REACCREDITATION EVALUATION
VISIT TO THE INSTITUTE FOR CLINICAL BIOMECHANICS,
FACULTY OF HEALTH SCIENCES,
SYDDANSK UNIVERSITET, ODENSE, DENMARK
10-12 March 2008

Evaluation Team Report

1. INTRODUCTION

1.1 The reaccreditation evaluation at the Institute for Clinical Biomechanics at Syddansk Universitet Odense, Denmark was agreed by the Commission on Accreditation of the ECCE in December 2007 upon receipt of the Self Study prepared by the Institute. Members of the evaluation team were nominated by the Executive and received the institute's Self Evaluation documentation prior to the visit.

1.2 The members of the Evaluation Team met in Odense on the evening of Sunday 09 March 2008 prior to the start of the visit. The evaluation team was composed as follows:
Dr Arvid Thorkeldsen (Chair)
Dr Vincenso Cascioli,
Dr Stefan Malmqvist
David Burtenshaw (UK), Executive Secretary ECCE,

The members of the ECCE team represented expertise in the basic sciences, the clinical experience, and administration. The members of the team were allocated specific sections of the report as their areas of responsibilities before arriving at Odense.

1.3 The University submitted the following documents to CoA and the evaluation team; Self-Evaluation Report (titled Self study report) 2007, Appendices Part 1 2007 and Appendices Part 2 2007 (Both appendices were written almost entirely in Danish by agreement with the CoA. Two members of the team were able to both speak and read Danish.)

In addition, some documentation was made available on request including Minutes of the Study Board, examples of student evaluations and undergraduate projects.

1.4 The team were slightly concerned that several academic staff who were due to meet with the team, cancelled at short notice. Given the advanced warning from ECCE to the institution and the fact that the timetable was agreed by all parties, it is regrettable that the evaluation team were unable to discuss matters at the designated times with a significant proportion of the full time staff.

1.5 The panel reported verbally to senior staff on its concluding draft of Strengths and Weaknesses (Section 12). It informed the Institute that a draft report would be sent to the

Institute for factual correction by April 2008. It invited the Institute to send representatives to the CoA meeting in Brussels on 02 May 2008 where the report would be discussed.

1.6 The sections of the report follow the headings of the Standards to which the Conclusions, Strengths and Weaknesses have been added at the end.

1.7 At the last evaluation visit in 2002 the team identified thirteen Strengths. The Weaknesses concerned the limited number of chiropractic staff involved in research, textbooks in the libraries, the poor documentation, an insufficient case mix in the clinical experience, the absence of nutrition in the curriculum and the lack of an epistemology course. There was one Concern; *The programmes dependence on the good offices of the full-time Director of Studies places a large burden on a single academic/administrator.* (Para 12.4.1 refers)

1.7 In 1995 the Danish Minister for Education gave Syddansk University, Odense permission and funding to establish the first three years of a five-year chiropractic curriculum. In 1997 this was followed by permission and funding to start the final two years of the five-year programme leading to a Candidate (Masters) degree in Clinical Biomechanics, and for qualifying graduates to commence the mandatory Danish chiropractic internship programme.

The bachelor's programme in Clinical Biomechanics at Syddansk Universitet, Odense, is a full-time three year undergraduate degree leading to a two year Masters degree programme, followed by a one-year full-time internship programme in order to obtain Danish licensure as a senior chiropractor.

2. AIMS AND OBJECTIVES

2.1 Statement of Aims and Objectives

The overall aim, structure and content of the chiropractic programme is outlined in broad terms by the government through legislation of 27 May 1993 in; 'Bekendtgorelse om uddannelser i klinisk biomekanik ved Odense Universitet.' The programme documentation for both the Bachelors and Masters in Clinical Biomechanics conforms to the directives set out in the legislation and clearly states the aims and objectives of both parts of the programme. In addition to this, extensive and detailed study guides are provided for each module. These provide more detailed staged learning outcomes specific to the module.

2.2 Participation in formulation of aims and objectives

The study board of the institute for clinical biomechanics is responsible for the content and delivery of the programme. This body includes student representatives from the

clinical biomechanics course, chiropractic faculty and biomedical faculty. The institute receives input from the profession through the national association, external examiners and numerous part-time teaching staff in private practice.

2.3 Academic autonomy

The institution is autonomous in the design and development of the curriculum in so far as it must conform to national legislation and university regulations. It must be assumed that national legislation and university regulations would always enable the aims and objectives of any programme of education to be achieved. The Dean of the Faculty of Health must approve any changes to the curriculum proposed by the Study Board for the clinical biomechanics programme. As the biomedical portion of the BSc curriculum is shared by students on the medical programme, the Study Board for the medical programme must be advised of any proposed changes and have input into the process. The Dean of the Faculty of Medicine must consider the wishes of both Study Boards before approving changes to the curriculum. The student population on the medical programme is much larger than that of the biomechanics programme (270 vs. 50 per year). It is likely that, given these circumstances, the ability of the two study boards to influence the direction and content of the biomedical curriculum may not be equal. It is possible that this is reflected in the students' perception that it is difficult to see the relevance of some of the material presented in the biomedical track. (Para 12.3.3 refers)

2.4 Educational outcomes

The institution clearly defines the exit competencies that must be achieved on graduation and these conform to the competencies listed in Part 2 of the ECCE 'Accreditation Procedures and Standards in Undergraduate Chiropractic Education and Training.' A revision of the MSc programme, planned to start in 2008, will attempt to link the postgraduate (pre-full-registration) internship more closely with the undergraduate education. The intention is to make the internship programme an integral part of the undergraduate programme and therefore mandatory for registration. The setting in which the competencies are achieved within the MSc part of the programme is not primarily that of a primary contact practitioner.

3. EDUCATIONAL PROGRAMME

3.1 Curriculum model and educational methods

The curriculum in the BSc is split into 3 tracks: Biomedicine (120 ECTS), Academia (30 ECTS) and Professionalisation (30 ECTS). Biomedicine employs a regional systems-based approach following a life-cycle from cradle to grave. Within each module the content is further divided into 4 levels: molecular and membrane, cell and tissue, organ and system, and individual and group. The Academic track focuses on research,

scientific theory and knowledge acquisition. The Professionalisation track is mainly concerned with practical clinical skills. The curriculum is delivered through lecture, small group tutorials and seminars, presentations and case-oriented problem-based learning. Practical skills are practised in practical skills laboratories. Contact time is kept to a maximum of 15 hours per week on average. The BSc programme was revised in 2006. At this time each semester was split into 2 modules of 8 to 10 weeks. The students are assessed after each module. The revision also added a professional track to the medical curriculum. This means that the medical and the clinical biomechanics programmes are equal in terms of ECTS points and workload. (Para 12.2.3 refers) The addition of a professional track to the medical programme has made it less convenient for students to transfer from the clinical biomechanics programme to the medical programme. This is because the professional tracks in each programme are not the same in terms of content.

3.2 Theory of chiropractic and the scientific method

The theory and principles of chiropractic are adequately taught and integrated into a multidisciplinary setting. A strong focus on research exists both within the department of clinical biomechanics and throughout the Syddansk Universitet, which is possible through the excellent support, resources and facilities provided by the University and the Danish government. The program aims to produce the "academic" chiropractor, able to engage in research, foster the ability to participate in the scientific development of chiropractic, keep up to date with evolving knowledge and critically evaluate information and engage in critical thinking. The undergraduate programme is a vertically integrated course taught in semesters. Chiropractic theory is delivered in the Professionalisation track which only comprises 16% of the undergraduate programme. Consequently the Director of Studies now provides further voluntary evening sessions to enhance the delivery of the chiropractic elements. Scientific methods are delivered through the Academic track. (Paras 12.2.1, 12.3.3 and 12.2.5 refer)

3.3 Basic Biomedical Sciences

Academic content in the biomedical sciences appears to be robust and relevant to a medical degree. However, many of the chiropractic students commented that they felt excluded as a group within the larger body of medical students during their early years of study, in particular semesters 1 to 4, and that the lectures and practical classes were directed specifically for the medical students. The examples the students used to support this view included: Cases or examples used in lectures or practical classes were specific to the medical students and that chiropractic case studies or examples were not used, lecturer responses to questions relating to the relevance of some lecture content suggesting that the chiropractic student need not worry about certain academic material,

and that guest lecturers were invited to speak during lecture time on topics of specific interest to the medical students without a similar opportunity available for the chiropractic students. The chiropractic students appreciated that in many cases a medical example was appropriate. However, they felt that some opportunities to include chiropractic were missed. This concept was reinforced by the view of at least one lecturing staff member in that he did not wish to know who were the chiropractic or medical students, but considered them all to be equal and treated the same. Therefore, it appears that the bulk of the early lecture content is delivered without consideration of the presence of chiropractic students, and seems to be geared specifically for the medical students sharing the classes. (Para 12.3.3 refers)

3.4 Behavioural and Social Sciences, Ethics and Jurisprudence

There are no specific modules that address these issues because they are embedded in the Academic and the Professional tracks. Staff indicated for example, that Ethics is delivered in Modules 3, 6 and 10. The staff concerned were of the opinion that some students needed more Communication Skills teaching.

3.5 Clinical Sciences and skills

Clinical chiropractic is principally taught by chiropractic staff and solely to the clinical biomechanics students. The clinical sciences are divided into intellectual/academic and practical skills and are taught by well qualified medical teaching staff. These skills are described using Bloom's taxonomy of educational objectives.

For the Professionalisation track three levels of competencies have been defined for academic/intellectual and practice skills. The clinical sciences on the bachelor include case-based problem solving in addition to the taught subjects. The intention is to foster students' clinical decision-making and management skills relevant for a chiropractor.

The clinical sciences described in the Master curriculum are only partly competence based in its current version and no levels are described. A major revision is planned for 2008 to align the structure of the BSc and the MSc curriculum, and this work is about to commence. The clinical sciences on the Master contain case-based problem solving and practice based learning (PBL) in addition to the taught subjects to foster clinical decision-making and management skills.

Apparently, there are no clinical input case presentations from field chiropractors into clinical subjects studied together with medical students. Since experienced medical doctors present cases, a situation as this may undermine the Clinical Biomechanics students' professional identity and thus trigger and strengthen an identity problem. (Para 12.3.3 refers)

Both the basic and the clinical sciences are taught together with students of medicine. There seems to be a limited scope to put these clinical subjects in a chiropractic perspective, and an example of this is the lack of experienced field chiropractors doing case presentations in relation to clinical subjects studied.

The students were of the opinion that studying alongside medical students will increase and stimulate multidisciplinary co-work and integration in their professional career. (Para 12.2.3 refers)

3.6 Clinical training

The clinical training takes place in form of different internships that are described in the curriculum for the Bachelors and the Masters program. The internships are named and classified from A to E. The first internship, A, covers observations and reflection at a private chiropractic practice, and then observation at medical and surgical departments in a hospital when they follow a patient through the whole care plan. At the same time they compile and present a portfolio about their observation. They also take part in the ward rounds.

The final internship is spread out over semesters 9 and 10 at Ringe multidisciplinary hospital (Back Centre Funen) and several other hospital units, as well as a 4 week rotation at a primary chiropractic practice. The students spend two full days per week at Ringe Clinic during semester 9 and 10. The Ringe Clinic specialises in patients demonstrating a chronic condition, rather than patients with an acute disorder. This results in chiropractic students not meeting patients with typical ailments one can expect in an average chiropractic practice. (Para 12.3.1 refers)

The visiting team is of the opinion that the case-mix has improved since last visit. In discussion with students it became evident that approximately 20% of the patients they see in the final two semesters are acute patients, and the remaining 80% chronic patients. New additions to the curriculum since last visit are that the subjects during the final year have expanded with electro-physiology, rheumatologic conditions, sports injuries, and pelvic lesions. This has considerably broadened the case-mix that the students are exposed to, e.g., in the sports injury clinic, the patients presenting with mostly acute conditions often seen in primary chiropractic practice. Thus the proportion of extremity lesions has increased considerably since 2002. Also, the referral routines to the Back Clinic have changed since last accreditation. The visitation time has thus been reduced from 6-8 weeks to 2 weeks. To fulfil the specific aims and objectives each student hands in a portfolio/logbook with documentation on the acquired clinical competencies.

Evaluation of competencies after graduation is performed through an electronic questionnaire half way through their post-graduate internship. Both students and supervisors are requested to respond. The questionnaire includes questions on satisfaction

with level of knowledge, level of skills, problem-solving capabilities, patient records, case presentations, communication skills, patient information skills, team working skills, evidence based practice, self-reflection and ethics.

There is a formal presentation of cases with the clinical team. However, the student is not required to include referenced material as apart of the case write up.

There is no clinical entrance examination, and the reason is a smooth transition from the Bachelor's program to Master's program. However, the students have to have passed all the Bachelor's examinations before they progress. Facilities, recordkeeping, work and learning environments of the clinic at Ringe are of highest standard, as well are the patient facilities.

Assessment of students' clinical competencies is on-going throughout semester 9 and 10. At the end of semester 10, students must pass an OSCE style clinic exit examination at which an external examiner is present. Student performance is constantly monitored throughout their daily activities and while meeting patients. Each new and follow-up patient encounter is monitored by individual supervisors and Ringe team members.

3.7 Curriculum structure, composition and duration

The structure, composition and duration of the program are generally adequate. However, as described above, the composition of much of the academic content does not seem to be delivered in a way that is specifically relevant to chiropractic student. Another issue exists with respect to the clinical training of the final year chiropractic students. The clinical treatment encounters by the semester 9 and 10 chiropractic students through Ringe, private practice, rheumatology, sports clinic and orthopaedic rotations appears to fall significantly short of the ECCE requirement of 400 treatment encounters. Although the pre-registration internship year addresses this deficit, it is currently not part of the academic requirement to graduate as a chiropractor from the USD. The pre-registration internship is however, a requirement to be able to practice in Denmark as an autonomous senior chiropractor. Without the pre-registration internship one is only allowed to practice as a junior chiropractor under the supervision of a registered senior chiropractor. The institute is currently in negotiations with stakeholders to bring the pre-registration internship formally into the chiropractic education. (Para 12.3.2 refers)

3.8 Programme management

The Study Board at the Faculty of Health is the regulatory body of the education and its content. It ensures the organization, realization and development of educational and teaching activities as outlined in the University Act.
Decisions made at the Study Board meetings (once a month) are implemented by the Director of Studies and through dedicated resources at the Secretariat of the Faculty of Health. The overall responsibility for the delivery of the BSc and MSc programmes lies

with the Director of Studies. The Study Board consists of an equal number of teachers and students with a maximum of 10 in all.
The Study Board makes decisions about minor changes to the curriculum and implements these via the Secretariat to the Faculty of Health. Major changes to the curriculum are initiated by the Director of Studies who files a request with the Dean of the Faculty of Health. Once approved the Unit for Educational Development produces a timetable for the implementation of changes which the Unit for Educational Development and the Study Board complete.

3.9 Linkage with subsequent stages of education and training, Chiropractic practice and the health care system

The Bachelor and Masters programmes prepare the students for their subsequent stage of training, the pre-registration internship year which is in a supervised clinical environment. Students on the year are monitored by clinicians and evaluation reports are sent to the University.

4. ASSESSMENT OF STUDENTS

4.1 Assessment methods

With the introduction of the revised Clinical Biomechanics programme the opportunity was grasped to change assessment methods. Essay style written assessments and oral examinations are being phased out in favour of a range of methods including OSCE examinations, portfolios, short structured, multiple choice questions and continuous assessment. The changes to the assessment methodology have been supported by the University's Unit for Educational Development. Assessment is now taking place at the end of each module in each of the tracks, a format that met with student approval.

Each track in the undergraduate programme has its own dominant method of assessment such as portfolios and formal examinations in the academic track, OSCE in the professional track.

The Masters programme has four elements of assessment which remain similar to the last evaluation visit and comprise OSCE testing of competences each semester. The dissertation, which can be either a project leading to a monograph or a biomedical article, is examined separately.

4.2 Relation between assessment and learning

Considerable care had been given to tailoring assessment to the learning process and the changes made have all been approved by the Study Board for Clinical Biomechanics. On the Masters programme in the clinic, the relationship is the traditional one for the discipline although it can be argued that the relatively low number of patient encounters

together with the nature of the patient mix at Ringe in particular, does result in a more restricted relationship between assessment and learning.

5 STUDENTS

5.1 Admission policies and selection

High standards are required to enter the chiropractic programme, and criteria and methods of selecting students onto the program are robust.

The admission system is changing this year and a new system is being introduced. Discussion focused on the new system. In 2008 the number of places on the undergraduate programme will rise from 50 to 65. The new admissions system involves a complicated process which is intended to address the issues of recruiting the most motivated students and those who are certain that they wish to progress to study chiropractic rather than medicine. All applicants (the current number is approximately 160 for 50 places) will take an admission test (GAMSAT or similar). The top 33 will be accepted for the programme and the remainder will be invited to participate in a series of Mini Interviews (MMI) which will consist of an OSCE format set of 5 content domains, and the 32 with the highest average scores will be accepted. The whole process is part of a staff research project concerning admissions which hopes to improve the quality of and retention among the cohort. The evaluation team were slightly concerned that the process will tie up staff and take them away from the teaching function for a significant period of time in order to carry**.**

5.2 Student intake

Currently 50 students are accepted onto Clinical Biomechanics and the Institute intends to recruit 65 students commencing in September 2008. The numbers are government regulated. The Institute is resourced for 50 students although the staff resource is limited for the number proposed by the Ministry. (Para 12.4.1 refers) The number of students progressing to the Masters programme is smaller due to attrition and transfers to the medical programme. The Institute has begun to tackle the issue of transfers. Less attention has been paid to attrition because it is partly explained by students falling behind with their modules.

5.3 Student support and counselling

At the University level there is a student counselling centre besides chaplains and a Special Pedagogical Support Unit for students with permanent physical or psychological conditions. All the University provision depends on students self-identifying their problems. However, changes have been made which ensure that students whose studies are falling behind are proactively offered counselling.

The University is to be commended for its policy of Student Counselling which is undertaken by students appointed by the University. These students, who are funded by both the state and the institute, are mentoring first year students in particular as they come to terms with the structure of the curriculum, and working and living within a university setting. The students are trained over two weekends and are paid for six hours work per week over a six month period. The team regarded this as a strength (Para12.2.4 refers). Student observers are used by the Study Board to assist in making representations on some issues.

There are good informal and formal links between the full-time staff and students. These are put under strain by the fact that there are so few full time staff (Para. 12.4.1 refers)

5.4 Student representation

Students are fully represented on all of the relevant decision making bodies. They comprise half of the members of the two Study Boards for the undergraduate and masters programmes. An inspection of the minutes of the Study Board for the undergraduate programme did reveal that they attended and participated in the decisions. In addition, students may attend Study Boards as Observers to make the case on behalf of students whose cases are being considered by the Board. The students themselves did state that they felt fully integrated into the work of the Board. There had been problems getting students to sit on the Study Board although this has been solved in 2007-8. Students are represented on all of the main decision making committees of the University although these are not necessarily clinical biomechanics or chiropractic students. In addition the University has developed an action plan which relates to quality assurance developments in the University. The only exception to student election to committees is the Advisory Committee where the students are appointed by the Dean upon the recommendation of the Director of Studies.

6 ACADEMIC and CLINICAL STAFF

6.1 Staff recruitment

Over recent years the complement of full time chiropractic staff delivering the undergraduate programme has declined so much so that the balance between chiropractors and non-chiropractors and between full and part time staff is a concern (Para 12.4.1 refers). The Institute and the Faculty are fully aware of this potential crisis and are attempting to recruit new staff from the graduating/ post internship cohorts, i.e. before they go into employment in hospitals or private practice. Graduates are recruited to undertake research and are used in the teaching function while doing their research. In this way the University hopes to build up its research profile and, as a consequence, increase its full time teaching complement.

The process of appointment is as follows. The Rector appoints an assessment committee for appointing professors. The committee consists of the chair and up to four members. The majority of the members must be external members, preferably from abroad. For other posts the Rector also appoints an assessment committee or nominates the experts to conduct an academic assessment of the applicants.

The assessment committee, or expert, decides whether the applicant possesses the academic qualifications stipulated in the job structure and fulfils the other academic and professional requirements stipulated in the advertisement. A non-prioritized, reasoned and written assessment of the applicant's academic qualifications is submitted to the Rector. In the event of differences of opinion between the members of the committee, this must be stipulated in the assessment. Only the chairperson and the committee members may participate in the work of the committee but the institution may appoint a secretary to the committee if necessary.

With only three full time chiropractic employees and 76 part time employees the Institute is not in a position to promote staff other than into "dead man's shoes". The Masters programme has a healthier proportion of chiropractors (75%) although no CVs or details were provided for the staff at Ringe. Of the part time staff only 8 have an email address at the University (Appendix 11.44) which suggests that their major commitments could well be elsewhere (Para 12.4.1 refers). The University IT Department has a policy of only opening e-mail accounts for VIP staff, not external lecturers.

6.2 Staff Promotion and Development

The University is expected to develop its staff in accordance with Danish law. There is a system of annual job appraisal interviews in place for staff whose main employment is at the University. The system appears to be very robust. The purpose of the job appraisal interview, held once per year, is to deepen knowledge about wishes and expectations in a broad sense, provide insight into the work situation, ensure competence development, provide overview of competence availability and requirements, management understanding and function.
There is no such scheme for the part time chiropractic staff that undertake a large part of the course delivery (Para 12.4.1 refers)

Promotion (see 6.1 above) policy was not investigated. However, the team were impressed by the attention given to staff development and particularly encouragement to bid for and complete research. Staff were also supported when they sought to improve their pedagogic skills (Para 12.2.2 refers)

7 EDUCATIONAL RESOURCES

7.1 Physical facilities

The university facilities used by students on the Clinical Biomechanics programme are the University Hospital of Odense, the University of Odense campus and the Backcentre Funen in Ringe. The facilities are well equipped and of a very high standard. Particular mention should be given to the extensive research facilities available to staff and students. (Para 12.2.2 refers)

7.2 Clinical training resources

The practical skills laboratory is light and airy with approximately 25 chiropractic tables. There are plans to increase the capacity of the room by removing an internal wall. Pending approval, the room will be extended by approximately 15 metres and thus increase the size by at least 50%. Plans are also underway to increase the number of offices by putting another floor onto a wing on the existing buildings. In 2009 the majority of activities that take place at the Backcentre Funen in Ringe will be moved to an existing hospital complex in Middelfart in west Funen. The distance to the university campus will increase but the facilities will be twice as big as those currently used in Ringe. Long-term plans include moving the University hospital to the University campus. Teams of health professionals including chiropractors, medical doctors, physiotherapists and nurses supervise the students in the 9th and 10th semesters at Backcentre Funen. This promotes inter-disciplinary co-operation and fosters a mutual respect between the health professions rarely seen in any other chiropractic programme. The future of the chiropractic profession and health care provision in general should benefit greatly from this approach. (Para 12.2.3 refers) Students at this level also spend time in a hospital rheumatology unit, a hospital orthopaedic unit and in private chiropractic practices. Backcentre Funen is a secondary care centre. The centre attracts in the region of 3000 new patients per year. Approximately half this number forms the new-patient base for students in the final two semesters. Given the number of students in the final two semesters, 25 at the time of the visit, the number of new patients is more than sufficient to enable students to reach the minimum 40 new patient visits. However, as a secondary care centre the vast majority of patients present with chronic low back pain having been referred from primary care practitioners in the local community. The students' clinical experience is therefore somewhat limited with respect to the case mix. Students have an opportunity to experience a broader case mix through their attendance at private chiropractic practices. However, the relatively short period of time allocated for this limits its impact on the overall student experience. The centre has also recently opened a sports clinic in an effort to broaden the student case mix. The focus here is mainly on extremity problems. The clinic staff anticipate that moving the clinic to Middelfart will increase patient numbers and broaden the case mix.

7.3 Information Technology

The University IT service is responsible for administrative development and change, facility management, harmonization of IT solutions, infrastructure, staff development, IT security, and student services. The University also has an e-learning strategy committee that manages an e-learning platform which is available for all taught subjects. All courses offered in the Bachelor and Masters programme have a corresponding e-learning course which is used to administer the course. Clinical information from scientific journals, including relevant chiropractic journals, and databases is much used by students and teachers. The University library has access to over 2500 journals and numerous databases for searching literature.

7.4 Educational expertise

Each Faculty in the University has its own Unit for Educational Development. The faculty unit has been closely involved in the revisions to the Clinical Biomechanics programme and will, presumably, become involved in the proposed revisions to the Masters programme.

One member of the small team of full-time staff has considerable educational expertise which has been brought to bear on the nature of the new assessment system and the proposed admissions system.

On the clinical biomechanics programme students do benefit from the wide range of non-chiropractor lecturers who bring their considerable expertise to bear on the programme. (Para 12.2.3 refers) In addition the use of teaching assistants to follow up the main lectures also brings the undergraduates in contact with research. The assistants are provided with pedagogical advice and assistance.

8. THE RELATIONSHIP BETWEEN TEACHING AND RESEARCH.

8.1 Research active staff

Staff at the University are expected to be research active and chiropractic is no exception to the University's drive to be research oriented. Consequently, research is actively pursued and integrated throughout both the undergraduate and masters courses. The faculty's research ethos together with the opportunities to work with Sports Scientists and medical experts in four separate institutes has the potential to attract a high calibre of staff. (Para 12.2.2 refers) At present full-time teachers with research excellence are few in number yet they still achieve a good balance of teaching and research, and share their knowledge and skills with the chiropractic students. This commitment to research activity is supported with good time provision for staff to conduct research. Research is supported by the excellent provision of resources and new technology. The Director of Research coordinates research strengths with the teaching programme. There are 12 research students and 4 PhD students who research and teach.

Research is primarily financed by the government although the search for private funding is of increasing importance. The outcome is that research funds are being sought more vigorously. Nevertheless the institute has had the luxury of companies coming to them unsolicited with offers of funds. The government monitors and ranks institutes' research.

When students propose either an undergraduate or a masters research project they must be aware of the ethical dimension to their work. Three staff deal with the initial approval request and, if they deem that there is no intervention the project is permitted to proceed. Besides ethical acceptability, the proposed research must be seen to be economically viable and with a workload not exceeding 15 ECTS points If, however, the research is ethically sensitive a form is taken to the local Ethics committee at the university hospital for approval. The latter course is expensive.

Research at the Bachelor level is a project based on reading articles and interpreting the literature. They are often given the project rather than asked to develop their own. The student has a contract with their project supervisor stipulating a set number of hours which has been obviously designed to make consulting time fair besides making supervision of 50 projects possible with so few staff contactable in the University.

The Masters dissertation is more actively scientific and students must pass their dissertation before they can obtain the qualification. The University also provides the opportunity for students to take one year out, usually between semesters 7 and 8, to engage in research full-time. (Para 12.2.2 refers)

9. PROGRAMME EVALUATION

9.1 Mechanisms for programme evaluation

The Study Board for Clinical Biomechanics is required by law to assure the quality of the programme. Evaluation comes from two primary sources; student evaluations supplemented by those of the lecturer, and external examiner evaluation. External Examiners are appointed by the government for a three year period. A copy of one external examiner report (in Danish) was made available to the team. External Examiners are the second markers. They make use of the generic mark scheme and can report on its utility.

Somewhat unconventionally, the Masters programme has e-evaluation of the postgraduate internship year i.e. after qualification. This is reported to the Study Board. The Self Evaluation document did not mention evaluation of the Masters programme although students did confirm that they are requested to complete evaluations.

External evaluation of the whole University is the responsibility of the Danish Evaluation Institute who audited the University in 2007.

9.2 Staff and student feedback

Student evaluations of each course in each track for each semester produce average about 50% returns (In the professional track it is between 70-85% whereas it is lower on the other two tracks). The lecturer concerned evaluates the responses and reports to the Study Board. The Study Board in turn considers the summative data and may request changes to a module. The students provided evidence of changes in courses that had resulted from Study Board consideration of evaluations.

The team noted that evaluation of the clinical experience on the bachelor programme was not taking place. The reasons for this are to do with the management of this activity by a small team of full-time staff. (Para 12.4.1 refers) A possible outcome of neglecting this early experience of clinical operations is that the student experience could be highly variable.

Evaluation of the clinical experience in semesters 9 and 10 takes place in accordance with university practice. Student progress in the clinic is discussed at a monthly meeting of the supervisors. Evaluation of the internship year has been noted above (Para 9.1).

9.3 Student cohort performance

The University has a detailed system for recording student performance and progression. The Study Board is responsible for performance data and progression. It produces copious statistics on progression which have been made available to the team as required in the 2007 Annual Monitoring Report (AMoR) to the ECCE.

The team were made aware that some students do fall behind for a variety of reasons and extend their studies on the undergraduate programme up to the limit of six years. In effect these students could be classified as part time as a consequence of either their actions or the decisions of the Study Board.

The data does note students leaving the programme but there was no specific data regarding the issue of students transferring to medicine which concerns both the full time staff and many students (Para.12.3.3).

9.4 Involvement of stakeholders

Programme evaluation involves all relevant departments within the University, academic staff, students, and professional bodies**.**

10. GOVERNANCE AND ADMINISTRATION

10.1 Governance

The Institute of Sports Science and Biomechanics is an integral part of the Faculty of Health Studies, one of the five faculties of the University. The University itself is governed according to Danish Law by a Board of Governors which is responsible to the Minister for Science, Technology and Innovation.

The Study Board for Clinical Biomechanics is responsible to the University for planning and assigning resources for teaching and developing the curriculum. The University meets the entire Standard for Governance.

10.2 Academic leadership

The team met with the Dean of the Faculty of Health Studies who has led the Faculty for 20 years. He is responsible for an optimal connection between education, research, educational quality, quality of teaching and quality assurance.
The Dean has enabled chiropractic to develop because it fills the void left as medical science gave up studying the musculoskeletal system and movement. The Dean placed great emphasis on the Faculty as a research-driven body of scholars of which the chiropractors are a small component. (Para 12.2.1 refers) The Faculty office manages political relations with the University and beyond. It is also the location for: the Unit for Educational Development; the Unit for Communication; the Faculty web site and the IT unit; the Education and Quality Unit, which oversees quality assurance, pedagogical activities, guidance counselling and correspondence; and the Research and Economy Unit that supports PhD study, the management of budget and accounting, and employee administration.

The Dean appointed the Director of Studies on the recommendation of the Study Board in 2007. It was obvious to the team that this appointment had resulted in a reinvigoration of chiropractic and the undergraduate Clinical Biomechanics programme. The Director of Studies has already turned his attention to the Masters programme which needed revision following on from the revised undergraduate curriculum. The Research Director with support from the Director of Studies, is responsible for the research effort of the staff. The leadership provided by the Director is excellent and it has inspired both staff and students alike. The evening sessions that he has organized has enabled the students to acquire a chiropractic identity. (Para 12.2.5 refers) On the other hand there is a danger that his leadership is compromised by the fact that he is managing a large number of part time staff which in one context he described as a logistical nightmare. Managing 76 part time staff and a broader range of part time clinic experience managers is not compatible with the administrative, research and pedagogic demands placed on the Director. At present the Director is able to perform all of these tasks with efficiency and good humour. However, the University should be made aware of its reliance on a single person in the event of unforeseen circumstances. (Para 12.4.1 refers)

10.3 Educational budget and resource allocation

The internal budgeting of the Faculty runs as a dialogue between the Dean and the Head of Department of the Institute. The dialogue is based on the budget model of the Faculty, the earnings of the Faculty, the budgetary statement from the Faculty of Health. In addition the Faculty of Health Science conducts status meetings for each education. The purpose is to secure a realistic budgetary framework through agreement between the Dean and the Director of Studies when deciding on educational strategy, goals, and plans of action. The budgetary framework for the education in Clinical Biomechanics is closely matched with the curriculum. Developing and updating the content of the curriculum involves continuous budgetary adjustments which occur as an interplay between the above mentioned processes.

10.4 Administrative and technical staff and management

The management structure of the University was clearly outlined in the Self Evaluation document. The Dean of the Faculty of Health Science appoints the Heads of Departments and Directors of Studies and manages a set of administrative units that back up the faculty's activities. The lines of responsibility are clear and the institute is fortunate in having a highly respected Dean managing its affairs. (Para 12.2.1 refers) The administrative and technical staff of the faculty are centrally managed and are appropriate for the support of the institution's implementation of the chiropractic program.

10.5 Interaction with professional sector

The evaluation documentation refers to an Advisory Committee that is required by law. Its function is to link the academic community to society beyond the University. The committee is appointed and not elected. Members of the Danish Chiropractic Association (DCA), along with other stakeholders, sit on the committee.

The very nature of the Clinical Biomechanics course also ensures that the chiropractic students and staff are brought into contact with professionals in many fields of health care both in hospital settings and in private practice. (Para 12.2.3 refers)

11. CONTINUOUS RENEWAL AND IMPROVEMENT

Currently, a revised Clinical Biomechanics undergraduate programme is being introduced. The changeover commenced in 2006 and at the time of the evaluation visit, had reached Module 8 (Semester 4). The intention is to reduce the student workload on the Chiropractic pathway so that it is comparable with that on the medical pathway. Nevertheless, it was clear that the medical pathway still dominates the programme and still leads to an identity crisis for chiropractic students. (Para 12.3.3 refers) As a consequence of the revisions to the undergraduate programme, the Course Director has

become aware of the need to revise the MSc programme and work has commenced on the revision.

12 SUMMARY and CONCLUSIONS

12.1 STRENGTHS AND WEAKNESSES AND CONCERNS

For the purposes of this report the evaluation team adopted the following definitions from the Standards;

Strengths – Areas that meet or exceed the *Standards* and (are worthy of specific recognition.

Weaknesses – Areas requiring specific attention and action by an institution.

Concerns – Areas of substantial weakness/concern as to jeopardise the *Accreditation* of an institution that require specific attention and action by the institution *as a matter of urgency.*

12.2 STRENGTHS

12.2.1 The leadership provided by the Dean, and the Director of Study who has raised the profile of Chiropractic within the Institute and the University, and provided a vision for the future of chiropractic in Denmark (Paras 3.2, 10.1 and 10.4 refer).

12.2.2 The research ethos which underpins the educational model of the Institute and results in high quality research informing the learning experience and academic aspirations of the students. (Paras 6.2, 7.1 and 8.1 refer)

12.2.3 The interdisciplinary links with other medical sciences throughout the programme that will foster integration of chiropractic within the wider health care community. (Para 2.3, 3.1, 3.5, 7.2, 7.4 and 10.5 refer)

12.2.4 The supportive role provided by student mentors/counsellors in the early semesters together with the support provided by student observers in the Study Board. (Para 5.3 refers**)**

12.2.5 The introduction of themed intra-curricular activities to strengthen chiropractic identity within the Clinical Biomechanics programme (Para 3.2 and 10.3 refer).

12.3 WEAKNESSES

12.3.1 The patient mix in semesters 9 and 10 may not provide a representative sample of patients encountered in a primary contact chiropractic setting. (Para 3.6 refers)

12.3.2 The continuing challenge for the University to meet the Standard on Clinical Training of 400 treatment (patient) visits which is only ameliorated by the treatments that occur during the pre-registration internship. (Para 3.7 refers)

12.3.3 The Biomedical track as currently delivered, appears to be weighted in such a way that Clinical Biomechanics students have difficulty relating the material to Chiropractic (Paras 3.2, 3.3, 3.5, 9.3 and 11 refer).

12.4 CONCERNS

12.4.1 The extended use of part time staff may make it difficult to ensure the quality of the student learning experience and may place an unnecessary administrative burden on the full time staff (Paras 1.7, 5.2, 5.3, 6.1, 9.2, 10.2, 10.5 refer).

Post approval note. *Full-Time staff include those who are employed by the University and who may have administrative and research responsibilities in addition to teaching.*