

LEARNING/TEACHING

Centres for Clinical Education (CCE): Developing the Health Care Education of Tomorrow— A Preliminary Report

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ABSTRACT *A new interdisciplinary concept of medical and health care education has been introduced at Karolinska Institute in collaboration with the County Council in Stockholm under the motto Learning together to be able to work together. Centres of Clinical Education are built up in four major hospitals to promote meeting places during clinical education for students from different categories. During a three-year project more than 5000 students from four educational programmes have been involved—medicine, nursing, occupational therapy and physiotherapy. The project started in 1998 and will turn into regular activities in 2002. The Centres consist of three parts. First is the Clinical Training Ward, a ward without patients where manual skills as well as skills in communication are taught, practised and videotaped. Second is the Clinical Education Ward, a student-driven ward where students during two-week periods experience their own professional roles in day-to-day work and learn how to work together. Third is the Multidisciplinary Team, where teachers from the four programmes plan and provide opportunities for students to learn together. Opportunities to meet and learn together have promoted a wider understanding of each professional in health care teams among students and staff. The Centres of Clinical Education provide excellent opportunities to bridge professional borders and to coordinate undergraduate studies and clinical reality.*

KEYWORDS *Multiprofessional clinical education, Clinical Training Centre, Clinical Education Wards.*

The merger of the Karolinska Institute (KI) and the former Stockholm College of Health Sciences created the opportunity for an integrated approach to health care education in Stockholm. This process occurred during the years 1997 and

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1998 and made it possible to develop a new interdisciplinary concept of medical education which we have called "Centres of Clinical Education".

The project was established as collaboration between KI and Stockholm County Council including the four major hospitals in Stockholm. At each hospital a Clinical Centre was built up consisting of three parts: a Clinical Education Ward (CEW), a Clinical Training Centre (CTC), and a Multi-professional/Multidisciplinary Team consisting of the teaching staff for the four educational programmes involved: medicine, nursing, occupational therapy and physiotherapy. The staff consists of medical clinicians, teachers in nursing, occupational therapists and physiotherapists.

The project started in the autumn of 1998, and will run for 3 years.

Overall Aims of Centres of Clinical Education: Learning Together, Caring Together

The Centres are intended to create meeting places for learning and collaboration with the following aims:

- to bridge professional borders—aiming at an interdisciplinary view for teachers and students;
- to coordinate undergraduate studies and clinical reality—exploring the frontier between new knowledge and reliable experience;
- to combine education in in-patient and out-patient care and to foster better understanding of the interplay between these two forms of care; and
- to further integrate theoretical and practical knowledge—developing the ability to transform theory into practice and explaining clinical findings in terms of pre-clinical knowledge.

The Organisation

The project is managed by a central executive group, which has been commissioned by the Board of Education at Karolinska Institutet (KI). In each of the four hospitals there is a local project group, led by a supervisor, who is head of the local activities. Both KI and the hospital are represented in the local groups. The CCE supervisor reports directly to the hospital Chief Executive and to the Board of Education. Student representatives are invited to participate in each of the four local groups. When evaluating the project, feedback from students and other stakeholders was sought.

All existing educational facilities at the four hospitals (e.g. library, computer-rooms, lecture halls, group rooms, etc.) are available for the project, and all teachers/tutors are involved. Each Centre has a Clinical Education Ward and a Clinical Training Centre designed according to local facilities.

The pedagogic method suited for CCE is problem-oriented, since the students are presented with clinical and methodological problems that they must solve together (Barrows, 1980; Boud, 1991). A student-driven ward at the Health University of Linköping and a Clinical Skills Laboratory at Faculty of Medicine in Copenhagen was the inspiration in this choice of methods (Dahle *et al.*, 1997; Aspegren, 1999).

Three Cornerstones: A Clinical Education Ward, a Clinical Training Centre and a Multiprofessional Team

Clinical Education Wards (CEWs)

Clinical Education Wards, or student-driven wards, were established in the autumn of 1998 at three of the hospitals involved: Stockholm Söder Hospital, Huddinge Hospital and Danderyd Hospital. At Karolinska Hospital another organisational unit was chosen, where students meet patients in an Educational Open Clinic (Ericson *et al.*, 2001). CEWs are small orthopaedic care units with about eight beds. Students run them for 2-week periods from medical, nursing occupational therapy, and physiotherapy. Medical students practise at the CEW during their fourth year of studies, while the other student categories come to the facility during their third and last year. The idea is to learn together in order to be able to work together. The students practise teamwork using their collective knowledge to plan and give care to each individual patient. During daytime the students under the supervision of senior teachers drive the ward from each category, meaning that the students take the major responsibility for the care. After each working shift there is a time set for group reflection. Students are put into situations where they are required to collaborate across professional divides, while they at the same time develop their own professional roles (Kusoffsky *et al.*, 2001). The wards provide excellent opportunities to practise clinical skills as well as teamwork. Our belief is that these students will have gained valuable experience when facing real-life situations in their future professions.

Clinical Training Centres (CTCs)

CTCs are specially equipped facilities/former wards where manual skills can be practised, together with communication and collaboration. CTCs are meant to strengthen clinical skills training as one step in the learning process. Having access to these training facilities early in the educational programmes will help students to overcome some of the frustration of not being able to practise "hands on" activities as much as they feel they need and to be more confident and relaxed when meeting patients (Mogensen, 2000).

Regular practice in how to lift a patient, how to mobilise a recently operated patient and so on are important, common parts of the different

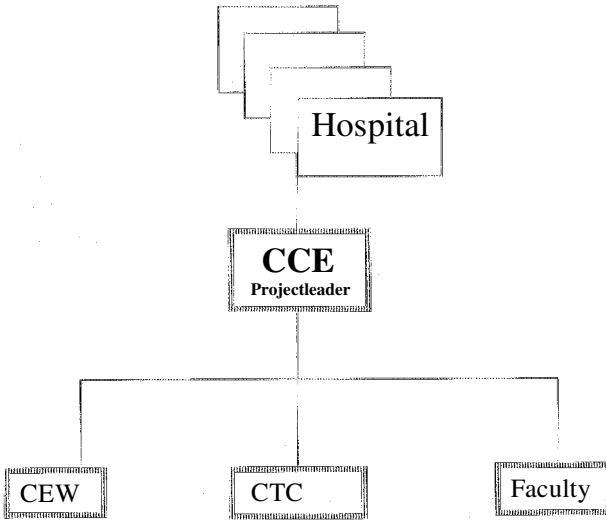


Figure 1. Local CCE organisation.

health care programmes and can preferably be performed in cooperation by students from different programmes. In the CTC students may also participate in role-playing in which they take either their own role, or that of someone from another profession. The role-playing is videotaped, and the subsequent review and discussion provides a valuable opportunity to learn from others and gain personal insights (Mogensen *et al.*, 2001).

There are also considerable advantages in visiting a CTC for already qualified staff. Here they can practise various activities in health care for which collaboration and communication over professional borders are crucial. An example of this is to practise and discuss the roles and skills necessary when working in an emergency unit.

Some of the CTC units have recruited students as assistants to the clinical teachers. These students support and teach others and make it possible to run the CTCs both in the evenings and at weekends.

Multiprofessional Teams

The multiprofessional/multidisciplinary teaching staff from four different health care education programmes comprises the third cornerstone in the project. These teachers provide the creative energy to drive CCE activities and function as role models for teamwork. Their task is to plan and implement various forms of joint teaching, common projects and lectures, and to ensure that resources are used in the best possible way. The staff consists of medical practitioners, occupational therapists, physiotherapists and teachers in nursing who meet on a regular basis. They identify and select

situations in which various professionals in health care depend heavily on each other.

Examples might include caring for trauma patients, postoperative care to avoid pain, thrombosis and wound infections, planning for home care and rehabilitation, informing patients and relatives in acute, severe situations and so on. Student groups from the different programmes take part in training seminars on these and other themes.

In order to organise and maintain a Multidisciplinary Team with committed teachers who contribute their creativity, certain conditions must be fulfilled. These include such matters as good facilities for meeting and working. In the future we anticipate that involvement in educational activities at the Clinical Centres will be considered an additional pedagogic experience for those who participate and should be rewarded by salary enhancements. In this way, the Centres may attract the most competent teachers/tutors. In the longer term it is important that the Multidisciplinary Team also includes teachers associated with other areas such as primary health care and geriatrics, to ensure that the educational programmes cover the complete chain of care.

The Clinical Centres are meeting places for faculty members, students and other personnel. Students from different programmes come to the CCE early in their education, and return to it regularly for various educational activities. Teachers meet to discuss and develop each programme and other personnel can meet to practise and develop important skills.

Evaluation

All activities in the project are subject to continuous evaluation. An overarching evaluation of the CCE project has recently been performed using several approaches.

Questionnaires

The students are asked to evaluate their 2-week placements at the CEW as well as each activity in the CTCs. A retrospective questionnaire is sent out to students who have passed the CEW units, where they are asked to answer questions about and reflect on their experiences.

Peer Review

A group of external experts from other universities has been invited to "inspect" and investigate the four CCEs including all activities. The four experts represent the different educational programmes involved: medicine, nursing, occupational therapy, and physiotherapy. They have visited each unit for a full day, meeting with students, faculty members and other personnel.

Interviews

A group of consultants, former experienced administrators in hospital and health care management, has conducted interviews with leading executives at the four hospitals.

Preliminary Results and Discussion

The experience after more than 3000 students have passed through CEW and after more than 10,000 visits at the CTC is very positive. For the first time students and teachers from the different educational programmes meet to share important knowledge and understanding of patient care. Many students have stated: "This has been the best 2 weeks of my whole programme".

The overall impression so far is that the Centres are very popular among students. One criticism presented early in the project was that too great an emphasis was placed on team building in the CEWs, at the expense of developing the professional role. As a result of this, the balance was shifted in favour of the latter, and satisfaction increased. An adjustment in favour of more individualised learning for each professional group has also been successful. In the beginning some students approached the CEW with a certain amount of scepticism. This was particularly pronounced among the medical students, who worried about their role within the team. The scepticism has decreased over time.

The CTCs seem to play an important role both in the process of manual skills training and in understanding the role of each professional in a team. At the CTC self-directed learning is enhanced.

One difficulty encountered in the Multidisciplinary Teams when planning seminars was in motivating teachers/tutors with this new concept of learning. Both faculty and students have had some difficulties to fit these seminars into their already fully booked timetables. However, over time, we have found that both teachers and students begin to realise the benefits of the interdisciplinary activities. It is the first time that most of the students really play the role of a professional.

The aims of the project have so far been fulfilled, except for one. We have not yet succeeded to involve education for out-patient care. This will be a challenge.

Cooperation has increased both among staff and among students. Collaboration between teachers from different programmes seems to set a model for students and is one of the most important outcomes of the project. Students tend to regard experiences as more relevant when they share them with personal and regular staff.

The Clinical Training Centres have contributed to a more effective utilisation of joint resources both regarding instructors and equipment. Self-directed learning can be applied and students often take own initiatives and

suggest themes they want to know more about. In some of the hospitals there is still a problem to find big enough localities. Collaborative situations for students from different programmes can be hard to organise when they practise in "ordinary" wards due to logistics.

In the CEWs, the focus is on students learning, and collaboration and teamwork is part of the agenda. One remaining problem to solve is that the CEWs tend to be more expensive.

The teachers in the Multidisciplinary Teams lack traditions in how to cooperate. They have problems finding time to meet, but learning from each other is pointed out as valuable experiences when promoting teamwork. In the future involvement in educational activities like this must be considered rewarding.

To conclude: the different activities in the CCE may help students to understand the important contribution of each professional in a team and to realise the complexity of providing health care. Working together may help staff to learn more about each other and about teamwork. Pros and cons are summarized in table 1.

Summary

The Centres for Clinical Education at Karolinska Institutet want to promote meeting places during clinical education for students from different

Table 1. Clinical education centres: an overview

	Pros	Cons
Centres for Clinical Education (CCEs)	Meeting places and resources for students and staff	Difficult to find good localities A new trend?
Clinical Education Wards (CEWs)	Students' learning in focus Teamwork and collaboration Relevant experiences Professional role Time for reflection	Cost? Logistic problems Stressful for ordinary staff Hard to find prof. role for med. stud.
Clinical Training Centres (CTCs)	Self-directed learning with possibilities to practise videotape activities in groups or individually Resources effectively utilised	Lack of localities
Multiprof. Team (MT)	Exchanging experiences Planning together New knowledge about other professionals	Time consuming No traditions to build on No rewarding merits

categories under the motto: "Learning together to be able to work together". The underlying idea has been that this will improve practice in health care.

Students and staff from for educational programmes are involved—medical, nursing, occupational therapy and physiotherapy.

Central aims are: to bridge professional boarders, to coordinate undergraduate studies and clinical reality, to combine education in in-patient and out-patient care and to further integrate theoretical and practical knowledge.

An executive group, commissioned by the Karolinska Institute and the County Council in Stockholm, has managed the project. Each of the Centres at the four teaching hospitals is monitored by a central board under the hospital director. The project started in 1998 and will hopefully turn into a regular facility at the beginning of 2002.

The CCE consists of three parts:

- the CTC: early in the education the student is introduced to this clinical ward without patients in which manual skills are taught and practised as well as skills in communication;
- the CEW: during a 2-week period in the end of their education students themselves run the ward in order to experience their own professional role in practical day-to-day work and learn how to work together; and
- the MT: teachers from the four programmes meet to plan and provide opportunities for the students to learn together.

An evaluation in three steps has been performed, suggesting that the project should be turned into a regular facility in 2002. This recommendation is now accepted by Karolinska Institutet and the County Council in Stockholm.

Acknowledgements

The authors are grateful to Gloria Dall'Alba and Gareth Morgan for linguistic advice.

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