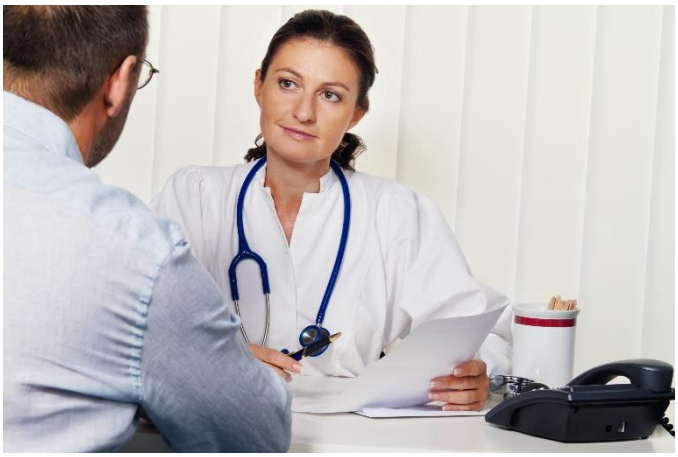
PrimCareIT

Connecting and Supporting Health Care Professionals via ICT

Counteracting brain drain and professional isolation of health professionals in remote primary health care through tele-consultation and tele-mentoring to strengthen social conditions in remote Baltic Sea Regions



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Baltic Sea Region
Programme 2007–2013

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Baltic Sea Region Programme 2007–2013

1. Background

The Baltic Sea Region is confronted with an ageing population, which leads to a rising demand for primary health care services. In addition, the migration of professionals, called brain drain of health professionals, is affecting particularly remote areas challenging the maintenance of rural primary health care. With the retirement of older professionals and an unwillingness amongst younger professionals to re-locate to remote areas, many regions are facing a shortage of physicians. There is evidence that professional isolation is one of the causes for brain drain, among other factors such as remuneration and living conditions. Such brain drain of health professionals is currently affecting primary care in remote areas in the whole Baltic Sea Region.

To meet these challenges the project “PrimCareIT – Counteracting brain drain and professional isolation of health professionals in remote primary health care through tele-consultation and tele-mentoring to strengthen social conditions in remote Baltic Sea Region” was originally initiated within the “eHealth for Regions” network. The main project activities started in January 2012.

Information and communication technology (ICT) opportunities such as tele-consultation and tele-mentoring have strong potential to reduce professional isolation and to provide opportunities for professional networking, continuing medical education and career development for younger and experienced doctors and health workers in remote areas. Tele-consultation permits online communications e.g. between health care professionals of different locations. Those discussions on special cases of disease can be supported by transmissions of medical, imaging and health informatics data from one site to another. Tele-mentoring is similar – and more at the same time. The relationship between mentor and mentee is characterised by the aspects of learning and developing the mentee’s skills.

During the PrimCareIT Project, the partners analysed existing barriers for large scale deployment of tele-consultation and tele-mentoring such as technology acceptance, work flows, daily routines or legal uncertainties. They elaborated on strategic opportunities for better use of such tele-health to overcome brain drain of health professionals in primary care in remote areas. They implemented jointly developed tele-consultation and tele-mentoring solutions between health workers, general practitioners and medical specialists in pilot sites in Finland, Sweden, Lithuania, Estonia, Latvia and Belarus.

Project meeting in Kaunas, Lithuania

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Project data

Partnership	Health care professionals, medical doctors associations, hospitals, planning and financing authorities, regional development administrations and eHealth research organisations
Number of partners	16
Partner countries	Belarus, Estonia, Finland, Germany, Latvia, Lithuania and Sweden.
Lead partner	South Ostrobothnia Health Care District, Seinäjoki, Finland
Funding Programme	Baltic Sea Region Programme 2007-13
Total budget	€ 2.5 million
Duration	January 2012 – March 2014
Forerunners	Projects “ImPrim” and “ICT for Health”

PrimCareIT was selected as a flagship project of the EU Strategy for the Baltic Sea Region. These flagship projects contribute to maintain and reinforce the attractiveness of the Baltic Sea Region.

Sami Perälä, Project Director

2. Project objectives

The overall aim of PrimCareIT was to raise the attractiveness of remote primary health care for medical professionals by the means of tele-consultation and tele-mentoring (in the following also referred to as “eHealth” or “tele-health”). Thereby the project worked for counteracting brain drain and professional isolation in sparsely populated areas for more equal access to primary health care in the Baltic Sea Region.

The project objectives were:

- To assess the regional needs and strategic opportunities of tele-consultation and tele-mentoring to avoid professional isolation of health professionals in remote primary care.
- To assess current barriers for large scale deployment of tele-consultation and tele-mentoring in the Baltic Sea Region such as technology acceptance, investment decisions, work flows, legal uncertainties.
- To implement and validate transnationally developed tele-consultation solutions in remote primary care in pilot sites.
- To implement tele-mentoring as innovative solution for career development of younger health professionals in remote primary care.
- To prepare the durability and large scale implementation of the piloted solutions in the partner regions.
- To raise the political awareness via Northern Dimension Partnership in Public Health and Social Well-being and Political Board of “eHealth for Regions” on how to attract health professionals to remote primary care through joint political discussions with “ImPrim” project.

Improving the professional situation by tele-health

3. Assessment of needs and strategies of tele-consultation and tele-mentoring

Written by: Professor Bosco Lehr, Flensburg University of Applied Sciences, Germany

The initial question was to which extent “professional isolation” of health professionals working in remote primary health care influences the attractiveness of their jobs and working conditions in the Baltic Sea Region compared to cities and urban areas.

In order to obtain a solid theoretical background of the PrimCareIT project we assessed the regional needs and strategic opportunities of tele-consultation and tele-mentoring. The results of the desk research combined with findings of conducted interviews with experts and focus groups led to a transnational strategy to attract health professionals to remote primary care.

The results provided input to the pilot implementations as well as to the discussions at political level to capitalise the opportunities of strengthening the access to and high quality of primary health care in remote areas by the means of eHealth.

3.1. Report on transnational literature review

The literature review showed that the state of the art in the involved countries is still on different levels. In all countries, some kind of tele-consultation or tele-mentoring solutions have been used but topics such as the effects of tele-consultation and tele-mentoring on the health care system or the weighting of factors leading to brain drain have not been considered in most of the countries.

3.2. Report on expert interviews and conclusions

The second part of the theoretical background of the PrimCareIT project was the report on the expert interviews carried out in the seven project partner countries.

The interviews showed that the characteristics of brain drain and professional isolation are on different levels, as well as the prevalence of tele-consultation and tele-mentoring differs between the countries. The factors and effects of brain drain and professional isolation are diverse but similar in all countries. The mostly named factors for professional isolation included the own personality of the health care workers, the arrangement of the health care systems or the geographical isolation, when working in rural areas as well as financial problems, heavy workloads, a lack of teamwork and difficulties in participating in trainings. Among the main factors for brain drain were differences in salaries, poor attitudes of the society towards health care workers and better social conditions in urban compared to rural areas. The described effects of brain drain and professional isolation were an increase of dissatisfaction and negative attitudes towards the health care system as well as a decrease in medical care accessibility and quality. The most important solutions counter-acting brain drain and professional isolation were seen in higher funding for

primary care, adequate work pay ratios and better employment opportunities as well as additional support especially in rural areas. Tele-mentoring and tele-consultation experiences among the medical professionals ranged from already using tele-consultation and tele-mentoring to not having used any telemedicine at all so far. Therefore, the results differ a lot concerning tele-consultation and tele-mentoring, although they are seen as good solutions in all countries by most experts.

Since most of the topics are still not widely studied, further research will be necessary following this study. Hence, a focus group was organised in February 2013 to further elaborate on information regarding the use of tele-consultation and tele-mentoring to counter-act brain drain and professional isolation in the partner countries.

3.3. Report on focus group and strategic workshop

The third part of the theoretical background of the PrimCareIT project was the report on the transnational focus group and the strategic workshop.

The main findings from the focus group include that there are different challenges that have to be faced when implementing tele-consultation and tele-mentoring solutions. But the focus group participants also developed several recommendations for successfully implementing, solutions in the daily routines of medical practices and health centres. Those include for example well working remuneration systems in those countries where health care is not publicly driven, like in Germany, or patient centred incentives in systems with mainly public health care providers, such as Finland or Sweden. The recommendations also focused a lot on technical aspects, like easy usability (of devices) and IT trainings for health care professionals. Besides, organisational issues were raised concerning recommendations of implementing a tele-consultation hour or using tele-consultation and tele-mentoring in an asynchronous way.

In the strategic workshop the focus lay more on strategy development. The major findings of the disputants included the advices to focus on recent health care developments and the difference of the various health care systems. It was also suggested to highlight the benefits for the users, the health care system in total and the decision makers as well as the positive outcomes for the patients being a rather relevant factor for decisions in health care.

3.4 Integrated transnational strategy paper

The developed strategy paper emphasises the overall idea of enhancing the working environment of health professionals in remote regions through the provision of specialist contact via ICT solutions, like video-conferences, forum discussions or portals. The different approaches are focused on tele-consultation and tele-mentoring, while the first describes an exchange between health professionals of different specialties and the latter between more experienced and less experienced persons of the same profession. Enabling this exchange is targeting at health professionals, who feel professionally isolated in remote regions. Tele-consultation and tele-

mentoring are therefore tools to enhance the working environment for health professionals in order to make it more attractive.

The main hindering factors for tele-health solutions were seen in missing IT infrastructures, low financial incentives, lacking personal will of health professionals to use something new, no financial reimbursement for providing or using tele-consultation/ tele-mentoring or missing time in the care processes to provide or participate in tele-consultation or tele-mentoring. Apart from directing activities to counteract those issues, pilot owners and experts in the PrimCareIT interview study emphasised that an easy usability, good training opportunities and well working technical equipment build among others the main requirements for a successful implementation of tele-consultation and tele-mentoring.

All conducted studies showed very well that participants regarded tele-consultation and tele-mentoring as highly interesting and useful tools, which can, when implemented according to the recommendations derived from the PrimCareIT studies, successfully support health professionals in remote regions.

New strategies are needed to overcome hindering factors in tele-consultation and tele-mentoring within the health care sector.

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4. Implementing the pilots of tele-consultation

Written by: Professor Tobias Larsson, Blekinge Institute of Technology, Sweden

Tele-consultation simply means to receive the professional opinion of a peer or colleague from other healthcare providers who are not physically present. An example is a family doctor in a remote area calling a senior colleague at a hospital to get his opinion regarding a difficult medical case through video-conferencing. Another field of application are nurses taking care of elderly people at their home getting second opinion from hospital medical specialists through transmission of health data and telephone-consultation.

Doctors' virtual morning meeting in Finland

For PrimCareIT, this includes health care professionals and their patients or health care professionals holding diagnostic, mentoring, or other decision-making activities and thus accounts for a substantial part of tele-medicine. It can be generally defined as a (audio-) visual communication link between health professionals. Tele-consultation enables the virtual communication between doctors of different disciplines or with specialists in other health care institutions like hospitals.

As more and more other health professionals in primary health care (for example specialised nurses and physiotherapists) have their own consultations and the request for inter-professional collaboration, there is a need for technical and methodological support for communication and consultations between all health professionals in primary health care systems.

Tele-consultation is proven to be one instrument to counteract professional isolation of general practitioners. It allows them to directly communicate with a colleague to discuss clinical pictures, diagnosis and treatment of their patients. Therefore, tele-consultation is also a tool for continuing education. Furthermore, tele-consultation leads to better cost-effectiveness, cost savings, access to specialised medical knowledge and to more attractive jobs for medical professionals in remote areas.

PrimCareIT addresses the above areas problems and has worked with them in consideration of the national and regional distinctions. Seven pilot sites in six different countries within the Baltic Sea Region – Finland, Sweden, Lithuania, Estonia, Latvia and Belarus – have been used to elaborate, implement and test tele-consultation.

4.1. Objectives

The aim of tele-consultation was to establish an understanding on best practices in primary health care counteracting professional isolation and brain drain.

The main objectives were:

- To successfully implement methods and tools for tele-consultation in seven pilot sites in remote areas of five different countries within the Baltic Sea Region.
- To validate the transnationally developed tele-consultation solutions in remote primary care in pilot sites.
- To prepare the durability and large scale implementation of the piloted solutions in the partner regions.

Sub-objectives were:

- To enhance the connection of health professionals within primary health care and the cooperation with the secondary health care sector.
- To enhance the use of ICT for collaboration of health professionals within primary health care and the cooperation with the secondary health care sector.
- To improve the professional cooperation and quality in remote primary care.
- To counteract professional isolation through tele-consultation.

The pilots were organised and set-up as collaborative activity between partners where procedures and approaches were shared. The same is true for the evaluation and follow-up procedure.

4.2. Pilots

Seven pilots with the focus on tele-consultation were deployed:

#1 Sweden: Blekinge Wound Care Centre and primary care actors (Municipality and County Councils)

#2 Belarus: State Educational Institution Belarusian Medical Academy of Post-Graduate Education – Professional support of general practitioners from remote areas

#3 Finland: Kauhava Primary Health Care District – Central hospital to home care units

#4 Sweden: County Council of Västerbotten – Psychogeriatric in distant rural area

#5 Lithuania: Vilnius University Hospital Santariškių Klinikos – Remote general practitioner

#6 Estonia: Estonia Vormsi Primary Health Care Centre – General practitioner support

#7 Latvia: National Health Service – Supporting general practitioners from remote areas

The execution of the pilot evaluation was consistent with all pilots:

1. **Situation analysis:** analysis of the country specific working models within remote primary health, e.g. communication and division of work between general practitioner and nurse
2. **Literature study** on best practices in tele-consultation
3. **Needs assessment** in the pilot regions, e.g. what kind of technology and methods, for example webcam, is still needed
4. Process assessment on **how to implement tele-consultation** in the daily work routine
5. Assessment of **legal aspects** of tele-consultation
6. **Pilot deployment**
7. **Evaluation**
8. Recommendation and **best practices handbook**

Tele-consultation in Västerbotten, Sweden

The evaluation of the individual pilots consists of formative, process, and outcome evaluation:

- Pre-test Baseline Data collection before pilot:
  - Monitoring of present consultations; time duration, type, location etc.
  - Observations with field notes of the settings for consultation at the pilot site (consultation rooms, equipment, localities, placement of working desk with computer, bench and chairs for the patients etc.).
  - Interviews with involved experts and primary health care workers regarding work, IT-knowledge, attitudes, skills and expectations.
- Data collection during the pilot after each consultation:
  - Follow-up questionnaire filled in by involved primary health care workers; communication, accessibility, usability, technique influences on the consultation quality, advantages, disadvantages, obstacles.
  - Video observations of consultation with present patient, use of equipment, communication.

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- Data collection after the pilot:
  - Follow-up with questionnaire/ interview with participated health personnel tele-consultation could be replicated, disseminated, and made sustainable.
- Data collection after the pilot period:
  - Follow-up questionnaire/ interviews with involved primary health care workers (and other involved actors).
  - Knowledge – regarding pilot specific contents (assessment and treatment, skills, use of technology, self-confidence and empowerment).
  - Attitudes towards use of technology for consultation.
  - Number of pilot consultations, types, duration.
  - Benefits of tele-consultation versus traditional consultation (security in care and treatment, empowerment, time, knowledge, partnership).
  - Benefits tele-consultation versus traditional consultation for patients (expressed by health personnel).
  - Benefits tele-consultation versus traditional consultation for the healthcare (expressed by health personnel, obstacles and limitations).
  - Suggestions for further development of tele-consultation.
- Data collection after one year (after project is concluded):
  - Questionnaire/ interviews. Long term outcome; follow-up maintenance, replication, dissemination.

4.3. Results

With hundreds of sessions concluded via the seven pilot sites deployment within the PrimCareIT project some results can be drawn:

Positive reflections

- Tools, methods and technology exist off-the-shelf and built-into devices.
- Fast and easy access to peers and specialists.
- Improved security in assessment, treatment etc.
- Less travels.
- Money and time savings.
- Facilitates learning.
- Possibility of patient participation at more meetings.
- Nurses/ nurse assistants can assist remote expert (improved use of trained staff).
- Primary health care workers are positive to technologies that improve their work.
- Involving users in the process speeds up deployment and also brings new solutions to the table.

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Negative reflections

- Collegial dialogues still better in real life (if that is an option).
- Save travels only if today's processes are changed.
- Possible overuse of patients' time.
- Work satisfaction lowers if technology is not working.
- Non-functional technology causes irritation.
- Manuals and "how-to's" needed for easy start.

To enable new processes in primary health care for use of tele-consultation, it is important to involve responsible IT-departments etc. early on since there are also some start-up problems related to IT: network, 3G, camera, audio, software, firewalls, etc.

This can be summarised as:

- Tele-consultation (dialogue) worked well (collegial tutoring).
- Technology have to be "click-and-go".
- The consultations must be integrated and scheduled in the regular work.
- Tele-consultation is a valuable tool for supporting general practitioners in how to prioritise, treat and refer patients.
- Key factor for success is timely response receiving from specialist, confidence of having access at the right time.

4.4. Summary

Seven pilots were implemented; all pilots measured attitude and experience changes during the tele-consultation sessions. Information was collected in each participating organisation with a questionnaire and an interview. Pilots worked together in close cooperation and learned from the experiences of each other.

Pilots reported that tele-consultation helped to improve professional capabilities in remote areas. Participants felt less isolated and the self-confidence of making decisions and solving cases improved. Timeliness of response was positive and reduced travel needed (both patient and primary health care workers), possibly reducing costs.

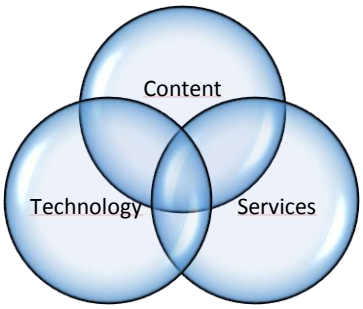
Tele-consultation as a tool for counteracting brain drain was not seen specifically in the study but it would be a helpful tool for young medical personnel to work in the rural areas and still have access to peer network.

5. Implementing the pilots of tele-mentoring

Written by: Kristjan Krass, Estonian Society of Family Doctors, Estonia

Tele-mentoring is a derivative of the prefix "tele" meaning "from the distance" and the term mentoring, a regularly used term in education, meaning a provision of guidance as well as support in different ways.

Tele-mentoring in the PrimCareIT project was a form of virtual mentoring that enhanced different communication tools for education and especially for continuing education and professional development for health workers in remote areas.



Comprehensive tele-mentoring solution

For example, a young doctor working at a hospital in a city can easily ask experienced colleagues next door how to apply theoretical knowledge in the concrete situation with a patient. In contrast, young doctors in remote areas are lacking these opportunities as well as direct physical networks with colleagues and mentors which are fundamental for learning and training-on-the-job.
Tele-mentoring activities took place in Finland, Lithuania, Estonia and Belarus. Existing tele-mentoring solutions and online video lectures were combined with tele-mentoring and developed further according to the originally observed needs.

5.1 Objectives

The project aimed to increase a common understanding on best practices in tele-mentoring use in primary care counteracting professional isolation and brain drain.
Furthermore, there was the objective to develop a comprehensive tele-mentoring solution for continuing education and professional development for health workers in remote areas. The set-up of the pilots was organised by the respective organisations involved. The pilot organisations developed e-courses and organised user training sessions for health workers in remote areas. Health care workers were recruited who tested technological solutions in a period of one year. All activities were supervised and evaluated in order to develop further recommendations.

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5.2 Pilots

Five pilots with the focus on tele-mentoring were deployed:

#1 Belarus: State Educational Institution Belarusian Medical Academy of Post-Graduate Education – Professional support of general practitioners from remote areas

#2 Estonia: The Estonian Society of Family Doctors – General practitioner mentors support young general practitioners in rural areas

#3 Finland: Kauhava Primary Health Care District – Central hospital to home care units

#4 Finland: South Ostrobothnia Health Care District, Seinäjoki University of Applied Sciences, Kauhava Primary Health Care District – Tele-mentoring between hygiene nurses

#5 Lithuania: Vilnius University Hospital Santariškių Klinikos – Mentoring between experienced health care professionals and specialist doctors and younger, less experienced physicians and nurses working in remote primary health care clinics

The execution of the pilot evaluation was consistent with all pilots:

1. **Situation analysis:** analysis of the country specific working models within remote primary health, e.g. communication and division of work between general practitioners and nurses
2. **Literature study** on best practices in tele-mentoring
3. **Needs assessment** in the pilot regions, e.g. what kind of technology and methods, for example webcam, is still needed
4. Process assessment on **how to implement tele-mentoring** in the daily work routine
5. Assessment of **legal aspects** of tele-mentoring
6. **Pilot deployment**
7. **Evaluation**
8. Recommendation and **best practices handbook**

Tele-mentoring session in Estonia

Data analysis covers primary care professionals' views and experiences from participation in tele-mentoring programme.

Mentees inclusion criteria: Primary care specialists (doctors and nurses); rural and/ or remote workplace.
Mentoring methods: web-based lectures and seminars; chat rooms and forums; expert led discussions; online meeting; virtual classroom sessions etc.
Main technologies: Moodle; Skype; Oovoo.
Evaluation methods: Questionnaires and interviews (pilot audience profile, pre-test and post-test questionnaires, pilot session review and interview)

5.3 Results

Two third of participants were physicians and one third nurses; with regard to gender, more female than male mentees participated in the mentoring programmes (Table 1).

Profile	Belarus	Estonia	Finland*	Lithuania	Total
Physicians	26	8	0	18	52
Nurse	0	0	25	1	26
Male	10	1	1	13	25
Female	16	7	24	6	53
Age (>50 years)	13	1	17	13	44
Practice duration (>10 years)	22	4	24	19	69

Table: Pilots audience characteristics

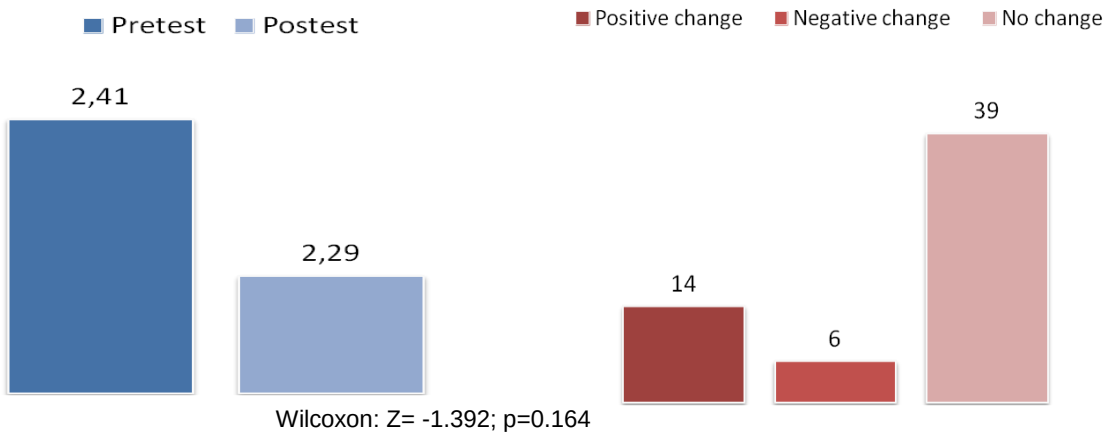
* Data from Pilot #4

Our analysis showed statistically no significant change in opinion about possibilities to support professional development using tele-mentoring. There were nine participants who had more a positive opinion after the implementation of the tele-mentoring pilot (Figure 2).

Wilcoxon: Z= -1.387; p=0.166

Pilots' response: I feel tele-mentoring can be used as a tool to support my professional development

Our analysis showed statistically no significant decrease in professional isolation among participants, but there were 14 participants who reported lower professional isolation after the implementation of the tele-mentoring pilot (Figure 3).



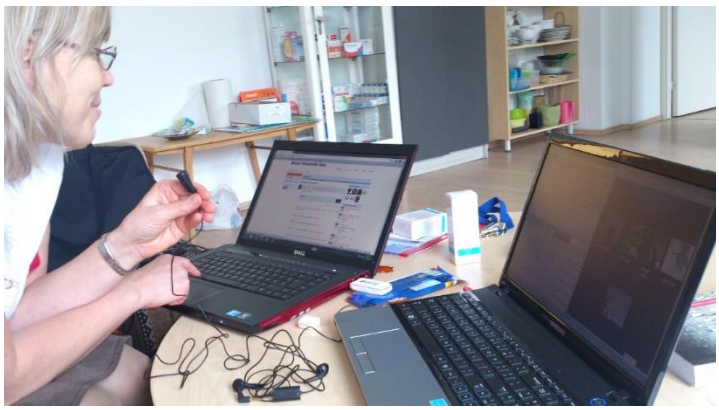
Pilots' response: I feel professionally isolated

5.4 Summary

The tele-mentoring pilots in the framework of the PrimCareIT project were implemented at five pilot sites in four countries: Finland, Lithuania, Estonia and Belarus.

Tele-mentoring is a good technological tool for health professionals to develop further professional experiences and to save time spent for travelling. It can also contribute in reducing the risk of professional isolation and brain drain of health care professional working in remote areas.

The tele-mentoring impact on financial perspective has to be further studied to assess if higher maintenance costs on technology exceed time and travel savings.



Pilot equipment in Estonia

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6 Good practices for large scale implementation and guidelines for tele-consultation and tele-mentoring

Written by: Clara Axelsson, eHealth Institute, Linnaeus University, Sweden

The following section presents experiences of implementing tele-consultation and tele-mentoring in the pilots described above. Data were gathered from all pilots through questionnaires, interviews and analysis of documents. A qualitative content analysis of the data was then performed identifying following factors as means of success.

Preparing

Initially, when planning to implement eHealth the organisation and the users in mind need to get on-board. This can be more easily achieved by embedding concrete visions of reasons for implementation and how to carry it out.

Involvement

An identified success factor of the deployment of eHealth is the involvement of stakeholders at different levels. The involvement of certain decision makers can give incitement to encourage organisations to initiate eHealth projects. Furthermore, motivated doers can facilitate the implementation as well as the endurance of implemented solutions. Besides, it was stated that the involvement of responsible IT-departments as early as possible was beneficial, too.

Communication

To assure the commitment of stakeholders, communication was identified as vital. Involved organisations and stakeholders have different goals and visions which needs to be communicated to all partners in order to attain a better understanding of each other but also to create a common ground in a project.

Technology

When it comes to success of an eHealth deployment the choosing of suitable technology is of utterly importance. Experiences from the pilots show that a thorough needs assessment prior to procurement of technical solutions or software is beneficial, both for the pilot as well as for the organisation and the users. The main identified obstacle in pilots was non-functional technology which causes setbacks in deployment and irritation amongst workers and hence, a lower level of satisfaction.

Implementation

During the implementation phase of solutions for eHealth, integration and communication were the most important activities since sharing of ideas, plans and actions were identified as key factors for success.

Training

With technology in place, the users need to adapt not only these new tools but also a new way of work with these tools. A proper training or education will help them in doing so. The creation of new or the use of already existing manuals or handbooks for selected technology was found to be important. Moreover, these need to be provided and easily available to the end-users. New or adapted routines or respectively processes further support the end-users in their daily activities.

Assessment

Evaluations of both the deployment and the effects of implemented eHealth were found to be useful. A formative evaluation during the deployment could reduce the risk of obstacles and an assessment of the effects could raise awareness and facilitate endurance of implemented eHealth.

Health economy

When planning for or executing the deployment of eHealth, the obvious question concerning financial aspects is raised. There are several methods to calculate the return of investments. With the experiences from the project at hand following suggestions are provided which should be considered at an early stage of planning:

- Health economics evaluations compare the costs and effects of different work methods.
- Health economics evaluations are conducted from a societal perspective.
- All costs and effects are considered regardless of where and for whom in the community they arise.
- Different types of methods are used in health economics evaluations. Though all different evaluations include costs in monetary terms they differ in terms of description and valuation of effects.
- The choice of method for the evaluation is determined by the current problem and the availability of relevant data.
- Health economics evaluation should include impact assessments, which analyse the medical, economic, ethical and social implications of a shift from a current applied approach to a new one.
- The reliability of health economic evaluations depends on the quality of the data and methodology used.
- The economic evaluation cannot be better than the input data.

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7 Raising political awareness and stakeholder involvement on tele-health opportunities

Written by: Professor Johan Berglund, Blekinge Institute of Technology, Sweden

The importance of stakeholder involvement was highlighted and a specific approach was applied when planning the PrimCareIT project. The aim of the project and this specific approach was to raise “political awareness of strategies to ensure high quality and accessible services in remote primary health care by means of eHealth”. The focus was limited on tele-consultation and tele-mentoring which were implemented in different pilot settings among the project partners, for instance primary health care consulting secondary care or newly graduated professionals getting continuing professional development mentored by senior professionals.

The respectively activities were mainly carried out in tree steps: 1) a stakeholder analysis, 2) different stakeholder events and 3) the achievement of political statements.

7.1 Results

The first step in the stakeholder analysis was to gain knowledge and understanding about the health care system in the Baltic Sea Region. This first step revealed similarities, e.g. in primary care responsibilities and management, but at the same time also substantial differences, e.g. in health care organisations and their financing, which need to be considered in the analyses. In Latvia and Estonia, for example, almost 100 % of primary care is privatised while in Finland and Belarus it is only 5 to 10 %. The financing of health care also differs even though most countries have predominantly governmental tax financing. Based on these contextual factors, the second step was to identify stakeholders on three levels: national, regional and local. In this analysis, the stakeholders’ power and competencies in decision making concerning eHealth implementation were also considered.

The analysis carried out by project partners identified seven actor and stakeholder categories on national level and eight categories on regional and local level. The most important or influential group was the political one – on the national level ministers of health and on regional/ local level county council politicians. A further observation was that health care professionals had a very low impact (or interest) in this field.

The outcome of this analysis was the establishment of a stakeholder list where all the individuals of the previously described levels were identified by name, position and contact details. This list was created by the so called Regional Stakeholder Contact Persons named among the PrimCareIT project partners. These persons had the responsibility to regularly update the list during the projects duration.

The Regional Stakeholder Contact Persons had also the responsibility to collect information about different events and activities in which the PrimCareIT project was presented or discussed. In addition, they gave information about the project on request and distributed newsletters about

project progresses. During stakeholder events the following main objectives were discussed (with stakeholders): 1) assessment of regional needs and strategic opportunities as well as barriers of tele-consultation and tele-mentoring as tools to avoid professional isolation and brain drain, 2) implementation of pilot sites and 3) how to prepare the durability and expansion of the piloted solutions. In total, 61 events with more than 3,000 participating stakeholders involved were reported during the project time.

Finally, a Round Table Discussion with high-level stakeholders at the PrimCareIT Final Conference was organised in order to achieve further joint transnational conclusions and statements signed by stakeholders, decision makers, professionals and politicians in Health Care among participating countries. The international event took place on 14th February 2014 in Tallinn, Estonia.
To assure the sustainability of the implemented eHealth solutions the project developed three types of documents in which the concerned stakeholders declare their intention to support this new ways of cooperation:

- "Agreement" or "Letter of Intent"
  an agreement with partners involved in the project on continued expand and implementation of tele-consulting and tele-mentoring in regular work.
- "Guidelines to implement tele-consulting and tele-mentoring"
  for the health care organisation in which the project pilots have been implemented and with the willingness to continue further implementation
- "Political statement"
  for politicians and health care decision makers for sign their intentions and willingness to take the good practices and recommendations of the PrimCareIT project into consideration. 17 documents in total were signed during the project period.

7.2 Conclusion and suggested follow-up actions

The joint transnational conclusions and signing of statements showed professional and political willingness to promote the development in tele-health.

Among the main results and achievements of the project which were presented to the stakeholders was that tele-consultation and tele-mentoring provide opportunities to health care professionals in remote areas for professional guidance, knowledge exchange and networking. The project showed the possibilities and solutions to counteract brain drain and professional isolation, problems that are relevant in all countries within the Baltic Sea Region. However, three major challenges or barriers to implement eHealth in a wider perspective were identified: missing IT infrastructure, varying engagement in the organisations and lack of financial incentives. This means lack of high speed broad band internet in remote areas, lack of health professionals' personal interest to use something new and difficult conditions to get financial reimbursement for the services provided. In addition, problems with the legal acts on distance learning were found.

To conclude, the project results of the implementation of the eHealth technology, here by tele-mentoring and tele-consultation, have shown barriers like a paradigm shift for the health care professionals. That is why large scale implementation seems unsuccessful, instead the implementation has to be built on and be expanded by good examples and pilot projects such as in this project. The future will be a more patient driven health care with the main idea that the role of primary health care professionals should be the one of a coach to guide the patient with his/ her health or disease and within the health care system if in need of secondary care. Obviously, eHealth tools are a necessity to fulfil this task.

Round Table Discussion with high-level representatives from the Baltic Sea Region countries on 14th February 2014

Part-financed by the European Union (European Regional Development Fund and European Neighbourhood and Partnership Instrument)
Baltic Sea Region Programme 2007–2013

8 Final Conference

The PrimCareIT results and developments were presented at the conference “Connecting Health Care Professionals via ICT. Tele-mentoring and Tele-consultation in Primary Health Care”, which took place on 14th February 2014 in Tallinn, Estonia.

Conference guests were welcomed by the Deputy Secretary General on Health of Ministry of Social Affairs of Estonia, Ivi Normet and by the Minister of Social Affairs and Health of Finland, Paula Risikko. The project’s results were presented and the pilot leaders from Finland and Sweden pointed out the factors of success such as motivation, technical equipment and a timeline. The experiences from implementing tele-consultation and tele-mentoring at the pilot sites especially raised a lot of interest among conference participants.

At the Round Table Discussion among political representatives from the project’s partner countries, participants supported ICT-solutions in health care and agreed with the project’s findings that international collaboration and sharing of good experiences and best practices are important. The participants noted the potential cost savings, yet, they recognised that there is a certain amount of professional resistance to these new technologies. Other emphases were that financial issues should be covered, further collaboration is needed, patients should be included in the development of solutions, and new laws may be required in some countries.

The next step following up the PrimCareIT project will be to think how to organise the overall structures of health care considering the requirements for the adoption of eHealth solutions. The conducted pilots in regional health care centres showed that the effort is worth it.

- www.primcareit2014.net (available until 12/2014)

Save-the-day-card announced the event.

8.1 Round Table Discussion

“Tele-mentoring and Tele-consultation – support for primary health care in remote areas” – that was the title of the discussion with decision makers from the Baltic Sea Regions. Participations were:

- Liudmila Zhilevich, Head of the Department of Primary Health Care, Ministry of Health of the Republic of Belarus
- Ivi Normet, Deputy Secretary General for Health of Ministry of Social Affairs of Estonia
- Diana Ingerainen, Head of Estonian Society of Family Doctors
- Aulis Ranta-Muotio, Chairperson of the board of South Ostrobothnia Health Care District, Finland
- Eriks Mikitis, Director of the Health Care Department at the Ministry of Health of the Republic of Latvia

- Justina Januševičienė, Head of Health Care Services Acceptability and Accessibility Monitoring Unit at Ministry of Health of Lithuania
- Per Mosseby, Director of the Center for eSociety at SALAR (Swedish Association of Local Authorities and Regions)

8.2 Possibilities and impact of eHealth

Reasons and solutions against brain drain and professional isolation of health professionals and its effects on health care provision in remote primary care
Alfonsas Vainoras, Professor of Sport Institute at Lithuanian University of Health Sciences and senior researcher in Human Health Institute

Professor Alfonsas Vainoras' presentation introduced the research work and presented the findings during the project period. Based on literature review, expert interviews and focus group discussion, he described reasons for brain drain and professional isolation as well as their effects on primary health care and solutions for them.

The strategic opportunities of tele-consultation and tele-mentoring for remote primary care
Peeter Ross, e-Health Expert at the Estonian E-Health Foundation

During his presentation, Professor Peter Ross discussed the strategic opportunities for better professional communication via ICT in health care. He suggested that technology opens "totally new avenues for health and care" in a changing environment. The raising of awareness in several sectors, such as medical education and the patient's view regarding the opportunities of technology in health care communication, can help to deal with current problems.

Stakeholder involvement
Johan Berglund, Professor of Public Health at the Blekinge Institute of Technology, Sweden

Professor Johan Berglund's presentation explained how political awareness on professional isolation, brain drain, and tele-health topics was raised by PrimCareIT. He introduced stakeholder analysis, dialogue, and events that were carried out during the project and described the main results, achievements, and challenges of the project, which are further acknowledged in political statements signed in partner countries.

The experts discussed the opportunities of eHealth.

8.3 Large scale implementation of tele-consultation and tele-mentoring

Implementation of tele-consultation in pilots

Tobias Larsson, Professor in product development at Blekinge Institute of Technology, Sweden

Professor Tobias Larsson provided an overview of the tele-consultation work. Tele-consultation was implemented at pilot sites to overcome professional isolation in remote primary care. The work was started with a situation analysis and assessments of the needs, processes and legal conditions. Piloting took place in seven pilot sites. Conclusions were gathered in a best practices handbook and formulated as guidelines for large-scale implementation of tele-consultation.

Describing the implementation of pilots

Implementation of tele-mentoring in pilots

Kristjan Krass, online learning environment developer in the Estonian Society of Family Doctors

Kristjan Krass introduced the concept of tele-mentoring and described tele-mentoring pilot activities that were carried out within PrimCareIT in five pilot sites. The work consisted of similar steps as seen in tele-consultation; from pre-assessment to piloting and evaluation, resulting in a publication of guidelines for implementing tele-mentoring. Kristjan Krass pointed out that tele-mentoring was well accepted as a method at pilot sites. Although time and cost savings could be observed, a certain amount of money for technical maintenance was required, too.

Lessons learned in tele-consultation pilots

Ewy Olander, Senior lecturer, School of Health Sciences, Blekinge Institute of Technology, Sweden [presented by Tobias Larsson because of illness of Ewy Olander]

The presentation described the implementation process and lessons learned from the tele-consultation pilot in Blekinge Wound Centre in Sweden. The presentation provided information on pilot participants' experiences as well as on findings regarding IT support, technology, and user involvement needs, concluding into overall lessons learned on implementing tele-consultation into ordinary work.

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Lessons learned from pilots in Finland: tele-consultation and tele-mentoring in Kauhava Primary Health Care District

Raimo Rintala, Senior consultant, MD, Kauhava Primary Health Care District, Finland

Raimo Rintala presented a tele-consultation pilot case from Kauhava Primary Health Care District, Finland. His presentation started with an overview of the pilot background and implementation. He continued with pilot evaluation results and changes that occurred during the pilot. He also described lessons learned in technical adaptation, personnel's experiences, financial savings and overall opportunities brought by tele-consultation and tele-mentoring implementation.

Lessons learned in tele-mentoring pilots

Giedrius Vanagas, Ph.D., MPH Professor of Lithuanian University of Health Sciences

Professor Giedrius Vanagas provided an overview of the tele-mentoring topic and lessons learned during the tele-mentoring pilots. He started with describing the background idea, aims and methods of tele-mentoring implementation in pilot sites, introducing also the used evaluation methods. Professor Vanagas then presented the conclusions from the pilot evaluations, discussing the supporting and limiting factors of tele-mentoring, experienced problems, and impacts of professional isolation and brain drain.

Discussing the integration of eHealth modules into the curriculum of health care professionals

9 Imprint and contact

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Project Management and Realisation
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Project at a Glance

- 16 project partners.
- 6 Baltic Sea Region countries as well as the Republic of Belarus.
- Lead partner: South Ostrobothnia Health Care District, Finland.
- EUR 2,57million budget.
- Part-financed by the European Union Baltic Sea Region Programme 2007-2013.
- PrimCareIT has been integrated into the action plan of the EU Strategy for the Baltic Sea Region by the EU Commission (Flagship project).

PrimCareIT

www.primcareit.net

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