strategies to quite a substantial degree and they see participation in HPH networks as a relevant influence for that purpose. The extents varied by type of HPH strategy and by affiliation to networks.

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Conception and design: JMP, CD, HS, FR.

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# Evaluating postgraduate courses in Health Promotion

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## Abstract

**Background** Background Evaluation of short training/postgraduate courses, with focus on measuring acquisition of new knowledge, is often limited. Therefore, the aim of this study was to develop a Multiple Choice test for evaluating how well participating staff in the clinical prevention and health promotion training course had acquired knowledge.

**Methods** 11 participants from a spring course and nine control persons took a pilot test, and 12 participants and 21 control persons took the final Autumn-test. A MC test was developed with 17 questions with three possible answers for each question. The participants answered the MC test as a pre-test and a post-test.

**Results** Results The pilot test showed that the number of correct answers in both groups resulted in a median of 13 ranging from 10-15 and 10-16 ( $p = 0.42$ ), respectively. The Autumn testing showed a significant difference in number of correct answers between the pre-test and the post-test, 10.5 (6-13) versus 12 (11-13) ( $p = 0.016$ ). Furthermore, there was a significant difference between the post-test of the participants and the answers of the control persons, 11 (8-14) ( $p = 0.02$ ). In addition, the study found that the participants were positive towards answering the MC test, and that the test could be completed within the allocated period of time.

**Conclusion** A MC test can be easily developed to evaluate whether the participants acquire knowledge by participating in a training/postgraduate course in clinical health promotion. However, the MC test does not measure acquisition of new clinical skills and effect for the individual patients.

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## Introduction

Evaluation of short training/postgraduate courses, with focus on measuring acquisition of new knowledge, is often limited. This may be due to the length of the courses as they often vary from a few hours to a few days, and so knowledge dissemination may be prioritized over evaluation. It may also be due to lack of access to evaluation tools for measuring knowledge.

However, there is a widespread tradition of evaluating the participants' immediate overall satisfaction with the course. This may be because there are already complete test forms for this, and that the same form is applicable in many courses.

There are various evaluation methods for measuring knowledge, such as Multiple Choice questions, assignments, essays, written and oral examinations, as well as Objective Structured Clinical Examination (OSCE) (1). It is important to choose an evaluation method appropriate to the aims of the course, such as knowledge and clinical skills,

while at the same time meeting the basic requirements for reliability and validity (Table 1) (1;2).

Due to the limited time in training/postgraduate courses, and especially in courses with a sizeable theoretical content, the use of a Multiple Choice test (MC test) seems natural. An MC test has high reliability when it comes to testing knowledge, but is criticised for having low validity when measuring clinical skills (2;3).

Every six months, the WHO-CC at Bispebjerg University Hospital in Denmark offers a four-day course in clinical health promotion called "Systematic Implementation of Brief Intervention". The aim is to develop staff skills in implementing brief intervention focusing on tobacco, alcohol and physical inactivity, and also to improve the participants' knowledge of the background, evidence and method for brief intervention (Table 2). In this article competences are defined as knowledge and clinical skills. The target group is nurses and other health care staff who



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**Table 1** Possible evaluation methods (Ringsted and Aspegren, 2004)<sup>1</sup>

	- Multiple choice tests
<b>Knowledge</b>	- Essays written examination - Oral examination
	- Clinical decision making: Patient management problems (PMP)
<b>Skills</b>	- Clinical skills: direct observations of performance in simulat scenarios, Objective Structured Clinical Examination (OSCE), or observation in the clinic - Communication, cooperation: OSCE, feed-back from others – if necessary patients
	- Assessment of behaviour. Can be made by supervisor, colleagues, staff, if necessary patients - singly or a combination, so called 360° assessment (multiple peer assessment or multiple source assessment)
<b>Attitudes</b>	- Assessment of reflexive reports of specific problems or incidents - Assessment of statements and responds to other's statements or behaviour. For example in groups or at conferences. Can be made by supervisor, colleagues or staff
	- Logbook (experience log) – quantitative registration of accomplished activities, for example operations, procedures
<b>Experience</b>	- Cusum-score – registration of procedures with qualitative element – registration of success rate
	- General assessment of behaviour and manner. Can be made by supervisor, colleagues, staff, if necessary patients – singly or a combination (360° -assessment, multiple source assessment)
<b>Habits of action</b>	- Assessment of reflexive reports of quality of own actions and handling of problems - Assessment of portfolio – assessment of documented behaviour and manner and the results from this. Portfolios are different material from many different sources

**Table 2** The outline for the course in clinical health promotion: Systematic implementation of brief intervention October

25th of Oct.	26th of Oct.	1st of Nov.	2nd of Nov.
<p><b>8.30 – 9.30: Theory</b> Welcome and Pre MC-testBBH as a model hospital for clinical health promotion Background for documentation in the area of clinical health promotion</p> <p><b>9.45 – 12: Theory + training</b> Second hand smoke – what do we know?Presentation by participant Assessment of motivation</p> <p><b>12.45 – 13.45: Theory</b> Motivation, barriers, myths/attitudes, implementation, criteria of success</p> <p><b>14 – 15: Theory + training</b> Medical record formScreening for alcohol and tobacco</p> <p><b>15 – 15.30: Theory</b> Literature list, referencesSumming up</p>	<p><b>8.30 – 11.45: Training</b> Test in brief intervention</p> <p><b>12.30 – 15.15: Theory</b> Screening for physical activityHealth risks by physical activityHealth gain by physical activity for patients with chronic diseases</p> <p><b>15.15 – 15.30: Summing up</b></p>	<p><b>8.30 – 9.00: Since last time</b></p> <p><b>9.00 – 10.00: Theory</b> Updating of knowledge about tobacco and alcohol</p> <p><b>10.30 – 12.00: Training + Theory</b> Walk and TalkAlcohol dependence Replacement therapy and treatment of withdrawal symptomsOffers of support</p> <p><b>12:45 – 15.00: Training</b> Brief intervention</p> <p><b>15.00 – 15.30: Summing up</b></p>	<p><b>8.30 – 14.30: Theory + Training</b> Theory about stages of change in personal behaviourCharacteristics in the specific stagesEffort to support the process of change in the individual patientKeep the overview – Use glasses</p> <p><b>14.30 – 15.30 Evaluation</b> Incl. Post MC-test, and feedback</p>



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Figure 1 Trial profile



will be conducting the brief interventions in practice. So far, the participant evaluations have only focused on overall satisfaction with the course, but there is also a need to evaluate knowledge acquisition. Therefore, the aim of this study was to develop a MC test for evaluating how well the staff participating in the clinical prevention and health promotion training course had acquired knowledge.

The literature in the field is sparse. A search of randomized studies resulted in six articles, but none were directly relevant to this study (4-9). However, some reviews do show that medical postgraduate courses do have an effect (10;11).

### Material

11 participants from a spring course and nine control

persons took the pilot test, and 12 participants at an autumn course and 21 control persons took the final test. One participant did not complete the pre-test, and another participant did not complete the post-test due to absence. These two were not included in the comparative analysis of the pre- and post-test, and one of these was excluded from results regarding views on obtaining new knowledge and the overall attitudes towards the course. Both groups (participants and control persons) were recruited from nurses and other health care staff (Figure 1). The structure of the course was changed between the two courses in spring and autumn, making the theory part more interactive, but the content of the course remained the same. Consequently the changes would not have influenced the MC test.



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### Method

#### Development of MC test

The MC test was developed and consisted of 17 questions with three possible answers for each question. The time allowed for completing the MC test was 15-20 minutes so the number of questions was adapted to this time frame. The questions emerged from the training course material as well as from interviews with all five teachers, who were asked to identify, which knowledge they found most important for the participants to acquire during the course. There was continuous dialogue between the teachers about the formulation of the MC questions. Three nurses from Vejle Hospital were then asked to complete the preliminary MC test and comment on the formulation of the questions, which resulted in a few adjustments.

#### Pilot test

The preliminary MC test was given a test run by participants at the end of a previously course. Twenty minutes were allocated to the test. Participants from four departments at Bispebjerg University Hospital also completed the MC test. Their head nurse, who had been asked to pass on the MC test to four nurses, contacted them and the subjects subsequently returned the completed test within 16 days. It was not allowed for the nurses to have participated in the course before, and the MC test had to be done individually. Nine control persons returned the test. After the pilot testing, the MC test was further adjusted, leading to three to five options for each MC question.

#### Final Test

The final test was carried out in a subsequent autumn course, where the participants answered the MC test as a pre-test as well as a post-test. Fifteen minutes were allocated to each of the MC tests. One of the MC questions was later excluded from the analyses, as all the possible options given for this question turned out to be wrong.

The participants were not informed about the correct answers until after the post-test. The post-test included a supplementary validating question (question 18), where the participants on a scale from 1-10 were to rate the quantity of knowledge they had acquired during the course.

The control persons were recruited in the same way as the training course participants, except this time the MC test was personally handed out by the authors of this article either at the morning conference or dur-

ing lunch break. The control persons were given 15 minutes to complete the MC test. Not all the control persons answered the test within this period, and a collection later in the day was arranged.

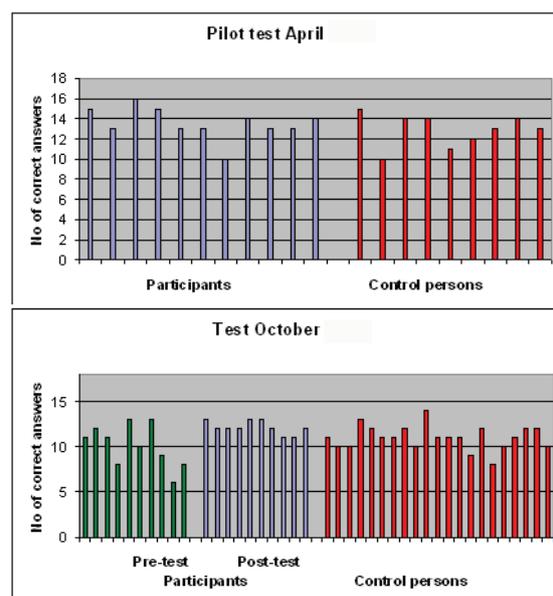
Participants received a letter with information about the MC test two weeks before both the spring and autumn course, so they could decide in advance whether they wanted to participate. Before the test was handed out it was once again emphasised that participation was voluntary. All answers from the participants and the control persons were anonymised.

A Mann-Whitney test was used to compare the answers from participants and control persons, and a Wilcoxon test was used to compare the pre-test and the post-test. The significance level was 0.05.

### Results

The pilot test in the spring showed that the control persons had approximately the same level of knowledge as participants completing the course (Figure 2a). The number of correct answers in both groups resulted in a median of 13 ranging from 10-15 and 10-16 ( $p = 0.42$ ) respectively. The Autumn testing showed a significant difference in number of correct answers between the pre-test and the post-test, 10.5 (6-13) versus 12 (11-13) ( $p = 0.016$ ) (Figure 2b), indicating that the participants had acquired new knowledge during the course. Furthermore, there was a significant difference between the post-test of the partici-

**Figure 2a, 2b** The participants' and control persons' answers in the pilot test in Spring and in the test in Autumn.





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pants and the answers of the control persons, 11 (8-14) ( $p = 0.02$ ). This result indicates that participation in the course increases the level of knowledge among the staff.

The additional question (question 18) in the post-test showed that the participants generally thought that they had acquired new knowledge by participating in the course, 8 (4-10). The participants were asked to comment on the MC test, but none of them did so. Bispebjerg University Hospital's own evaluation form showed an overall satisfaction with the training course in general, for both the spring and autumn course; 8 (5-10) and 9 (8-10) ( $p = 0.09$ ).

Finally the study found that the participants were positive towards answering the MC test, and that the test could be completed within the allocated period of time.

### Discussion

The study showed that an MC test could be developed and used to evaluate the participants' level of knowledge before and after a postgraduate/training course. There was a significant difference between the pre-test and the post-test in the autumn course and there was also a significant difference between the participants and the control persons.

Although a MC test could be used, it can be questioned whether the MC test is the optimal type to use in this context. According to Kirkpatrick's theoretical model "The Four Levels", an ideal evaluation would take place in the course as well as in the entire organisation, in this case the hospital (12). The model is characterised by a focus on practical use, and correspondingly one of its strengths is that the model is simple to use (13). However, the validity of the model can be contested (14). The model aims at uncovering the entire range, from the individual participant's reaction and satisfaction with the course to an evaluation of what the hospital as a whole gains by offering this course. However, an evaluation at this scale would be time consuming and costly, especially in view of the shortness of the course.

In addition to increasing the participants' knowledge of clinical health promotion, the course aims to improve staff skills in conducting brief interventions. With the quantity of theory involved, inclusion of an MC test for measuring knowledge acquisition in the course would be relevant.

Other possible methods include oral examinations and essays or other forms of written evaluation, but for this the course leader must spend a dispro-

portionate amount of time.

A MC test is not suitable for measuring attainment of clinical skills, whereas OSCE would meet this demand (Figure 1). OSCE is very time consuming, and therefore barely realistic to carry out during a four-day course, but would be more suitable for use in a clinical stay of longer duration or in a larger final examination (2).

The strength of this study is its well-considered design where the developmental phase with independent pilot test has been separated from the test phase, as well as the use of control persons. The use of control persons showed the fairly high level of knowledge about clinical prevention and health promotion among the staff at Bispebjerg University Hospital. The limitation is the small number of control persons and course participants.

In many ways, the MC test is ideal for measuring knowledge acquisition at training courses. It is easy to use, but it is also necessary to develop a specific test for each course as the courses have different aims and content. In addition, a MC test must be continually adjusted, as aim and content of the course also changes with time due to new evidence and new demands on the staff.

Implementation of an evaluation carries the risk of a Hawthorne effect (15), as awareness of a forthcoming evaluation alone will improve performance. This can, however, also be utilized positively by increasing the participants' motivation. However, the Hawthorne effect has been discussed (16). The use of a MC test can possibly also have a motivating and focusing effect on the teachers.

At the same time attention must be paid to the risk of downgrading the areas of knowledge that are not part of the evaluation. The consequences of a poor test result have to be considered when evaluating courses; a realistic option could be improvement of the course and/or the participant repeating the course.

A course in clinical health promotion should ultimately benefit the patients. In a future perspective, more of the patients should be offered qualified guidance in physical activity, smoking and alcohol cessation intervention and thereby be supported to improve their health. This corresponds to Kirkpatrick's theoretical model, which recommends evaluation of the course as well as the entire organisation (12). The organisational evaluation is independent of the course evaluation method and can be easily integrated in the quality assurance work of the hospital. A simple indicator of the process would be the number of extra patients re-



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ceiving brief intervention. A simple result indicator would be the number of patients completing the patient course.

### Conclusion

A MC test can be easily developed to evaluate whether the participants acquire knowledge by participating in a training/postgraduate course in clinical health promotion. However, the MC test does not measure acquisition of new clinical skills and effect for the individual patients.

### Contributors

Conception and design: JKHS, LCS, DMN

Acquisition of data: JKHS, LCS, DMN

Analysis and interpretation of data: JKHS, LCS, DMN

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Approving the article: JKHS, LCS, DMN

**Competing interest:** None declared.

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# Review: Long-term effect of perioperative smoking cessation programmes

Hanne Tønnesen & Thordis Thomsen

## Abstract

**Background** Preoperative smoking cessation programmes have been reviewed recently regarding the immediate effect on postoperative complications and smoking habits. The objective of this review was therefore to evaluate long-term effects of perioperative smoking cessation programmes.

**Methods** PubMed, Cochrane, Embase, CINAHL databases were searched for randomised clinical trials on perioperative smoking cessation intervention programmes that included follow-up for smoking. The literature was evaluated and data were extracted from the included papers. The review involved meta-analyses.

**Results** The 10 included RCTs were presented in 12 papers and communications, involving 1,369 patients. Only 5 RCTs had a follow up of 12 months. The RR in the perioperative period was 1.90 (95% CI: 1.65 to 2.18), and after 12 months 1.57 (1.09 to 2.26). The subgroup analyses of the intensive 6-8 weeks programmes revealed a high RR of 5.89 (3.49 to 9.93).

**Conclusion** Smoking cessation intervention programmes were effective on short and long-term. The intensive programmes of six to eight weeks duration seemed to be most effective.

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## Introduction

The association between smoking and postoperative complications is well established (10;11) and more than three hundred papers have been published since dr. Morton first described the increased risk of pulmonary problems in smokers compared to non-smokers in 1944 (12). However, the first randomised clinical trial (RCT) on smoking cessation in relation to surgery was published more than fifty years later (11;13). It was soon followed by eight more RCTs and further ongoing studies are to be published in the coming years, all together gathering substantial knowledge on the effect of different smoking cessation programmes in the perioperative period (14).

Preoperative smoking cessation programmes have been reviewed recently regarding the immediate effect on postoperative complications and smoking habits (11;14-16). However, a possible long-term effect and related prognostic factors still needed to be investigated further. The aim of this review was therefore to evaluate long-term effects of perioperative smoking cessation programmes.

## Material

The inclusion criteria were RCTs on perioperative smoking cessation interventions among smokers undergoing surgery and postoperative follow up for smoking cessation. The programme should involve personal contact; it could be brief or intensive intervention, with or without pharmacotherapy. The control group could receive treatment as usual or placebo.

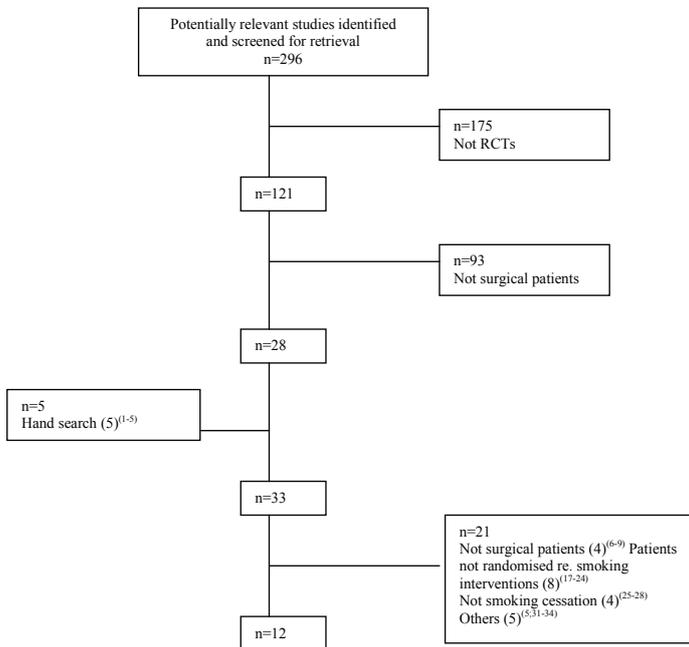
In total, 10 trials were identified and presented in 12 papers including 4 papers on long-term follow-up on original trials (2;4;29;30). Two trials did not distinguish between smoking reduction and smoking cessation in the outcome data, and were therefore excluded (27;28). This review included 10 trials for further evaluation; the trial profile is given in figure 1.

The main outcome measurement was smoking cessation up to one year after the intervention, either continuous or point prevalence.



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**Figure 1** Trial profile for the systematic review



### Methods

A systematic literature search was performed in the databases PubMed, Embase, CINAHL and the Cochrane Library; supplemented by hand search. There was no time or language restriction. The search strategy included participants (smoking OR tobacco use disorder) AND intervention OR smoking cessation OR tobacco use cessation OR smoking intervention OR tobacco use intervention OR smoking counselling OR tobacco use counselling OR patient education OR preoperative care OR perioperative care OR preoperative preventive care OR perioperative preventive care OR health promotion program OR preoperative health promotion program OR perioperative health promotion program) AND relation to surgery (surgery OR operation OR surgical procedure OR perioperative intervention OR postoperative complication\* OR intraoperative complication\*).

The search included RCTs as well as clinical controlled trials (CCT), and reviews with or without meta-analysis in order not to overlook weakly defined RCTs; the only limit was 'all adults'.

The quality of the studies was evaluated through the Cochrane Collaboration's tool for assessing risk of bias (35).

Data from the 10 RCTs were extracted regarding number of participants, follow-ups and drop outs, types of intervention and control programmes, quit rates and validation as well as regarding risk of bias;

sequence generation, allocation concealment, blinding, incomplete data, selective reporting and other bias.

Mantel-Haenszel methods were used to calculate risk ratios (RRs) and corresponding 95 per cent confidence intervals (CI). RRs were calculated using available case analysis (35).

Metaanalyses were performed using the fixed effect method. Heterogeneity among studies was calculated using the  $I^2$  statistic describing the percentage of the variability in effect estimates, which is due to heterogeneity rather than sampling error. Metaanalyses were performed only if the  $I^2$  of heterogeneity was below 40%.

Subgroup analyses were conducted according to the intensity of the smoking cessation programmes; brief intervention (BI) and intensive intervention (II) in 4-8 weeks programmes, with and without nicotine replacement therapy (NRT), bupropion and varenicline; the setting (intervention with and without relation to the surgical setting); and study quality (high and low). Review Manager (RevMan) version 5.0 (The Nordic Cochrane Centre, The Cochrane Collaboration, Copenhagen, Denmark) was used for data analysis. The results were presented as risk rates (RR) and 95% confidence interval (95% CI) (35).

### Results

The 10 included trials involved 1,369 patients from Denmark, Sweden, United Kingdom, Australia, Canada and the US. The characteristics are described in table 1.

The risk of bias was relatively low, because all trials reported adequate sequence generation and allocation concealment, and they were free from selective reporting or other bias. All trials reported intention to treat analyses. However, four trials were unclear about the blinding procedure (3;4;29;36), two did not clearly address incomplete outcome data (36;37), and two reported point abstinence from smoking instead of continuous abstinence (38;39).

Four trials included 12 months follow-up, three trials for 3 and 6 months respectively.

The analyses showed significant quit rates on short term preoperatively and immediately postoperatively in 7 of 9 studies (Figure 2, a). However, the quit rates reduced over time with the exception of the studies that tested intensive interventions (figure 2 b,c,d,e).

Only the quit rates of the 6-8 weeks intensive inter-



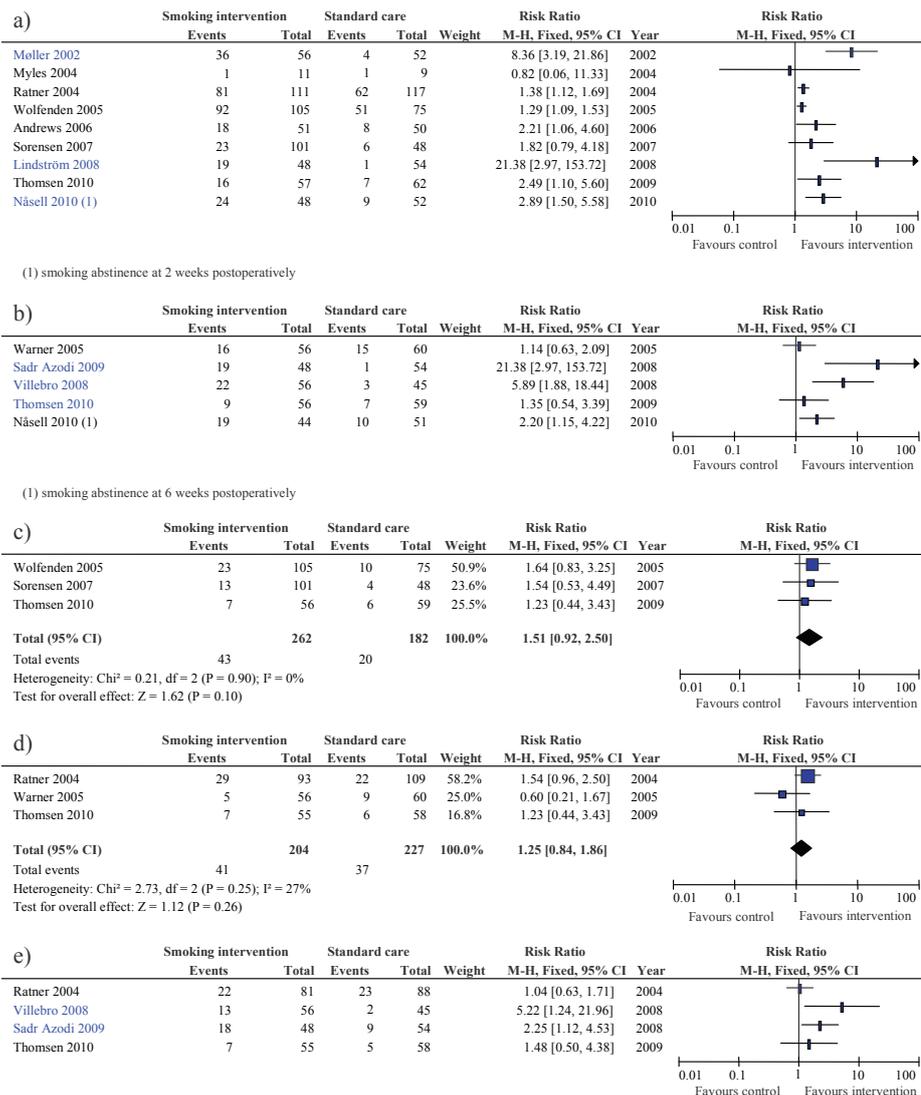
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**Table 1** Characteristics of the included 10 trials presented in 12 papers/communications.

References	Preop. smoking cessation program	Duration (Weeks)	Validation	No. of patients	No. of drop-outs	Follow-ups (Months post)
Thomsen et al. 2010(2)	BI + NRT	1-2	Yes	130	17	Peri 1+3+6+12
Sadr Azodi et al. 2009(29) +Lindström et al. 2008(40)	II + NRT + hotline	4	Yes	117	19 15	Peri 1+12
Nåsell et al. 2010(1)	II + NRT + hotline	8	Yes	105	11	Peri 1½
Villebro et al. 2008(4) + Møller et al. 2002(13)	II + NRT	6-8	Yes	120	19 12	Peri 1+12
Sørensen et al. 2007(36)	BI (telephone) + NRT	1	Yes	180	31	Peri 3
Andrew et al. 2006(3)	BI (letter)	4	No	102	1	Peri
Warner 2005(47)	NRT	0	No	121	5	1+6
Wolfender 2005(39)	BI (computer and telephone) + NRT	1-2	No	210	29	Peri 3
Myles 2004(37)	Bupropion + BI (telephone)	7	Yes	47	23	Peri
Ratner 2004(30)	BI	1-3	Yes	237	69	Peri 6+12

BI = brief intervention. II = intensive intervention. NRT = nicotine replacement treatment. Peri = perioperative. Post = postoperative

**Figure 2** Results of preoperative smoking cessation programmes on quit rates in the perioperative period (a), and at follow up after 1 (b), 3 (c), 6 (d), and 12 (e) months. The blue colour reflects the intensive programmes.



vention programmes stayed significant during the total follow-up period (figure 2). Accordingly, the subgroup analyses of the intensive programmes revealed a high RR of 2.87 (1.50 to 5.58) for long-term smoking cessation (figure 3b).

**Discussion**

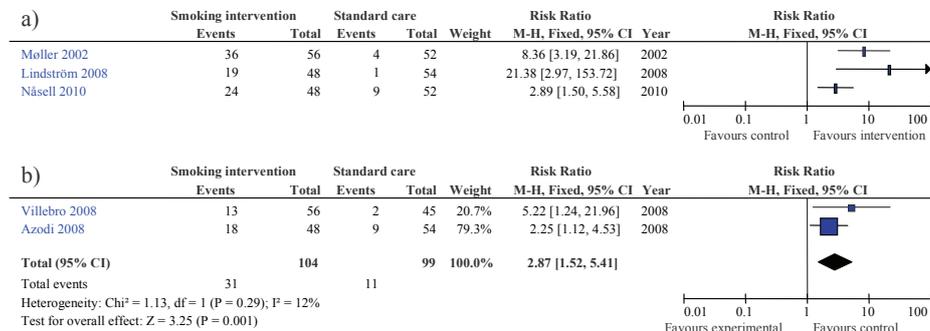
We found a significant effect of the perioperative smoking cessation programmes on short-term, while there was no clear overall effect on longer term. However, the intensive intervention programmes of 6-8weeks showed a significantly increased smoking cessation rate after one year (4;13;29;40). No studies followed up on the quit rate for more than one year, and they did not include long-term functionality and health, mortality or costs over time.

Studies of smoking intervention in other groups of hospital patients have recently been reviewed by dr. Rigotti and her colleagues (41). They found that only programmes lasting for one month or more after discharge were effective, thus sustaining our results. Nevertheless, these



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**Figure 3** Sub-group analysis of the results of intensive smoking cessation programmes on quit rates in the perioperative period (a) and at follow-up after 12 months (b).



findings do not exclude that minimal smoking cessation programmes might be useful for some sub-groups of hospitalised smokers or smokers in other settings. The intensive smoking intervention programmes also have a clear beneficial effect on the development of complications after surgery in smokers compared to the brief intervention programmes (14), and they seem most attractive for implementation in surgical settings.

However, the bias and limitations of our review should be kept in mind. Especially, the relatively small sample sizes of several of the included studies may be followed by a significant risk of type 2-failure, thereby overlooking minor effects. On the other hand, the use of point prevalence and self-reported quit rates without validation may overestimate an outcome (38;39). Furthermore, the patient groups differed regarding primary diagnosis and co-morbidity, smoking history and other factors influencing the effect of smoking cessation programmes. According to the consecutiveness of included patients the heterogeneity of the materials may be high. On the other hand the consecutiveness would improve the possibility of generalising and translation of the results. All studies were performed in high-income Western countries, and care should be taken if translated to other countries, cultures and patient groups.

From a clinical perspective, the intensive smoking cessation intervention programmes of 4-8 weeks of duration are preferable for surgical patients due to the immediate risk reduction of postoperative complications previously described as well as due to the beneficial long term effect on the quit rate. Implementation through evidence-based clinical guidelines and follow-up for effect could easily be established using the HPH Model for Documentation of Health Promotion activities (42) and a clinical qual-

ity registry such as the Danish national smoking cessation database ([www.scdb.dk](http://www.scdb.dk)). These tools allow ongoing exchange of knowledge and experience as well as identification and updating of the most effective programmes for the benefit of the individual patient and the society as a whole.

The patients are positive, when it comes to smoking cessation programs in the perioperative period, especially the intensive programmes of 4-8 weeks duration are requested (4;40;43;44). This is in contrast to the fear of stigmatising smokers, when recommending smoking cessation before surgery, which was hypothesised previously (45;46).

From a scientific point of view, future studies should be powered to include follow-up after longer time, e.g. 3-5 years, for smoking habits as well as for long-term postoperative complications and functionality, mortality and costs.

In conclusion, this review supports that the briefer perioperative smoking cessation intervention programmes are effective on short-term only, while the intensive programmes of six to eight weeks duration are effective on long-term as well.

**Competing interests:** None declared.

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# Clinical Guidelines: Smokers undergoing scheduled surgery: The Gold Standard Programme

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## The overall objective of this guideline

Reducing the doubled risk of postoperative complications in smokers undergoing elective surgery. In addition, increasing the long-term quit-rate among surgical patients(1).

## The clinical questions

1. How to identify smokers at increased complication risk after surgery?
2. How to document the risk in the medical record?
3. Which type of smoking cessation intervention programme should be recommended?

## Target group

Daily smokers undergoing scheduled surgical procedures

The patient preferences: In general, the surgical patients have a very positive attitude to smoking cessation intervention (2-4), and their compliance to lifestyle intervention is especially high in the perioperative period (5).

## Target users

Surgeons, anaesthesiologists, and other clinicians involved in the surgical pathway for their clinical information and recommendations on complication risks and related risk reduction and to support the shared clinical decision-making. Nurses and other health professionals responsible of smoking cessation intervention prior to surgery for support their choice of intervention programme.

## Recommendations

### 1. Self-report

Self-reported daily smoking identifies smokers at increased risk. The literature shows that self-reported tobacco use is sufficient to identify the risk patients, and the simplest to use in clinical routines. This information might systematically underestimate the smoking to a minor degree; however, over-estimation has not been described, which means that the identified daily smokers definitely are risk patients (6-8).



## Research and Best Practice

### 2. Documentation

Documentation in the medical record can be done easily through the HPH DATA Model that has been validated for surgical patients as well as other patients (9). This model has a specific code for daily smoking. Some clinicians use the ICD-10 for harmful smoking (DF 171), because they understand smoking as harmful in relation to surgery; others just write the number of daily cigarettes in the medical record. The related Health Promotion Activity Model can be used for documentation of the intervention. It has a specific code for intensive smoking cessation programmes (and another for the brief interventions among smokers) (10).

### 3. Intervention

The 6 to 8 weeks Gold Standard Programme (GSP) is the only smoking cessation intervention (see below) that significantly reduces the postoperative complication rate to about the half and significantly increases the continuous quit-rate at longer-term (above 20%). GSP can be added to the surgical pathway either 6-8 weeks before the operation date (11) or 4 weeks before and 4 weeks after (12). The quit rate at the time of the operation is more than 50%. Other less intensive and briefer programmes have been tested without effect on those outcomes (13), while some may have an intermittent and minor effect on the smoking it-self (14).

GSP describes manual based smoking cessation intervention performed by trained staff. The introduction often involves a motivational dialogue followed by a structured patient education programme, which includes teaching and training or handling temptations and risk situations, relapse prevention, dependency, nicotine replacement therapy (free of charge) and withdrawal symptoms. In addition the programme includes setting a quit date and planning for the future. The patients are followed up for smoking status at the end of the programme and again after 6 and/or 12 months. The follow-up also includes evaluation of the patient satisfaction (15).

### Indicators for registration

They relate directly to WHO Standard II and III for Health Promotion in Hospitals (16):

- Documentation of smoking status at first contact to hospital or health services
- Information given (increased risk for smokers, intervention and the following risk reduction),
- Start GSP (or referral according to local guidelines)
- Outcome (quit smoking)

The indicators should be followed up over time through audits of the medical records.

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## News from the International HPH Network

# HPH makes historical MoU with WHO

In late 2010, the long awaited WHO/HPH Memorandum of Understanding (MoU) became reality, as it was signed by WHO Euro Regional Director Zsuzsanna Jakab. The document was officially presented to the HPH Governance Board by WHO Regional Advisor, Maria Haralanova, who at the same time extended WHO's warmest congratulations to the International HPH Network on the historical achievement.

### About the MoU

The collaboration between WHO and HPH will include both policy, training, implementation, research etc. And in a WHO perspective, the HPH collaboration fits very directly into the European policy document "Health 2020", which is under development, and which will specify WHO's visions, values principles and main policies in the area.

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Since the signing, a detailed work plan has been made to put the collaboration framework of the MoU into action as soon as possible. The final draft of this plan is expected to be presented at the HPH General Assembly at the International HPH Conference in June 2011.

The WHO/HPH MoU aligns nicely with current WHO policy in the area. Furthermore, as the need for evidence-based health promotion is more pressing than ever, HPH's platform and channels are very valuable in spreading the visions, values and concepts of WHO but also, and just as importantly, to strongly assist the actual evidence-based implementation and practices through the many HPH hospitals and health services.



WHO/HPH MoU Signing Ceremony

On behalf of the WHO, Regional Advisor, Maria Haralanova concluded that she is very happy to see more focus on and closer collaboration with HPH. She noted that:

*"HPH is a much needed network and partner for WHO, and HPH can assist greatly with evidence, support, coordination, monitoring and implementation of health promotion aimed at patients, staff and community."*

On that note, the official signing ceremony was held, where the original MoU with WHO Euro Regional Director, Zsuzsanna Jakab's signature was signed by Governance Board Chairman, Louis Coté, and International HPH Secretariat CEO, Hanne Tønnesen on behalf on the International HPH Network.



Presenting the MoU at the GB Meeting, Dec 2010

The MoU can be downloaded freely from [HPHNET.ORG](http://HPHNET.ORG), and in mid 2011, a combined HPH Constitution & HPH/WHO MoU document will be printed and distributed to all HPH members.



## News from the International HPH Network

### About HPH in Portugal

There is, as of yet, no HPH Network in Portugal, but very important first steps have been taken by the Portuguese High Commissioner's Office. The first Portuguese Conference on HPH was held successfully in November 2009.

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Portuguese High Commissioner for Health, Maria do Céu Machado

### About HPH in Slovenia

Although Slovenia does not yet have a Network, the future is looking bright. Aside from the first meetings being held with both international and Slovenian representatives, the general atmosphere is very positive.

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## First members in Portugal

Portugal is one of the up-and-coming countries in HPH. Thanks to a large-scaled effort by the Portuguese High Commissioner for Health and her staff dedicated to the task of introducing HPH to the country's hospitals and health services, the very first members have by now joined HPH officially - and it is hoped more will follow.

We are very pleased to inform everyone that Portugal's first member of the International HPH Network is the O Porto Hospital Centre in Porto. Furthermore the Trás-os-Montes and Alto Douro Hospital Centre has also just filed their application.

Also, we can safely say that this progress is

The HPH Network is thrilled to welcome Portugal and the members to the Network and look forward to a fruitful collaboration in future for the benefit of patients, staff and communities all over Portugal.

To mark the important occasion of the very first Portuguese HPH members, the high Commissioner said:

*I received with great pleasure the news of the first official memberships by Portuguese Hospitals to the HPH Network, namely the O Porto Hospital Centre, the Trás-os-Montes and Alto Douro Hospital Centre. The Office of the High Commissioner in Portugal recognises the significant work of the HPH Network in the health promotion field and has made an effort to facilitate membership across the country. With these memberships, I hope we have taken the first steps into establishing a Portuguese HPH Network in the near future.*

## HPH in Slovenia

On March 10, 2011, a meeting of hospitals and health services interested in HPH membership was held. Taking part in the meeting to support the development were both representatives from the Slovenian Ministry of health and Dr. Marijan Ivanusa, Head of the WHO Country Office in Slovenia.

The meeting took place in Slovenia's capital, Ljubljana, and among the key points on the agenda were discussions such as how to get further ahead with HPH memberships in Slovenia, how to move towards establishing a national HPH network and much more. Many of the hospital representative also shared very inspiring cases of the many health promoting initiatives taking place all over the country's health care system. Likewise, Slovenian interest in international HPH Task Forces was discussed, and hopefully Slovenian participation in the work will be made into reality soon.

The next meeting of the interested Slovenian Hospitals and Health Services will be organised by the Ministry of Health very soon, and it will be focused on getting more HPH members in Slovenia. Preliminary discussions of how to establish and anchor a national HPH network, to the best possible benefit of both patients, staff and community, will also be on the agenda.



Prof. Hanne Tønnesen, CEO of the International HPH Secretariat presents the HPH Membership Certificate to the representatives of the University Clinic of Respiratory and Allergic Diseases in Golnik (as the second member in the country).



## News from the International HPH Network

# HPHNET.ORG - The new HPH website

The completely remodelled and brand new HPH website went live in early 2011, and since then many developments have taken place. Content keeps coming in, Task Forces and Networks are adding more and more information to their own sub-sites, a new standard reporting section is almost done and much more.

### About HPHNET

As the old (2005) website of HPH was becoming outdated, the HPH General Assembly made a decision in May 2009 to completely remake HPH's site to boost the overall online presence. Subsequently, a large user survey was conducted to determine needs and wishes of users. The development of the site was commenced by the International HPH Secretariat in 2010 and it went online on January 15, 2010.

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The new HPH website can be found at either [hphnet.org](http://hphnet.org) or [hphnetwork.org](http://hphnetwork.org). They both direct the user to the new site. The new site will of course also be replacing the old HPH website, so after an initial period of transition, the domain [healthpromotinghospitals.org](http://healthpromotinghospitals.org) will redirect users to HPHNET too.

In spite of the many www addresses, we have by now found that we like the word HPHNET the best - it seems to be a more catchy name for the new online platform - and so that has stuck with us at the International HPH Secretariat. Maybe by using it and referring to it that way, people will also remember the address better and visit more?

There certainly are lots of reasons to visit. The site features lots of new resources and it is built on the ideas, preferences and needs of the users (as determined in the HPH Website User Survey 2009 - 2010).

The initial feedback on the new site has also been positive, and it seems that the users have really taken to it. Many have made user profiles already and hit numbers increase by the hour, in all areas of the site. Secondly, all Network Coordinators, Task Force Leaders and Working Group Leaders have received dedicated HPHNET sub-sites of their own, as well as a manual on how to get started with them.

These sub-sites can then be maintained, updated and tailored very freely by the responsible Coordinator, TF Leader or WG Leader. It is very simple, and many

are well on the way.

In one instance a Task Force (the HPH TF on the Rights of Children and Adolescents in and by Hospitals) actually had so much content to add that they requested six additional pages for their sub-site. Looking at what that Task Force has done with their sub-site now, a few weeks after, it simply looks great and it is certainly a highly informative place to visit for any one interested.

Finally, we just wish to extend a very warm welcome to the site. We also hope that you will continue to send us all your wonderful ideas and input, so we can keep improving and developing the site to continuously fit your needs and wishes.

Also, we invite you regularly follow the news section to see when new additions to the site are made (we will also post on twitter and Facebook, of course).

Welcome to HPHNET.org!



## News from the International HPH Network

# The International HPH Network – A short history of two decades of development

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More information about the inter-national, the national and regional HPH networks is available on the official HPH websites:

hphnet.org,  
hph-hc.cc,  
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To tell the story of how the International Network of Health Promoting Hospitals & Health Services (HPH) came to be, we have identified six different time periods or phases. In doing this, we pick up the lead from previous work (1), and hopefully make developments even clearer.

The six development phases of HPH, which will be described in the following, were not planned or well defined at the time, no detailed action plans, evaluations or the like existed. Therefore the phases were reconstructed and are thus more or less distinct, partly overlapping at times, and with different foci of emphasis, specific milestones etc.

We have named the first period “pre-phase” and the others “phase 1 to 5”.

#### **Pre-phase: Preparations for initiating Health Promoting Hospitals by WHO-EURO (1986-1989)**

Health Promoting Hospitals, like many other health promotion initiatives, arose from the WHO's Ottawa Charter (2). For hospitals and other health care institutions, this Charter identifies re-orienting health services as a specific goal, one out of five key action areas of health promotion. A first specific concept for “Health Promoting Hospitals” (3) focused on hospitals as the core and leading institutions of health services and suggested to start model projects to demonstrate the feasibility of health promotion in hospitals.

#### **Phase 1: Development of concept and initiation of network structures (1989-1992)**

The City of Vienna in Austria was the first to offer WHO-EURO such a model hospital. The city funded the Ludwig Boltzmann Institute for the Sociology of Health and Medicine (LBIHSM) in order to scientifically plan, consult on and evaluate the project. From 1989-1996 the first European WHO model project was carried out at the Rudolfstiftung Hospital in Vienna (4). It was based on concepts of project management, organizational consultation and organizational development furthermore the project was documented and evaluated.

During the model period at the Rudolfstiftung Hospital, the International Network of Health Promoting Hospitals was initiated by WHO-Euro and LBISHM was designated as the network's first coordinating centre and secretariat.

In 1991, WHO's Budapest Declaration on Health Promoting Hospitals (5) was launched as the network's first policy document, defining contents and aims, suggesting interventions targeting both the hospital organization and the hospital setting, and lining out 3 target groups of HPH (i.e. patients, staff and the population of the community the hospital serves). The Declaration also defined the conditions for a planned Europe-wide pilot hospital project. LBISHM was contracted to supervise the scientific planning and coordinate the project and, in 1992, it was designated as a WHO-CC for Health Promo-



## News from the International HPH Network

tion in Hospitals, funded by the Austrian Ministry of Health.

### **Phase 2: Testing the concept & further developing network structures (1993-1997)**

From 1993-1997, the Europe-wide project was conducted at 20 hospitals in 11 countries, based on detailed agreements between the partners (participation in regular business meetings, cooperation with external organizational consultants, documentation and evaluation, development of a national / regional HPH network). Among many other things, the project proved that it was feasible to implement the HPH concept in diverse health system contexts and types of hospitals (4;6). These important insights were then reflected in the Vienna Recommendations on Health Promoting Hospitals (7).

Parallel to the European project, international network structures and media were established: annual International Conferences, an International Newsletter and regular business meetings. Also, a systematic policy of network building was started by WHO-EURO in 1995, for countries that had not been participating in the European project. These plans were supported by the European Commission (DG SANCO). Furthermore annual workshops for national / regional HPH network coordinators were introduced. At the end of the European project, there were already 16 established networks in Europe. It was mandatory for each to have at least 3 member hospitals, have a network coordinator and accept the core documents of HPH, whilst the specific structures and activities of the networks (e.g. their legal form, or thematic priorities) remained individual. Many networks, however, already then began establishing annual national / regional conferences, newsletters etc.

### **Phase 3: Spreading and internally differentiating the international network (1998-2000)**

In the third phase 10 more national / regional networks were initiated. The Vienna Recommendations also opened up the option of founding thematic HPH networks. These came to life in form of international HPH task forces (TFs) aiming either at adapting the HPH concept for specific hospital / health service types, for specific topics or for specific target groups. Trials for Tobacco Free Hospitals and Nutrition in Hospitals were piloted, but proved not to be sustainable, whereas a piloted task force on Psychiatric Hospitals was successfully initiated in 1998.

Within the first three phases, the Vienna WHO-CC was responsible for developing and piloting the HPH concept, guiding its early dissemination in Europe and establishing sustainable communication structures (8). From 1993 up to now (2011), the centre is responsible for the scientific program of the annual International HPH Conferences, the editing of the International Newsletters, and for providing one of the web pages. It also was responsible for coordinating international research projects on health promotion in primary health care (9), later on migrant friendly hospitals (10) (which resulted in a full HPH task force) and the PRICES HPH evaluation study.

### **Phase 4: Standardizing the concept & linking it to quality and evidence (2001-2005)**

In 2001, HPH coordination was shifted to the WHO European Office for Integrated Healthcare Services in Barcelona. This office developed stronger links to quality philosophy and tools as well as to the evidence debate in health care and led the network into autonomy and more independence from the WHO. The open development approach of the HPH network was systematized in this phase, when two international HPH working groups, initiated by WHO-EURO, aimed at linking the HPH concept to the quality philosophy, which at that time had become strong in the healthcare context. The working group "Putting HPH policy into action" concluded with the publication of 18 comprehensive HPH core strategies and seven strategies for capacity building for HPH (1;11-12). The working group on "Standards for Health Promotion in Hospitals" developed and tested 5 more focused standards for health promotion in hospitals (12-14). These Standards, in principle, make it possible to internationally compare HPH developments on an organizational level and to integrate HPH principles into hospital certification or accreditation schemes. On the national level, the German network published a handbook on quality management and health promotion in hospitals (15). Also, research on evidence-based health promotion interventions became even more pronounced (e.g. 12;16-18). A WHO project linked HPH to tools of business administration, i.e. using the Balanced Score card for integrating HPH into hospital strategy (12) was accomplished. Also, annual international summer schools were started, two task forces were initiated and 9 national / regional networks were established, including the first one outside Europe.



## News from the International HPH Network

### Phase 5: Restructuring, globalizing & extending the international network (2006-2011)

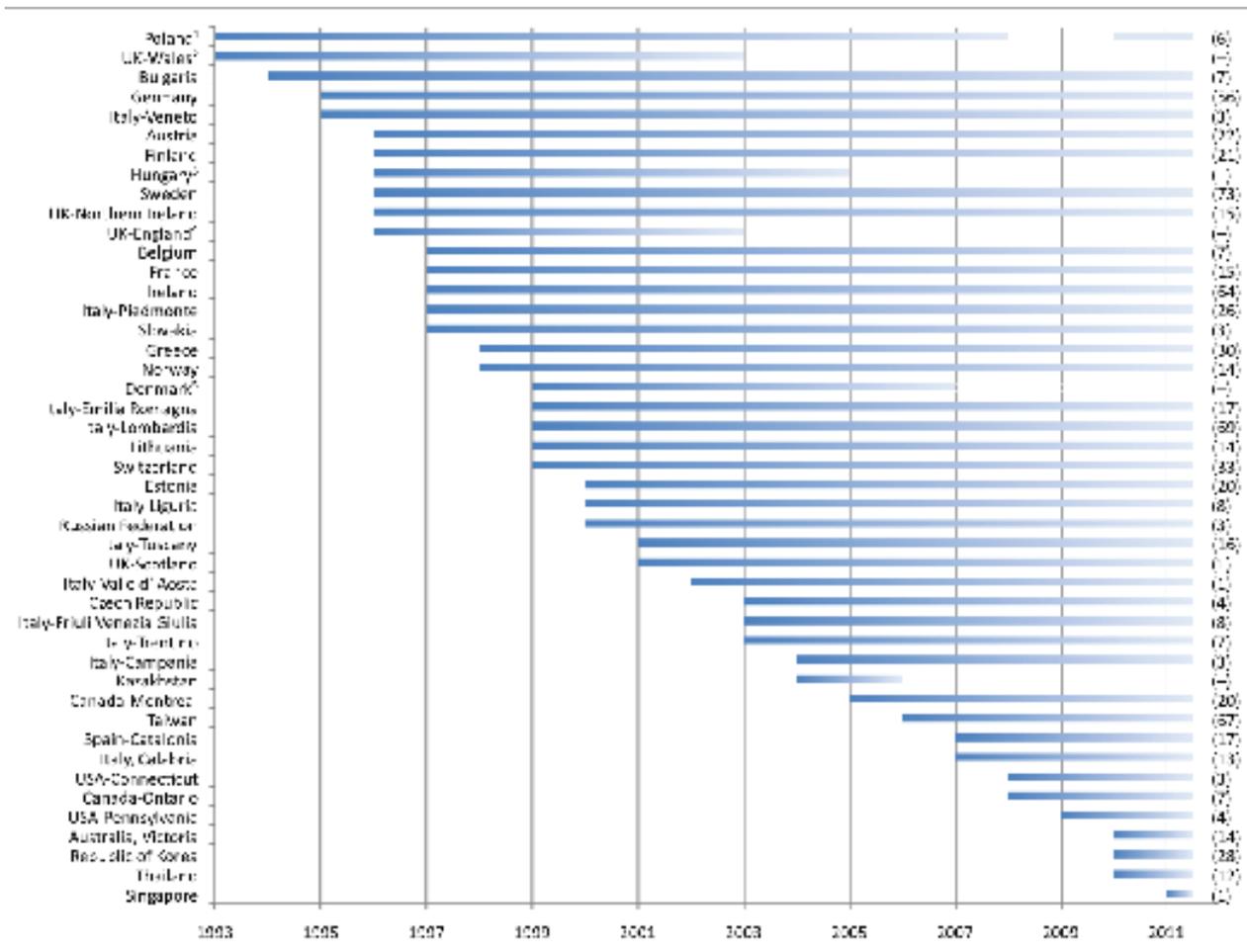
In 2006 the WHO Collaborating Centre for Evidence-Based Health Promotion in Hospitals & Health Services in Copenhagen, headed by Hanne Tønnesen, took over the coordination and secretariat of HPH. It finalized the consolidation of HPH as an autonomous international institution with democratic structures and mostly funded by fees from its members (with an annual budget of around € 230,000.-). The Copenhagen WHO-CC successfully led HPH into globalization and initiated new media, e.g. this official journal of HPH. Also, the strong efforts in evidence based research were continued (14; 19-23)

In 2008 the international network legally became an international association, under Swiss law, with

its own constitution and with a broadened name “International Network of Health Promoting Hospitals and Health Services” (but still the acronym “HPH”). According to this constitution, HPH’s mission is to “work towards incorporating the concepts, values, strategies and standards or indicators of health promotion into the organizational structure and culture of the hospital / health service. The goal is better health gain by improving the quality of health care, the relationship between hospitals / health services, the community and the environment, and the conditions for and satisfaction of patients, relatives and staff.”

The HPH constitution defines national / regional networks as core members of the international network. The coordinators of these networks constitute the General Assembly. Every two years an International Governance Board, with a chair and a vice

Figure 1 National/ Regional networks of the international HPH network, ordered by year of admission and with number of current members in brackets (May 2011)



\*Italy replaced due to death of coordinator  
 †Closed due to health care reform and reduced circumstances of network support  
 ‡Closed due to lack of political support  
 §Closed due to health reform and reduced financial resources of network support, by starting general practice  
 ¶Closed due to health care reform and reduced circumstances of network support



## News from the International HPH Network

**Table 1** Phases and milestones of the international HPH network initiated by WHO-EURO

### Phase 0: Preparations for initiating Health Promoting Hospitals by WHO-EURO (1986-1989)

1986	Ottawa Charter for Health Promotion (> Reorienting health services)
1986-	WHO Healthy Cities Project
1988-2009	Linköping WHO CC for Public Health Sciences
1988	WHO consultation on the Role of Health Promoting Hospitals
1989	Publication on Consultation (Milz & Vang 1989)

### Phase 1: Developing of concept & initiation of network structures (1989-1992)

1989	Feasibility study for Model Project
1989-1996	WHO-Model Project "Health and Hospital" at Rudolfstiftung Hospital, Vienna
1990-	Official start of International HPH Network as a MCAP of the Healthy Cities Project
1990-2001	Coordination & Secretariat of international network by LBIHMS Vienna
1991	The Budapest Declaration on Health Promoting Hospitals
1991-1992	Preparations for a European Pilot Hospital Project (EHPH)
1992-	Vienna WHO-CC for Health Promotion in Hospitals at LBIHMS/LBIHPR

### Phase 2: Testing the concept & further developing network structures (1993-1997)

1993	Annual International HPH Conferences, International HPH Newsletter, HPH Website
1993-1997	Conducting of European Pilot Hospital Project (EHPH)
1995-	Establishing of national and regional HPH networks
1995-	Annual HPH networks coordinators' workshop
1997-	The Vienna Recommendations on Health Promoting Hospitals

### Phase 3: Spreading and internally differentiating the international network (1998-2000)

1998-	Task force: Health promoting-psychiatric health care services
1998-2001	First international project data base of the network (then transferred to WHO Barcelona center)
1998-2001	EU-Project Health Promotion in Primary Health Care: General Practice and Community Pharmacy

### Phase 4: Standardizing the concept & linking it to quality and evidence (2001-2005)

2001-2005	Coord. & Secretariat by WHO European Office for Integrated Healthcare Services, Barcelona
2001-2006	Working Group "Standards for Health Promoting Hospitals"
2001-2006	Working Group "Putting HPH Policy into Action"
2002-2005	EU-Project Migrant Friendly and Culturally Competent Hospitals
2004-	Designation of Copenhagen WHO-CC for Evidence-Based Health Promotion in Hospitals
2004-	Annual International Summer Schools on HPH as satellites to International Conferences
2004-	Task force: Children and adolescents in hospitals
2005-	Task force: Migrant friendly and culturally competent health care
2005-	First non-European national / regional network joined the international HPH network

### Phase 5: Restructuring, globalizing & extending the international network (2006-2011)

2006	Coord. & Secretariat by Copenhagen WHO-CC for Evidence-Based Health Promotion in Hospitals
2006	Introduction of a General assembly & a Governance Board for the International Network
2006	Florence WHO-CC for HP Capacity Building in child and adolescent health
2008	Association "International Network of Health Promoting Hospitals & Health Services (HPH)"
2008	Extension of scope to other health care organizations and internationalization of network
2008	Task Force Smoke-Free-Health Services
2008	Project on a Retrospective, Internationally Comparative Evaluation Study of HPH (PRICES-HPH)
2009	Athens WHO-CC for integrated strategies and services to NCD prevention at country level
2009	Task Force Alcohol and Alcohol Interventions
2010-	Task Force HPH and Environment
2010	Memorandum of Understanding of International HPH Network with WHO-EURO
2011	Journal: Clinical Health Promotion. Research and best practice for patients, staff & community



## News from the International HPH Network

chair, is elected from this group. WHO-EURO and the WHO-CC's Copenhagen and Vienna, with secretarial functions, hold permanent seats in the Governance Board. Ann O' Riordan (Ireland) held the first elected chair. In the second period Yannis Tountas (Greece) was elected and in the third and current period Louis Coté (Canada, Montreal) holds the chair.

In this phase three further task forces were initiated, 10 national/regional networks were established, 7 of these outside Europe. Thus, globalization of the international network is going strong. The first international HPH conference outside Europe will be organized in Taipei City, Taiwan, in 2012, and the conference in 2014 is planned to take place in the USA.

Currently (May 2011), HPH consists of 39 networks in 26 countries in 5 continents, plus individual hospital / health service members in 52 countries that do not yet have HPH networks. In total, HPH has 841 members world wide – a figure which increases weekly.

In December 2010, HPH also formalized its long-standing and intimate collaboration with WHO by means of an official Memorandum of Understanding and preparations for adjacent periodic action plans (24).

From its conception HPH has been strongly supported by WHO-Euro and a number of its very dedicated representatives and officers, in the early days especially by Jo E. Asvall, Ilona S. Kickbusch, Johannes Vang, Agis Tsouros and Heather McDonald, later by Mila Garcia Barbero and Oliver Gröne, and currently by Maria Ruseva and Zsuzsanna Jakab.

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## News from the International HPH Network

# Introducing St. Mary Medical Center

As an ongoing feature we will in each issue give HPH members the opportunity to share experiences, inspiration and knowledge regarding Health Promotion in Hospitals & Health Services. In this issue we focus on one of the newest members - St. Mary Medical Center.



St. Mary Medical Center in scenic Langhorne, PA.

## About St. Mary

St. Mary Medical Center is situated on the US East coast, in Longhorn Pennsylvania. The center is licensed for 374 beds, occupies more than 600 physicians and over 2700 employees. St. Mary became a member of the Pennsylvania regional HPH network in March 2011.

### Contact:

Barbara Adons  
BAdons@stmaryhealthcare.org



Barbara Adons,  
Director of  
Community Health  
Services

We contacted Barbara Adons, Director of Community Health Services for a talk about their membership and experiences on implementation of Health Promotion initiatives.

Barbara states that, "St. Mary continues to move toward collaborative, flexible models of care delivery aligned with the needs of the target population in the pursuit of improved health. At St. Mary, we strive to address health needs at all points along the continuum of health and well-being, through participation of, engagement with and targeted interventions for the population." Barbara elaborates further on St. Mary's expectations for the HPH membership, "Our interest in participating in the HPH Network is a better understanding of core values and strategies that create potential for the highest level of performance, and we thereby hope to become inspired by how examples of this framework has been successfully applied elsewhere."

### Healthy staff

Among St. Mary's impressive HP initiatives is a comprehensive Colleague Wellness initiative, entitled "Make Every Day About Living" (MEDAL). The program includes health risk assessments (HRAs), a smoking cessation program, Way2Wellness and a healthy lifestyle program focusing on fitness, nutrition and mind-body skills.

St. Mary engages colleagues and communicates the goal of improving health and well-being. Barbara points out that the Colleague Wellness Committee with membership across all levels at St. Mary is key, and she emphasises an ex-

ample on the involvement of the staff, "One of our recent walking challenges took place in celebration of our National Awareness Campaign For Women About Heart Disease, held country-wide each February. Teams of 5 competed to walk the most steps during 2 weeks with the goal of being the first to reach the summit of Mount Everest, or 500,000 steps. Over 300 colleagues participated. Also our Lunch N' Learn health literacy programs focus on topics such as knowing your risk factors."

### Political awareness

We also talked to Barbara about the local political climate for Health Promotion. She said: "Local officials support St. Mary and others in pursuit of improving the health in our community. This includes creating an environment supportive of physical activity, such as walking trails and parks, as well as support to small farmers that make fresh produce available. St. Mary offers week-long summer camp programs at some of these local farms, and teach children ages 6-13 how to prepare snacks and light, healthy meals for breakfast and lunch using the fresh produce." Barbara also notes that the time is ripe in the USA for health promotion and disease prevention, and that it has been embraced by St. Mary's President and CEO, as well as the Board of Directors. "Through leadership and collaborative efforts, St. Mary is successfully promoting better health and health care by advancing prevention and wellness."

We would like to welcome St. Mary Medical Center to the HPH Network, and we look forward to working together to achieve our common goals.



## News from the International HPH Network

# Coronary patients share experiences

Else Karin Kogstad, local HPH Coordinator and Head of Dept. at Centre for HP at Akershus University Hospital will here tell about patient experiences from an HP initiative.

### About AKERSHUS HOSPITAL

Akershus University Hospital is one of fourteen hospitals owned by South-Eastern Norway Regional Health Authority. The hospital is situated in Akershus County, surrounding the Norwegian capital of Oslo, where it covers the areas 460.000 inhabitants.

#### Contact:

Else Karin Kogstad  
ek.kogstad@ahus.no



Exercise can also be a walk outside

Akershus University Hospital aims to be the most patient friendly and focused hospital in Norway. One of the new highly welcomed HP initiatives is aimed at a group of coronary heart disease patients. As Else Karin explains, "A group intervention is offered, consisting smoking cessation, guidance concerning nutrition and physical activity. The patients are followed-up over 8 weeks with controls after 3, 6 and 12 months. Motivational interviewing is used as a method, and the patients are given individual feedback on their progress."

An important part of the program is the collaboration with the patients' GPs, "We were cooperating closely with the general practitioner of each patient who would follow-up after the course had ended. They were also encouraged to make use of offers provided by patient organisations."

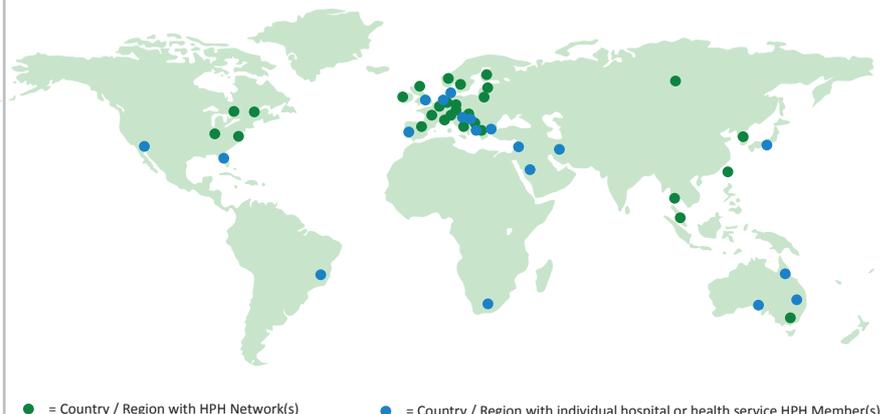
Else Karin shares on how well the program has been received, "The patients expressed great enthusiasm about being offered such a program, and were highly motivated to make changes in their lifestyle. All of the participants stopped smoking, changed their diet to more healthy food and were more physically active (which also affected their families). Many of the patients expressed gratitude for having been given a new chance in life, after having had the feeling of having one foot in the grave. Their anxiety about straining themselves through physical activity decreased during the program as they felt more secure about challenging themselves." Akershus University Hospital has had great success with the combination of hospital initiative and coordination with the patient's own doctor – an applicable experience that they are happy to share.

# HPH membership growth

HPH member numbers continue to soar. The strategic growth goals of the HPH General Assembly of 100 net members in 2010 were reached, but by now it looks like the steps taken to support and nurture such growth continues to bear fruit into 2011 also. In May 2011 the member number is on the verge of 850 hospitals and health services world wide, which means that we are well underway with 100 net members in 2011 also.

For a detailed view of the HPH membership geographical distribution, please see the map.

HPH World Map 2011





# CLINICAL HEALTH PROMOTION

## **Author Instructions for submission of papers for Clinical Health Promotion – Research and Best Practice for patients, staff and community**

From the Editorial Group we would like to welcome papers on clinical health promotion from all readers.

We especially encourage all participants at the 19th International HPH Conference to publish their important research and best practice in Clinical Health Promotion.

For submission of papers, please visit our website: [www.clinhp.org](http://www.clinhp.org)

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## Upcoming WHO-HPH Schools

The WHO-HPH Schools are yearly recurring events (usually both summer, autumn and winter) and they target National / Regional HPH Coordinators, HPH Hospital / Health Service Coordinators, HPH Task Force Leaders & Members as well as other interested health care providers and administrators.

The WHO-HPH Schools are great opportunities to gain practical insight into the field of Health Promotion in Hospitals & Health Services.

The 2011 and early 2012 WHO-HPH Schools are:

- WHO-HPH Summer School in Turku, Finland (May 30-31, 2011)
- WHO-HPH Autumn School in Prague, the Czech Republic (September 12-13, 2011)
- WHO-HPH Winter School in Bangkok, Thailand (December 13-15, 2011)
- WHO-HPH Summer School in Taipei City, Taiwan (April 8-10, 2012)

You can read more about the schools and register for participation at [hphnet.org](http://hphnet.org), where information, programs etc. will be updated continuously.

We look forward to seeing you in Turku, Prague or Bangkok or at another of the many future WHO-HPH Schools.



Prof. Hanne Tønnesen, Director WHO-CC  
CEO International HPH Secretariat