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

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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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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

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).

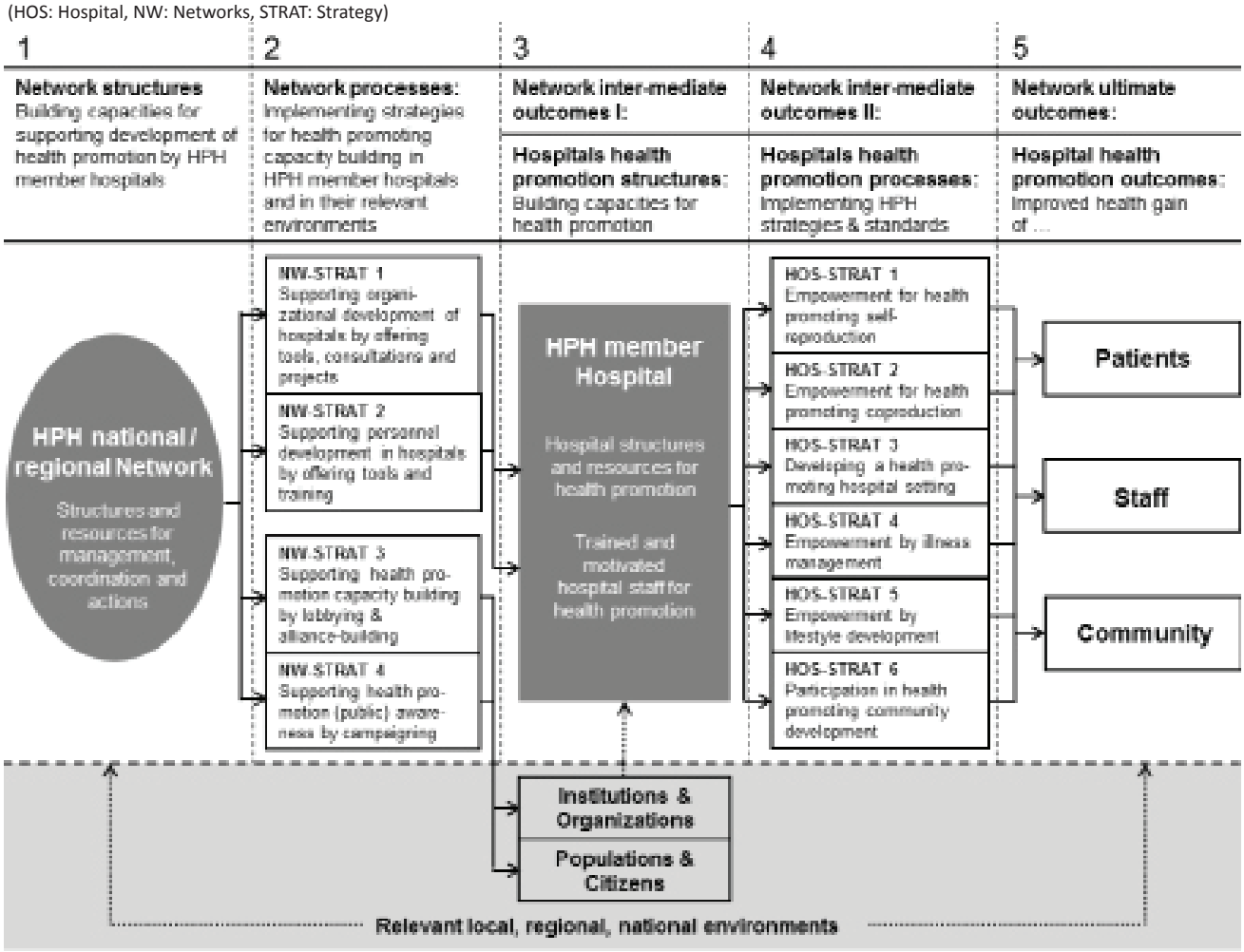
The outcomes were the self-reported degree of implementation of 18 previously described core strategies for putting health promotion into action (14) and the perceived strengthening by participation in HPH.

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 comprihensiveness and framwork of the PRICES HPH Evaluation Model for national / regional networks and member hospitals

(HOS: Hospital, NW: Networks, STRAT: Strategy)



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 varieed 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.

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

	Shares (%)
Type of hospital services[a]	180 (100%)
General hospital (mainly acute)	76.7%
Specialised hospital/facility	23.3%
Profit orientation of hospital[b]	177 (100%)
Non-profit organisation	94.4%
For-profit organisation	5.6%
Owner of the hospital[a]	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%
Location of the hospital[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%
Number of hospital beds[b]	162 (100%)
Up to 400	50.6%
Between 401 and 800	29.0%
More than 801	20.4%
Administrative status of hospital[b]	176 (100%)
Hospital is a standalone organisation	46.6%
Hospital is part of a trust or alliance	53.4%
Years of membership in the HPH network	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%

[a]P<0.00 (Chi^2-Test) between responders and non-responders

[b]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 promotion 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 (HOSSTRAT 1-3) were clearly better fulfilled than the three health promotion service strategies (HOSSTRAT 4-6) (see table 2).

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

	Criteria (n)	Implementation[a]	Hosp (n)	Strengthening[b]	Hosp (n)
Patient-oriented strategies (PAT-1 – PAT-6)	**44**	**3.66 (0.73)**	-	**54.1% (40.6%)**	-
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
Staff-oriented strategies (STA-1 –STA-6)	**30**	**3.36 (0.86)**	-	**51.6% (40.6%)**	-
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
Community-oriented strategies (COM-1 – COM-6)	**31**	**3.31 (0.89)**	-	**47.7% (42.4%)**	-
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
Total	**105**	**3.44 (0.82)**	**-**	**51.1% (41.2%)**	**-**
General strategies					
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%)	

[a]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.

[b]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 organisational 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 strengthning by participation in HPH - network level (numbers, mean and SD)

	Implementation (n)[a]					Strengthening (n)[b]					Networks (n)[c]
	Very low	Low	Mid-dle	High	Very high	Very low	Low	Mid-dle	High	Very high	
Aggregation by type of general strategy											
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
Aggregation by target groups											
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
Aggregation of all 18 HPH core strategies	0	1	10	6	1	3	6	6	2	1	18

[a]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

[b]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%

[c]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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