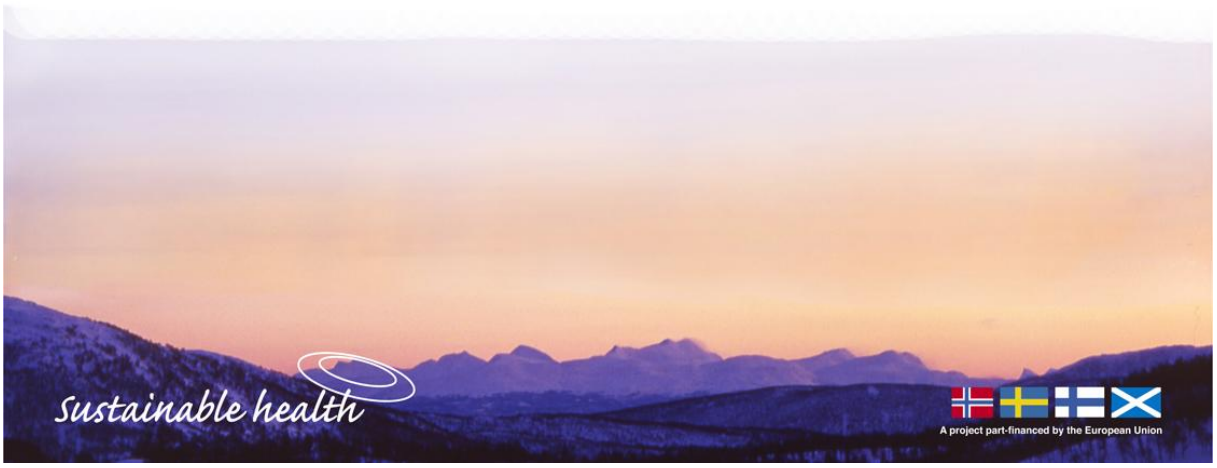
EUREKA
Digital
5-2008

INNOVATIVE APPROACHES TO COMPETENCE BUILDING



Bente Norbye
Rigmor Furu
Ian Leslie
Arthur Steinerowski (ed.)

EUREKA DIGITAL 5-2008

ISBN 978-82-7389-130-3
ISSN 0809-8360

Project Sustainable Rural Health Care Networks

This report is part of the overall project Sustainable Rural Health Care Networks (Sustainable Health). Rural areas in the Northern Periphery face specific challenges as regards to the provision of high quality, coherent and integrated health services. These challenges manifest in the obvious geographic factors including isolation and small dispersed populations, limited public transport and road infrastructure, and the resultant, long distances to hospitals and primary health care services institutions.

There are also significant difficulties in attracting and recruiting qualified and experienced personnel in rural health care services. This is compounded by the increasing centralisation of specialist secondary care services and the increase in the proportion of the elderly population relative to total population.

The Sustainable Health project aims to enable actors to provide high quality, coherent healthcare services in their communities and thereby contribute to the viability of these communities. The project will examine and pilot a number of approaches to address several different aspects of challenges to providing coherent, high quality health services to the population in the Northern Periphery.

The Sustainable Health project is a Transnational project involving partners from four European countries; Norway, Scotland, Sweden and Finland. The partners come from regions all facing similar problems in regards to developing coherent, sustainable health care services.

Partners

- AKMC, Centre for Emergency and Disaster Medicine – Sweden
- UHI Millennium Institute: Morey College and Lews Castle – Scotland
- NHS Western Isles – Scotland
- NHS Argyle and Clyde – Scotland
- National Centre for Telemedicine – Norway
- Tromsø University College, Department of Health – Norway
- Regional Development Centre of Mid-Troms – Norway
- Kemi-Tornio University of Applied Sciences – Finland

The Sustainable Health project is a part of the Northern Periphery Programme and is part funded by the European Regional Development Fund (ERDF).

Project period
01/06/2005 – 01/09/2007

Background

For countries that participate in the Sustainable Health Project: Scotland, Finland, Sweden and Norway the health standards are high in a world perspective. Each of them are characterised by a high level of life expectancy, which is above 80 for children born in 2007. Access to the health education is relatively good due to the introduction of new teaching programmes which include on-line courses and off campus education. In spite of that it is challenging to keep up with a high competence level in different fields in primary health care. Moreover, the rural areas in these countries are facing similar problems of the aging population and increasing needs in terms of health and care service provision.

In fact, for many years the focus on health services has been limited to specialist health care providers working in central hospitals in bigger towns. At the same time primary health care has got more and more responsibilities. The Kerr report (NHS Scotland 2005) revealed that 90% of the health care within NHS Scotland was delivered by primary health care. Despite that the emphasis was still on the health care delivered by the hospitals. The Kerr report (2005) emphasised the importance of competence building amongst primary health care providers, indeed decentralisation of health services has exacerbated the need for expert knowledge where this was not needed previously. In reality, the process of skills enhancement might be long and problematic, especially for remote and rural areas.

This report is part of the work undertaken for the Northern Periphery Programme (NPP) project: Sustainable Rural Health Care Networks and is largely based on: 'Rural Health Report – The importance of networking for multi professionals practising in rural areas' (Furu 2006); and 'Educational challenges for continuing education in rural areas' (Norbye 2006). The main objective of this part of the project is to consider sustainable systems for education and upgrading competences of health and care service providers particularly in remote and rural areas. The focus is on the need to provide educational and training programs that are tailored for the challenges in the different areas in which the health personnel work. This report opens by defining competence itself and then illustrates networking and new technology in competence enhancement. It demonstrates examples of networks within health

and care service, thereafter progressing to explore educational challenges in knowledge and training delivery.

Scope of competence

Use of terminology in the literature on competence is ambiguous and confusing, with terms such as competence, competency, capability and performance being used inconsistently and often interchangeably. In fact, there is a distinct difference between the meanings of competence and competency (Manley and Garbett 2000). Competence and competency are job-related, being a description of an action, behavior or outcome that a person should demonstrate in their performance. Competency and competencies, on the other hand, are person-orientated, referring to the person's underlying characteristics and qualities that lead to an effective and/or superior performance in a job. According to Woodruffe (1993) competence is an aspect of the job that an individual can perform, while competency is an individual's behavior underpinning competent performance.

A holistic approach to competence includes knowledge, skills, attitudes, performance and level of sufficiency. Although there is a tendency to associate competence with the *explicit knowledge,* which can be described as a formal and theoretical knowledge, the concept also involves *implicit knowledge* which reflects on the ability of in-time reflection over incidents, and tells how particular person or a group of people follow working procedures as well as organizational adjustments. This kind of competence is gained through practice and experience. In reality, a lot of the work health professionals do is based on implicit knowledge. When implementing new routines in the work environment as a common practice, they turn into explicit knowledge (Polanyi 1966).

Measurement of the competencies is challenging, sometimes even problematic. Heywood et al. (1992) argue that a competence is not directly observable but describes a set of *'... characteristics or attributes that underlie and enable competent performance in an occupation'* (Heywood et al. 1992, p.16). The ANRAC (1990) Nursing Competencies Assessment Project undertook the original work on competencies in Australian Nursing. They addressed the issue of measurement and agreed that: '*The act of assessment for professionals' competence is the making of an inference about the candidates' knowledge, attitudes and practice. A legal paradigm involving weighing evidence is more appropriate that a scientific*

paradigm entailing measurement.' (ANRAC 1990, p. 39). Moreover competencies should take into account ability for adaptation for the future needs of the workplace, where changes continue to occur because of the introduction of innovative technologies and new professional knowledge.

Networking and new technology in competence enhancement

Networking and new technology can be extremely important in competence enhancement. Lund (2005) defines network as a group of nodes tied together with close connection to each other. A network of people support distribution of information and resources as well as creates cooperation and better communication. Networks encourage working together on common tasks and solving encountered problems (Lund 2005). The network structure is characterised by its optimal support for shared information and communication amongst the particular group. Lund (2005) also claims that networks are open and are able to expand without limits, integrating new nodes as long as they are able to communicate within the network and as long as they share the same communication code. A network-based social structure is a highly dynamic, open system, susceptible to innovation without threatening its balance. Yet, the network morphology is also a source of dramatic reorganization of power relationships (Lund 2005). Moreover networks might be defined in different settings/contexts and they might have various intentions. For example networks created by the health professionals may improve or meet some of the challenges within competence building and health education (Furu 2006). Here, a remarkable role in developing new networks plays innovative technology, which gives opportunity for creating virtual networks within the health care sector including networks of expertise and competence as well as electronic conferences, also called e-conferences.

An *e-conference* can be described as a moderated discussion conducted via the Internet. It differs from traditional on-line forums as it introduces a moderator, who ensures that participants stick to the agreed agenda, and it observes a strict time-line. The moderator monitors the discussion, stimulates it making sure it stays lively and on-track. The e-conference is guided by an “agreed-upon agenda” and “ground rules” which govern participation. The guidelines are very important in facilitating an orderly exchange of ideas and information. An e-conference may be useful within different working fields where cooperation and communication are crucial for a particular work. The moderator is usually a

person with competence within the special working field. It can answer the questions, give useful advice and active participate in the ongoing discussions (Furu 2006).

Indeed, in the health care sector there is a need for communication and information flow between different professions in the field. There has to be a multidisciplinary cooperation which can improve quality of the service, treatment and care for the patient. In rural and remote areas, which are isolated from other health institutions and hospitals, the health professionals are often working alone without having someone to discuss with or get advice from (Furu 2006). Because of decentralisation of the health services there is a demand for competence building and better cooperation and communication within the sector. Therefore health professionals need to build up the competence and skills required for fulfilling their current tasks and meeting new roles. Nowadays, data and electronic tools play important part in the communication and information flow in the health sector. In spite of that there are still many institutions that use paper based information, which leads to difficulties in terms of knowledge sharing and keeping information updated (Furu 2006). For these reasons the health professionals in different pilots of the Sustainable Health Project need modern ICT system (information and communication technology) which would create better communication and experience exchange. Moreover ICT would allow building continuous and coherent services for the patients. For example, virtual networks might be helpful in order to seek for the competence, second opinion, guidance and counselling. Additionally it might be useful to send and receive information and to build up a communication arena for health care personnel within different specialised fields (Furu 2006).

Example of networks within health and care service

Cooperation between the NST (Norwegian Centre for telemedicine) and a geriatric ward at the University Hospital North of Norway has developed a virtual network for health professionals working in small hospitals in the municipalities (Furu 2006). The network of expertise in the geriatric field is a result of building up a programme within education and competence development. This educational programme, which focuses on multidisciplinary skills, should contribute to the competence building in the field of geriatric and rehabilitation of the elderly. Furthermore, the programme should establish and vitalize the network between

the participants and the participating units/wards by strengthening the identity of the health professionals, and the solidarity and interdependence amongst participating health care units (Furu 2006).

One of the main objectives in the Sustainable Health Project is to improve the health care provision in the northern periphery by providing high quality, accessible and coherent services (Furu 2006). In fact, the quality of the services might be enhanced by a better cooperation between health sector employees. Moreover, training and upgrading of professional skills should prepare the health professionals for the new roles in remote areas. In the Norwegian pilot of the Sustainable Health Project: "The Rehabilitation Network of Midt Troms", the aim is to establish a new form of cooperation within and between the multi professionals; and create a rehabilitation network for exchanging and developing competence within rehabilitation of the elderly (Furu 2006).

The long term objective of the project is to improve the quality of the services by:

- strengthen competence within patients in need of rehabilitation (at specialised health care level and at municipality level);
- strengthen competence at all levels in the health care service regarding rehabilitation;
- strengthen the cooperation and communication routines between the specialised health care level and at municipality level (Furu 2006).

In 2006 approximately sixty multi professional health workers participated in the educational programme and had accessed the electronic network (Furu 2006). They used the discussion forum for cooperation, sharing knowledge and experiences from the geriatric field. Different themes were discussed in the physical meetings and the particular reflections were prolonged and strengthened afterwards in the discussion forum. The whole process was administrated by the counsellors who were responsible for starting and ending discussions, as well as delivering new information from the field (Furu 2006).

In this example an electronic network was used for sharing knowledge and experiences between health professionals in a specialised field. A new ground for communication and information, compared to traditional methods, was established.

Educational challenges in knowledge and training delivery

Education plays major role in knowledge and competence building. Educational programs should be adapted to the current needs of the patients. The need for specialised competence can be critical in order to be competent in particular field of the health care. For example where a patient is discharged from the hospital to his/her own home with a respirator, it is crucial for the primary health care team to upgrade the skills in term of using respirator at home and be able to give competent care (Norbye 2006).

Most rural municipalities need upgrading to a higher level of competence on widespread themes, including specific areas such as:

- new roles for nurses where fewer doctors are on call out of hours;
- caring for young disabled people, some with additional aggressive behaviour;
- upgrading of skills regarding rehabilitation of the elderly;
- involving and educating the patients;
- preventive care with chronically ill elderly patients to avoid acute deterioration and the need of being admitted to the hospital (Norbye 2006).

These examples are taken from the Work Package 1 regarding Sustainable Health Project (Norbye 2006). It appears that the biggest challenge is to develop new skills supporting local health needs. In reality, remote health workers are required to offer a broader range of services than their urban counterparts (Boerma et al 1998). This has specific implications for the education and training of the health personnel in rural areas.

Educational programs, which should meet all these different aspects, have to take under consideration that the process of competence enhancement should be met locally. In fact, educational programs and the theory base can be delivered by distance education in off campus modules. This can be provided reasonably easy through e – learning programs or by videoconferencing. Depending on the local infrastructure and the users' knowledge of different methods of distant learning, one should use the programs available for the target

group for the educational program. Flexibility as well as the accessibility of the programs are important as the educational themes can change due to the specific local challenges (Norbye 2006).

There are many internet based programs and off campus modules covering different fields in the health sector. For the individual health worker it can be difficult to find a specific program that focuses on the needs of increased competence on a broader range. A substantial body of evidence shows clear benefits in targeting and coordinating programs of training and education (Rourke 2003, Wise 1994), which require close cooperation between educational institutions, employer and health professionals.

Educational programs in health care should provide both: an updated theory base as well as training of practical skills. Specialised practical skills need to be practiced and supervised or guided by someone experienced in the specific field. This will demand a need for either practical training in a hospital or in a unit elsewhere where a particular type of competence is taught. This exchange of experience and practical training can also establish useful networks that can be sustained after the actual period of training is completed. The National Framework for Service Change in NHS Scotland (2005) says that much of the evidence indicate that retention of skills is largely centre based and is not developed in settings where generic skills are used daily. Therefore it is necessary to create a "rural track" in mainstream education to expose health workers to the quality demands of remote and rural healthcare. In addition it might be helpful to make use of a multi-professional teams. Here, multi-professional cooperation is defined as a teamwork that aims towards a holistic approach to reach a common goal. This can be achieved by using different kinds of available competence. The quality of that cooperation is expected to be higher than if one would work independently without support of the team. The common goal in multi-professional cooperation can demand that the professionals solve the problems differently and across the normal boundaries of competence within each professional role (Bredland, Linge & Vik). Co-operational skills, flexibility and mutual respect are a base for a multi-professional teamwork (Norbye 2006).

The educational institutions in Norway and Scotland have for many years delivered programs that are more accessible for people in rural areas (Norbye 2006). In Norway there has been a focus on decentralised education for health professionals in colleges and universities (Norwegian Health Plan 2006). To ensure equality of education delivered and to provide

equal health services, the health educational institutions should be aware of the specific needs of rural areas. It is crucial to create appropriate training programs which will lead to the development of skilled and competent health professional. Those programs should be flexible, delivered locally and designed particularly for remote areas. Here, off campus study centres would play a significant role in knowledge distribution. This would increase accessibility to education for the students who otherwise would not be able to join more centralised form of studies (Norbye 2006).

Several small health centres in Northern Norway have already used video conference facilities (Norbye 2006). Existing infrastructure can be used in the future for ongoing knowledge delivery processes. Moreover it can maintain a sustainable base for the variety of the educational courses. It is expected that the educational programmes will enable all participants to transfer competence and knowledge between the hospital units and the health care units in the municipalities (Furu 2006).

Access to the Internet is available for many health professionals in rural areas allowing them to participate in e – learning programmes and virtual networks (Norbye 2006). Noteworthy is that video-conferences and Internet based programs should always provide information of how to use IT equipment. The educational training programmes should be user friendly, flexible and delivered locally to meet the need for recruitment and retention of local staff.

Conclusion

Changes in the health services and new roles for health professionals require upgrading skills and higher level of competence. The need for educating health personnel covers both: basic training and continuing education. Furthermore, since the rural municipalities have many different fields and subjects to cover, they should be encouraged to enhance employees' competence. It is important for educational institutions to cooperate with health workers, especially in remote areas, as it allows delivering suitable learning programs. This requires willingness from the educational institution to be flexible and positive towards new teaching methods as well as new types of courses specially designed for rural areas. Additionally, in

order to meet current challenges, which are associated with the ageing population, educational institutions should establish models of interdisciplinary educational on a local level.

As described in this project, rapid development of new technology can support networks creation which might be useful in knowledge exchange. This can be easily done for example by using e-conferences. As it has been presented, on-line education represents an accessible and efficient method of enabling rural health care professionals to develop their competences.

It can be summarised that sustainable systems which meet the constant need of the competence building require: on-line and distance education courses across the country, modules tailored for the challenges in the different areas, multidisciplinary teams that provide support, planning and adequate supervision, and practitioners who have flexibility and communication skills and the ability to work independently as well as part of a team.

The report defined competence itself and explored networking and new technology in competence enhancement. In addition it demonstrated example of networks within health and care service. Furthermore, it has identified educational challenges in knowledge and training delivery. Finally, there has been a strong focus on the need to provide programmes that are tailored for the challenges in the different areas in which the health personnel work. Organisational and pedagogical challenges have to be focused as well as the need for training programmes in how to use the technology.

References

ANRAC (1990) Nursing Competencies Assessment Project

Boerma, W. G. W., Groenewegen, P.P. and Van der Zee J (1998) General practice in urban and rural Europe: the range of curative services. *Social Science and Medicine*. 47(4), 445-453.

Bredland, E. L., Linge & Vik (1996) *It is about dignity. Ideology and practice in rehabilitation.* Universitetsforlaget AS, Oslo. NO.

Furu, R. (2006) *The importance of networking for multi professionals practising in rural areas.* Norwegian centre for telemedicine.

Gløtta, H. (2005) *Project description: Rehabilitation network of Midt-Troms.* The regional field of geriatric services for Midt-Troms, Finnsnes NO.

Heywood et al. (1992)

Lund, Ø. (2005) *Net based education within the specialities of educational services. What factors contribute to cooperation, reflection and learning in electronic conferences?* A Master`s degree in pedagogy. In depth study in the specialities of education. The faculty of social sciences. The University of Tromsoe, Norway NO.

Manley and Garbett 2000

NHS Scotland (2005) *Building a health service. Fit for the future.* A national framework for Service Change in the NHS in Scotland. Edinburgh Scottish Executive.

Norbye, B. (2006) *Educational challenges for continuing education in rural areas.* Tromsø University College.

Norwegian Ministry of Health and Care Services (2006) National Health Action Plan 2007 – 2010. Document out to Hearing, May 2006. NO.

Obstfelder, A. (2003) The Norwegian network of pathology. A tool for handling professional and social complexity. A system-theoretical analysis of needs, development and use of a telemedicine service. The institute for sociology. The faculty of social sciences. The University of Tromsoe, Norway NO.

Polanyi, M. (1966) *The Tacit Dimension*, London: Routledge & Kegan Paul.

Rourke, J.T., Incitti, F., Rourke, L.L. and Kennard, M. (2003) Keeping family physicians in rural practice. Solutions favoured by rural physicians and family medicine residents. *Canadian Family Physicians.* 2003(49), 1142-1149.

Wise, A.L., Hays, R.B., Adkins, P.B., Craig, M.L., Mahoney, M.D., Sheehan, M. (1994) Training for rural general practice. *Medical Journal of Australia.* 161(5), 314-318.

Woodruffe (1993)