



## EMPOWERING HOSPITAL PUBLISHABLE SUMMARY

PROJECT ACRONYM:	Emp-H
CONTRACT NUMBER:	664258
AUTHORS (name and organization):	ASL Biella

### **Summary of context, overall objectives, strategic relevance and contribution of the action to the health programme**

“Empowering Hospital” is a multicentre project aims to foster health promotion interventions and environments suitable for prevention of chronic diseases. The strategy is based on the Health Promoting Hospitals (HPH) framework with a strong emphasis on evidence-based prevention. Through its activities the project aims to promote the adoption of healthy lifestyles for improving the quality of life of people suffering from a chronic diseases, particularly diabetes, cardiovascular disease, breast, colorectal or prostate cancer and other major chronic diseases.

The “Empowering Hospital” project involved 5 partners coming from 4 EU countries. Its work led to evaluate the effects of a “health promoting model” delivered in 3 different hospital and healthcare settings: Hospital of Biella (Italy), Hospital La Fe in Valencia (Spain) and National Association Multiple Sclerosis (Lithuania).

Chronic patients, relatives and hospital staff (about 1.500 subjects overall) were plan to be selected to receive an intensive counseling session aimed to design and plan a tailored preventive pathway according to the behavioral risks factors identified with a profiling tool (a questionnaire, elaborated during the first year of the project, based on 4 risks factors: smoking, excessive alcohol consumption, sedentary behavior and unhealthy diet).

The introduction of a “health promoting model” in the hospital setting offered people suffering from chronic diseases, their relatives and health workers a new way for adopting healthy lifestyles.

Moreover, “Empowering Hospital” project supported people to organize their daily activities in a “healthier” way thus improving quality of life and reducing potential costs of further hospital admissions, outpatient visits, etc.

The project contributed and safeguarded the sustainability of the local health and social systems.



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This project had at least five implications for European public health, matching the overall policy objectives of the 2014 Call.

First, the innovative, coherent, and integrated approach was key to succeed: the integration of a large set of interventions in the context of hospital care allowed for reaching a selected population who may benefit from prevention activities targeting behavioural change. Moreover, the development of prevention activities inside the hospital setting has affected several processes of care, adding to them the prevention contents that otherwise could hardly be included in the hospital. This experience has stimulated innovation (in the context of the 'Health Promoting Hospitals' ), by offering a validated, sustainable in-hospital prevention model. For example, the recent tendency to reduce beds and in-patient activities, preferring of out-patient ones, is expected to make new free spaces available in the hospital buildings, that could be dedicated to prevention activities available to patients and their relatives, as well as to healthcare professionals.

The interventions were based on a comprehensive and detailed review of the scientific literature and its effectiveness was confirmed by the Emp-H randomised controlled trial, indicating a promising approach for the European Union, in which approximately nearly 80 million people are admitted to hospitals each year for acute conditions (European Hospital and Healthcare Federation 2011). The Emp-H results could be relevant and likely to trigger future initiative in many hospitals across Europe.

Second, this project fostered developing new forms of partnership between hospitals, primary care and local administrations and stakeholders, which are likely to promote an active and participatory role of all target groups in the community in which they live. Strong liaisons with the community aimed at providing a favourable environment for behaviour changes were established, both within and outside the hospital.

Third, public availability of the protocol and reports would encourage the promotion of hospitals embracing a comprehensive and effective health promotion approach. In the European Union many experiences fall under the 'Health Promotion Hospital' label, although only a few of such experiences have been extensively documented as comprehensive multidimensional interventions. The Emp-H project has proven that the implementation of an innovative, evidence-based, and generalizable intervention based on psycho-behavioural approaches is effective in facilitating people to change their habits and to adopt healthier lifestyles.

Fourth, we evaluated both the processes and the outcomes of this project. We feel that evidence based prevention and health promotion are two complementary approaches that can benefit from each other, and we aim to bridge the gap between them. Personalised empowerment activities



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included in selected clinical pathways more frequently accessed by at risk patients should contribute to reduce relapses and delay worsening of clinical conditions requiring hospitalization and intensive care, thus reducing healthcare costs. Promoting an active and healthy attitude in frail or ageing population through the community approach can consolidate the healthy behaviours in the present and the following generations. A thorough evaluation would also have relevant implications for research, as so far only a few health promotion initiatives (even those within the framework of WHO/Europe Health Promoting Hospitals) have been evaluated with a rigorous methodology.

Fifth, the involvement of partners with various levels of previous experience with the Health Promoting Hospitals network, based in geographically representative areas of the European Union, and having catchment areas characterised by diverse socio-economic and demographic compositions, has provided highly scalable results. As clarified in Section 6 (Expected outcomes), the experience gained with the adaptation of the project to different contexts allows for replications of this project in hospitals within the European Union, even through existing HPH and patients (charities) networks.

### **Methods and means**

The “Empowering Hospital” project was focused on the development of resources to inform and support patients, relatives and health professionals about the health promotion approach and evidence-based interventions.

Specific work-packages were focused on the setting-up of a questionnaire for profiling patients according to their own risk factor(s) with the aim to propose them a tailored preventive pathway for conducting a healthier lifestyle.

Moreover, intervention providers (health professionals and hospital volunteers) received specific training sessions at each pilot site through a homogenous health promoting approach: basic distance learning activities accessible from the project website in 3 different languages (Italian, Spanish and English) and a residential training course.

For this purpose a set of tools and materials were developed, including informational support for the training modules, literature reviews and clinical guidelines. An extraction of these materials have been published in the project website (<http://www.emp-h-project.eu/>).

In order to evaluate the effect of the Emp-H project a randomized controlled trial (RCT) was developed. For this purpose, subjects from three target groups (patients, patients’ caregivers/relatives, and hospital workers) were randomised to receive two conditions. The first condition (control) consisted in risk profiling, brief advice and informative materials delivery, while



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the second (intervention), comprised risk profiling, brief advice, informative materials, an intensive counselling and the facilitated access to hospital and community supportive resources. All the participants benefited of the ongoing hospital environmental change (smoking policy, new walking paths, reorganization of the hospital canteen, etc.) occurred during the first project year at the hospital level. Participants to be included in the study had to present almost one risk factor and to be aged between 40 and 75. Primary outcomes and cut-off value adopted to define risk conditions were: smoking, poor nutrition (<5 portions/day fruit and vegetables, >1 sugary drink/day), physical inactivity (less than 150 min moderate PA/week or 75 min vigorous PA/week), excessive alcohol consumption (>1 for women or 2 for men alcohol units/day and >1 monthly binge drinking), and excessive BMI (>25). All the participants were followed for 6 months, at the end of which received a phone survey.

All the participants were recruited in the following area: Cardiology, Diabetology, Dietetics, Oncology, Occupational risk, Pneumology, and GP surgeries.

A parallel use of the Emp-H model was conducted on patients affected by chronic neurological diseases in Lithuania (LISS) and on their relatives. Here the study was based on a pre-post design and the follow up was fixed at one year.

The recruitment of the study participants project year in Biella Hospital (Italy) and in Hospital La Fe Valencia (Spain) was able to include during the second an overall sample size of 395 patients, 314 relatives, and 336 hospital.

The study was able to verify the effectiveness of the Emp-H model in modifying all targeted risk behaviors. In particular, the intensive intervention, if compared with the brief intervention, was more effective in reducing risky alcohol intake and in increasing physical activity. A further assessment of the resources spent to provide the intervention was able to inform hospital managers about the sustainability of the Emp-H model. At the end of the project, a handbook designed to be used by health professionals and health managers was produced. The handbook aims to provide practical instructions to replicate the Emp-H model in other hospitals.

Finally, in the three territories (Biella, Valencia and Lithuania) considerable efforts have been made to:

- map local resources and networks,
- strengthen the already existing and consolidated territorial network,



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- formalize new agreements.

### **Work performed during the reporting period**

In the first project year the following activities were carried out: project management structure setting up, dissemination and communication strategy definition, study protocol production. In the second part of the first year, the training materials were prepared in 3 languages and were available through the project website. In addition, residential sessions for the training of health personnel involved in the project were organized.

The second project year was focused on: the start-up of the RCT and the definition of the profiling tool (questionnaire), the implementation of the intensive counseling sessions; the provision of in-house training courses and maintenance training for the practitioners involved in the project. During this period the Emp-H Midterm Workshop was carried out in Turin (Italy), and around 60 sector players were informed about the preliminary project results and were involved in the promotion of the "Emp-H model" in other regional Hospitals.

In the third project year the follow-up of the subjects recruited in the study was completed, data were analysed and results disseminated, and the local stakeholder networks were enforced. The final conference was held in Biella on March 10<sup>th</sup> 2018. During this event all the results were presented and shared with the local stakeholders and national researchers and the Emp-H video was presented.

### **The main outputs achieved so far and their potential impact and use by the target groups**

- A systematic review was carried out in order to collect evidence about effective health promotion interventions delivered in the hospital setting. The review guided the three pilot sites in the adoption of the interventions to be offered to patients, relatives, and health professionals. The work will be published in peer review journals.
- A specific questionnaire useful to profile subjects according to their behavioral risk factors was developed. The questionnaire, called “profiling tool”, is based on validated questionnaires promoted by accredited organizations like WHO and was created in order to be sufficiently accurate and not time-consuming. The profiling tool is structured in five sections: smoking behavior, alcohol consumption, diet, physical activity and individual empowerment.
- A protocol to evaluate the impact of organizational procedures to facilitate the introduction of health promotion interventions in the hospital aimed is available.



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- Health promotion materials focused on the hospital setting realized during the project are available.
- A handbook to help healthcare managers to facilitate the introduction of health promotion activities in the hospital organization was realized at the end of the project.

### Achieved outcomes compared to the expected outcomes

Expected Outcomes	Achieved Outcomes
Impact of counselling intervention	<p>A RCT with more than 1000 participants.</p> <p>Proportion of subjects profiled out of at-risk subjects: 90%</p> <p>Proportion of subjects participating to counselling out of profiled subjects: 73,6%</p> <p>Proportion of subjects who will to change their risk factors, out of those receiving counselling (intention within the next month): 12% smokers; 3.3% excessive alcohol consumers; 11.1% insufficient fruit&amp;vegetables consumers; 7.73% inactive people</p> <p>Proportion of subjects who modified their risk factors by adopting behavioural change, out of those receiving counselling (behaviours) (% improvement in the respective categories): 2.46% of insufficient fruit&amp;vegetables consumers reached the recommended consume; 50% of excessive sugary drinks consumers reached the recommended consume; 12.3% of smokers were able to quit; 58.97% of excessive alcohol consumers reached the recommended consume; 82.86% of monthly binge drinkers reached the recommended consume; 28.64% of inactive people achieved the recommended level of physical activity.</p>
Impact of interactive workshops	16.53% of the subjects in the intervention group benefitted from at least one health promoting facility. Among these, 76.84% have accessed to facilities related to physical activity.
Impact of environmental intervention	9 actions realized by ASL BI during the project period 8 actions realized by HuLaFe during the project period
Impact of liaisons with the hospital catchment area	A preliminary search of the relevant organizations was realized at the end of the first year project. At the end of the third project years two local networks were realized involving 19 (100% of those contacted) in Italy and 9 (66.6% of those contacted) in Spain).



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The introduction of personalized interventions and environmental changes in the hospital environment has been effective in significantly improving healthy behavior among people who come into contact with the hospital.

### **Dissemination and evaluation activities carried out so far and their major results**

Dissemination activities were significant during the first year and they were then strengthened during the second and third year.

During the first project year the dissemination of the the project goals and of the programmed activities was carried out through the project website and more than 6 presentations in conferences, seminars at local and national level.. During the second year the Emp-H website was updated; press releases, articles and documents were published, and workshops, conferences and local health events were organized Emp-H was disseminated in the following events:

- IPES - Paris (France), May 19 - May 20, 2016, attended byUPO. Objective: researchers and policy makers.
- European MSP Conference in Warsaw (Poland), 23 and 24 May 2016, attended LISS.
- ICIC 2016 - Barcelona (Spain), 24 and 26 May 2016, attended byASL Biella.
- "European Emp-H Proyecto" event at the Valencia Health Department La Fe (Valencia - Spain), 12 May 2016, attended by HULAFE.
- "Green light: 10,000 steps to feel good", Biella (Italy), 26 May 2016, attended by ASL Biella.
- World MS Day in the University Hospital of Kaunas (Lithuania), 3 June 2016, attended by LISS.
- Cochrane Center, Rome (Italy), 4 July 2016, attended by UPO. Target: researchers of the AIE (Italian Society of Epidemiology).
- "Aging in health" meeting, Bologna (Italy), 17 October 2016, attended by UPO. Objective: policy makers and researchers.
- Conference Emmas - by Sda Bocconi, 18 October 2016 at the Biella Hospital (Italy), attended by ASL Biella.
- AIE Congress - Turin (Italy), 19/21 October 2016, attended by UPO.
- Seventh EUSPR - European Society for Prevention Research - Conference and meeting of members, October 31 - November 2, 2016 - Berlin (Germany), attended by UPO and ASL BI. During the event a a special session on the Emp-H project was organized.
- S.I.T.I. Conference, Naples (Italy), 16/2 November 2016, attended byASL Biella.



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- National Careers Meeting in Vilnius (Lithuania), 17 and 18 November 2016, attended by LISS.
- International Conference in Vilnius (Lithuania), 2 and 3 December 2016, attended by LISS.
- Winter Scientific Meeting in Dublin (Ireland) on December 7, 2016, attended by DCU.
- Irish Nutrition & Dietetic Institute Research Symposium in Dublin (Ireland) on January 26th, 2017, attended by DCU.
- 25th International Conference on Health Promoting Hospitals and Health Services in Vienna (Austria) on April 12th/14th, 2017, attended by DCU.
- ESC- EUROHEARTCARE - European Congress of Cardiovascular Nursing and Allied Healthcare Professionals - Jonkoping (Sweden) - May 19, 2017 attended by DCU.

During the third year of the project the main dissemination activities consisted in the production of the final video and the participation to several conferences.

The Emp-H final conference held in Biella on 10 March 2018 was attended by a highly qualified audience, with scientific and academic support, as well as local and regional stakeholders. The conference was launched by the Commissioner for Health and Food Safety of the European Commission, Vytenis Andriukaitis (video message). Members of the Consortium and representatives of the HPH network attended the final conference. Furthermore, a round table was organized with the participation of other European projects researchers. These included: - The SUNFRAIL PROJECT (<http://www.sunfrail.eu/>), - THE PROJECT Co.NSENSO (Community nurses who support the elderly in a changing society - [www.alpine-space.eu / projects / consent / it / home](http://www.alpine-space.eu/projects/consent/it/home)), -The PROMIS (International Brick Program). Emp-H presentations during the third project year were held in the following conferences:

- SKILLS SUMMER CAMP - Sventoji (LT) - August 28/31, 2017.
- Annual Conference at Lithuanian Parliament : “Topicalities for learning disability care” – Kupiskis (LT) - September 22, 2017.
- Conference “LIVE WELL” – Kupiskis (LT) - September 23, 2017.
- The European Society for Prevention Research (EUSPR) conference - Vienna (AT) - 20/22 September, 2017.
- VIII° CONFERENZA NAZIONALE RETE HPH & HS - “La medicina di genere e la promozione della salute nella differenza: il ruolo della rete HPH & HS” Aosta (IT) - October 5/6, 2017, attended by UPO and by ASL BI –.
- OFFICIAL PUBLIC PRESENTATION OF EMP-H PROJECT (at local level) – Valencia - October, 20<sup>th</sup>, 2017, attended by Hulafe.



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- 41° Convegno AIE- L'EPIDEMIOLOGIA OGGI: EVIDENZE, COMUNICAZIONE E PARTECIPAZIONE - Mantova (IT) - October 25/27 attended by UPO.
- ECTRIMS - The European Committee for Treatment and Research in Multiple Sclerosis Conference, Neurology conference – Paris (F) - October 25/28, 2017 attended by LISS.
- 21st International Nursing Research Conference – Madrid (E) – 14/17 November, 2017, attended by HULAFE.
- “Far pensare per Far salute” national workshop – Biella, November 18, 2017, attended by UPO and ASL BI.
- 50° CONGRESSO NAZIONALE SITI -Specific workshop about Emp-H project, organized together with UPO (November 23): “La promozione della salute in Ospedale: il Progetto Europeo EMP-H/Empowering Hospital” – Torino - November, 23, 2017, attended by UPO and ASL BI.
- INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE “REHABILITATION IN HEALTH CARE “ - Klaipėda (LT) - November 23-24<sup>th</sup>, 2017
- Round Table discussion in Lithuanian Parliament + press conference „Global for disabled people Lithuania“ – Vilnius - December 8, 2017, attended by LISS.
- 6<sup>th</sup> Conference of Partners of the European Innovation Partnership on Active and Healthy Ageing – Brussels (B) - 27-28 February 2018.

## Conclusions and options for future use

The Emp-H project proposes a sustainable and replicable framework to promote the adoption of healthy lifestyles through the introduction of organizational and environmental solutions at hospital level. The Emp-H project was developed to sustain healthy behaviours among citizens who suffer from chronic-degenerative diseases to improve their quality of life, but also their relatives and the hospital staff.

The model was projected to empower patients, their caregivers or relatives and health professionals to adopt healthy lifestyles to prevent chronic diseases related with the four main risk factors: smoking, excessive alcohol intake, non-healthy nutrition, and sedentary lifestyle.

### *What benefits from the Emp-H project?*

The project contributed to improve knowledge about empowerment approach in the hospital setting related to healthy lifestyles, related with the quality of life and the reduction of behavioural risk factors. Emp-H provided information and support to healthcare professionals and hospital managers to create organizations and hospital environments conducive to change unhealthy habits..

### *How did we help the EU citizens?*



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The Emp-H will contribute to improve EU citizen health by:

- facilitating the hospital organizations to introducing health promoting activities in those setting that normally deal with clinical and non-preventive activities, exploiting "teachable moments";
- involving health professionals in the application of effective counseling techniques;
- promoting the evaluation of organizational models to promote healthy habits in the hospital.

*What are the results?*

The results of the study supported the effectiveness and the sustainability of dedicated counseling sessions in the clinical daily practice.

People who enter in contact with the services promoted by the Emp-H project have improved their health-related habits in particular for physical activity and at-risk alcohol consumption, but also for the other risk factors: diet and smoke.

The results of the project could be a start-point for the following activities:

- further dissemination of the Emp-H model at international, national and local levels, highlighting above all the originality and effectiveness of the experimented model;
- continue extension and implementation of health promotion networks, ensuring that they will be implemented in other hospitals using comparable methods;
- training of health professionals;
- encouraging the adoption of solutions to promote healthy choices at the local community level that could be integrated with the Emp-H model.

The availability of the handbook for the health practitioners and for the hospital managers produced at the end of the project constitute a practical tool to provide detailed information on how introducing health promotion practices in other EU regional and local hospitals.

The Emp-H project demonstrated the validity of a hospital-based organizational model and, for the future, it could be strengthened, implemented and, if possible, transferred to other communities.

In conclusion, the Emp-H project achieved the policy objectives described above and contributed to the overall CHAFEA policies by validating a scalable, sustainable and adaptable model shared by hospitals and professionals across Europe.



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