



U.S. Department of Education



Staff Analysis
of the
Standards Used by

Sweden

for the Evaluation of Medical Schools

September 15, 2000



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Background

At its September 1996 meeting, the National Committee on Foreign Medical Education and Accreditation (NCFMEA) determined that Sweden's standards for the evaluation of its medical schools were not comparable to those used in the United States. This determination was based solely on the fact that Sweden had not submitted any information about its standards.

In 1999, Sweden submitted an answer to the Department's questionnaire along with some other information about higher education in Sweden. Based on the NCFMEA's review of the information provided by the country at the September 1999 NCFMEA meeting, the Committee decided to vacate its prior determination of non-comparability until its March 2000 meeting. In making this decision, the Committee requested that Sweden provide additional information for the Committee's use at the March 2000 meeting. The specific information the NCFMEA requested was the following:

- (1) An English copy of the standards Sweden uses to evaluate its medical schools;
- (2) A description of the processes Sweden uses to apply its standards when conducting on-site visits and in making accreditation decisions on medical schools;
- (3) A copy of Sweden's accreditation agency's policy as to the frequency of reaccreditation visits; and
- (4) Any information not previously submitted that is pertinent to the Committee's revised guidelines, which were adopted at the September 1999 meeting.

Sweden submitted some additional information in January 2000. However, the additional information did not address all of the issues raised by the Committee. After discussing the issues with the Swedish representative at the March 2000 meeting, the NCFMEA decided to defer a decision on the comparability of Sweden's standards and processes for the accreditation approval of medical schools until the Committee's Fall

2000 meeting. In August 2000, the Chair and Executive Director of the NCFMEA traveled to Sweden to meet with Swedish officials about that country's standards and processes for evaluating medical schools. The information obtained during that visit is incorporated into the staff analysis that follows.

Introduction: An Overview of Higher Education in Sweden

Historically, postsecondary education in Sweden contained a strong element of national planning and regulations. The aims and length, as well as the location and financing, of most study programs were laid down by Parliament. Until 1989, the central government also established the curricula for all the general study programs.

In 1991, a major reform was initiated, aimed at deregulating the higher education system, thereby giving greater autonomy to each institution of higher education and a wider scope of individual choice to students. Although these reforms have produced many changes, including the desired greater autonomy for institutions and greater choice for students, Parliament and government are still fundamentally responsible for higher education in Sweden. Almost all higher education institutions fall under the responsibility of the Ministry of Education and Science. The one exception is the University of Agricultural Sciences, which operates under the jurisdiction of the Ministry of Agriculture. Most of the higher education institutions in Sweden are actually run by the central government, and the employees of the universities and university colleges are national civil servants.

The Swedish Law on Higher Education and the Higher Education Ordinance regulate all of Sweden's universities, including the medical schools. The Higher Education Ordinance has an annex, the Degree Ordinance, whereby the government regulates the degrees and qualifications in the higher education system. The medical qualification is a degree protected by law.

While the government decides which types of degrees and qualifications may be awarded, the National Agency for Higher Education (the "Agency"), an autonomous body under the Ministry of Education and Science, decides which institutions will be given the right to award these degrees. The right to award a degree is not granted to an institution for all time. Rather, the Agency conducts "quality audits" of all institutions on a regular basis to determine if they should retain the right to award degrees. In 1996, for example, the Agency conducted a comprehensive review of medical education in Sweden.

In April 2000, the Swedish Parliament enacted legislation requiring the Agency to perform "recurrent evaluations of all academic subjects and programmes in universities and colleges, starting in 2001. These evaluations should take place every six years and include all programmes leading to general degrees or vocational degrees as well as research training. They should also take into account the right to award degrees."

Funding for the central government-operated higher education institutions in Sweden is based on an allocations system. The fundamental principle of this system is that appropriations to individual institutions are made on the basis of the results achieved by the institution. About 60 percent of the government grant to an institution is related to the number of credit points earned by students "[presumably for their successful completion of their program of study] and about 40 percent is related to the number of full-time-equivalent students at the institution.

Medical education in Sweden is provided at six central government-operated institutions of higher education, five of which are universities, the other a specialized institution of higher education and research. These six institutions are:

University of Uppsala
University of Lund
University of Goteborg
University of Umea
University of Linkoping
The Karolinska Institute

Summary of Findings

Based on the information provided by Sweden in written documents as well as the information gathered during a site visit to Sweden, Department staff concludes that the system used by Sweden to accredit medical schools has some aspects that are comparable to the system used in the United States. However, the system also has some features that are different from those used in the US. Most notably, in certain areas (such as curriculum) the Swedish system does not have formal standards that all medical schools must meet. Rather, the government establishes certain broad educational goals for the M.D. program and permits schools flexibility in setting the methods to be used to achieve those goals.

It should be noted that Sweden has developed very detailed competencies that must be met by an individual who wishes to be licensed to practice medicine in Sweden. These competencies provide the framework for the skills and knowledge that must be taught during the five and one-half years of undergraduate medical studies plus the one and one-half years of clinical pre-licensure internship. These competencies also provide the framework for the National Agency for Higher Education to determine if each medical school is in fact meeting the government-established educational goals for the M.D. program.

Staff Analysis

The National Committee on Foreign Medical Education and Accreditation is charged with determining whether the standards of accreditation used by a foreign country to

accredit medical schools offering programs leading to the M.D. (or equivalent) degree are comparable to standards of accreditation applied to M.D. programs in the United States.

In making this determination, the Committee uses the following guidelines which it has determined provide an appropriate framework for the thorough evaluation of medical schools offering programs leading to the M.D. (or equivalent) degree. In general, these guidelines are similar to, and based upon, the standards used by the Liaison Committee on Medical Education (LCME) to accredit medical schools in the United States. The Committee wishes to make it clear, however, that these are in fact guidelines and that a foreign country's standards and evaluation processes can differ substantially from these guidelines and the LCME standards and still be determined to be comparable to the standards used in the United States, provided the foreign country can demonstrate that its standards and processes are effective alternatives to those used in the United States.

These guidelines were adopted by the National Committee on Foreign Medical Education and Accreditation at its September 15, 1999 meeting and became effective at the conclusion of that meeting.

PART 1: The Entity Responsible for the Accreditation/Approval of Medical Schools

There should be a clearly designated body responsible for evaluating the quality of medical education in the foreign country, and that body should have clear authority to accredit/approve medical schools in the country that offer educational programs leading to the M.D. (or equivalent) degree.

The National Agency for Higher Education, an autonomous body under the Ministry of Education and Science, is charged with monitoring, evaluating, and promoting postsecondary education in Sweden. The charter for the Agency, which was issued by the Swedish government in 1995, states that the Agency is the central authority for questions regarding public universities and colleges, as well as private higher education institutions that receive state support or have been given the right to award degrees. As mentioned in the introduction, the Swedish government has conferred upon the Agency the authority to decide on the right of specific universities and institutions of higher education to award degrees. In April 2000, the government also charged the Agency with conducting regular evaluations every six years of all subjects and study programs offered by Swedish universities and institutions of higher education.

Documentation:

Letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education

PART II: Accreditation/Approval Standards

The entity within the foreign country that is responsible for evaluating the quality of medical education in the country and has authority to accredit/approve medical schools should have standards comparable to the following:

1. Mission and Objectives

(a) The educational mission of the medical school must serve the general public interest, and its educational objectives must support the mission. The medical school's educational program must be appropriate in light of the mission and objectives of the school.

(b) An essential objective of a program of medical education leading to the M.D. (or equivalent) degree must be to prepare graduates to enter and complete graduate medical education, qualify for licensure, provide competent medical care, and have the educational background necessary for continued learning.

Sweden has stated in its response to the questionnaire that there is a requirement that the educational mission of the medical school must serve the public interest.

Sweden has also stated that the operations of the institutions of higher education in Sweden, including the medical faculties, are regulated by the Swedish Law on Higher Education and the Higher Education Ordinance, which states the educational goals for all major programs like medicine, engineering, etc. The Degree Ordinance, the annex to the Higher Education Ordinance, establishes the following educational goals for medical education:

"In order to get the medical qualification students must:

- Acquire knowledge and skills necessary for the medical profession and for subsequent clinical training which is the precondition for registration.
- Acquire knowledge about those conditions in society which affect the health of men and women in order to be able to work with prevention of disease.
- Develop the knowledge of oneself as well as an ability for empathy and an ethical and holistic view of man, thereby developing also an ability to establish good relations with patients and persons in close proximity with them.

- Acquire knowledge about the organization and the economy of the health care system which is of importance for all doctors as well as the skills for teamwork and cooperation with all professional groups."

Another important goal is that the medical trainings should be "of sufficient basis for the subsequent 18-month pre-registration (or pre-licensure) period as a house officer."

Documentation:

Sweden's response to the questionnaire

Letter dated June 22, 1999 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Ms. Bonnie LeBold, U.S. Department of Education
Annex 7, Degree Ordinance on Medical Qualifications, excerpts of which are provided in the letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education

2.. Governance

- (a) The medical school must be legally authorized to provide a program of medical education in the country in which it is located,

Sweden has stated in its response to the questionnaire that its medical schools must have legal authorization to provide medical education.

Sweden has also stated that the Swedish Law on Higher Education gives the government the right to decide which types of degrees and qualifications may be awarded, and the charter for the National Agency for Higher Education gives the Agency the authority to determine which institutions will be given the right to award these degrees. Thus, all institutions of higher education that provide medical education must be legally authorized by the government to do so.

Documentation:

Sweden's response to the questionnaire

Annex 1, Swedish Law on Higher Education, excerpts of which are provided in the letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein; U.S. Department of Education
Annex 2, Charter for the National Agency for Higher Education, excerpts of which are provided in the letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education

- (b) There must be an appropriate accountability of the management of the medical school to an ultimate responsible authority external to and independent of the school's administration. This external authority must

have sufficient understanding of the medical program to develop policies in the interest of both the medical school and the public.

Each university or Institution of higher education is managed by a governing board, which has the overall responsibility for all operations within the institution, e.g., financial administration and planning, personnel matters, etc. The Vice-Chancellor, who is appointed by the government on the basis of proposals from the Board for a period of not more than six years, is the Chairman of the Board and at the same time the senior manager of the university or Institution of higher education and its principal representative. The Board consists of 14 members, the majority of whom are appointed by the government. Appointment is for a period of not more than three years.

Other information provided by Sweden on the issue of the governance of its universities and Institutions of higher education included the following statements:

"Higher Education Institutions are accountable to a number of public authorities like the National Agency for Higher Education, The National Audit Board and, ultimately, to the Swedish Government."

"All institutions are under the supervision of the National Agency for Higher Education, an autonomous body under the Ministry of Education, charged with the task of monitoring, evaluating and promoting the post-secondary education of the country."

As the central government in Sweden controls much of higher education, including medical education, and there are linkages between the Ministry of Education and Science, which controls higher education, and the Ministry of Health and Social Services, which administers the Health and Medical Services Act of 1982, it would appear that there is a adequate responsible authority external to and independent of the school's administration that has sufficient understanding of health and medical education to develop policies in the interest of both medical schools and the public.

Documentation:

Sweden's response to the questionnaire
Booklet entitled "Higher Education in Sweden"
Letter dated June 22, 1999 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Ms. Bonnie LeBold, U.S. Department of Education

3. Administration

(a) The administration of the medical school must be effective and appropriate in light of the school's mission and objectives.

(i) There must be sufficient administrative personnel to ensure the effective administration of admissions, student affairs, academic

affairs, hospital and other health facility relationships, business and planning, and the other administrative functions that the medical school performs.

(II) The chief academic officer of the medical school must have sufficient authority provided by the institution to administer the educational program. That individual must also have ready access to the university president or other university official charged with final responsibility for the school, and to other university officials as are necessary to fulfill the responsibilities of the chief academic officer's office.

(III) In affiliated institutions, the medical school's department heads and senior clinical faculty members must have authority consistent with their responsibility for the instruction of students.

Sweden has stated that medical schools are normally part of a university and that the president of a university must have a Ph.D. degree and is usually a professor. Sweden has also stated the following:

"To a great extent universities and institutions of higher education determine their own internal organization. The Higher Education Act and the Higher Education Ordinance provide guidelines with respect to the organization of management and certain decision-making bodies."

The booklet, *Higher Education in Sweden*, states that except for certain rules related to faculty boards and the rules previously discussed under Governance for governing boards, universities and institutions of higher education may decide for themselves how they are to be organized. However, the government enters into a three-year contract with each school about resources, including resources for personnel, and the Agency can remove a school's right to offer a degree for poor performance/poor quality.

Documentation:

Sweden's response to the questionnaire

Booklet entitled "Higher Education in Sweden"

Letter dated June 22, 1999 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Ms. Bonnie LeBold, U.S. Department of Education

(b) The chief academic official of the medical school must be qualified by education and experience to provide leadership in medical education.

According to Sweden, the Dean of a medical school must have a Ph.D. degree and is usually a professor.

Documentation:

Sweden's response to the questionnaire

(c) The medical school may determine the administrative structure that best suits its mission and objectives, but that structure must ensure that the faculty is appropriately involved in decisions related to-

(i) Admissions;

(ii) Hiring, retention, promotion, and discipline of faculty; and

(iii) All phases of the curriculum, including the clinical education portion;

As previously mentioned, the booklet, Higher Education in Sweden, states that there are certain rules for faculty boards. All universities and institutions of higher education with a faculty organization (such as a medical school) are obliged to have faculty boards with responsibility for research and postgraduate training. The teachers are always to have a majority in the special bodies that make decisions relating to issues of research and educational content. Students have the right to appoint two representatives to the faculty board and to other decision-making bodies that deal with issues of teaching and educational content.

In its response to the questionnaire, Sweden provided the following additional information about faculty:

"As from the academic year 1993/94, each university and university college is entitled to decide on the establishment of chairs and the appointment of staff. The categories of teaching posts that may be established are, however, regulated in the Higher Education Ordinance."

"The academic staff are grouped into the following main categories: professors, senior lecturers, lecturers and research assistants. Professors have some teaching commitments but are mainly engaged in research and post-graduate supervision. To qualify for a senior lecturer, a person must have a doctorate and be active in both research and teaching. Teaching proficiency displayed in undergraduate teaching is also a criterion for professional appointment. Especially deserving senior lecturers can be promoted to the rank of assistant professor or full professor."

During briefings for the NCFMEA Chair and Executive Director, officials from the Karolinska Institute described the critical role that faculty play in curriculum development and evaluation. Faculty members also have an integral role in admissions, spending a significant amount of time conducting interviews with prospective students.

Documentation:

Sweden's response to the questionnaire

Booklet entitled "Higher Education In Sweden"

Briefing by officials of the Karolinska Institute on August 29, 2000, at the university's campus in Stockholm, Sweden

(d) If some components of the educational program are conducted at sites that are geographically separated from the main campus of the medical school, the school must have appropriate mechanisms in place to ensure that-

(I) The educational experiences at all geographically separated sites are comparable in quality to those at the main campus; and

(II) There is consistency in student evaluations at all sites.

The institution is responsible for setting up mechanisms to ensure consistent quality of educational instruction and student evaluations at all geographically separated sites

Documentation:

Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

Briefing by officials of the Karolinska Institute on August 29, 2000, at the university's administrative offices in Stockholm, Sweden

4. Educational Program

{a) *Duration:* The program of education leading to the M.D. (or equivalent) degree must include at least 130 weeks of instruction, scheduled over a minimum of four calendar years.

Sweden has stated in its response to the questionnaire that the minimum length required for an educational program is five and one-half years.

Sweden's Degree Ordinance establishes the length of the medical training as follows:

"The medical qualification includes courses comprising 220 credit points (220 weeks or 5.5 years.)"

Documentation:

Sweden's response to the questionnaire

Letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education

(b) *Curricular Content*: The medical school's curriculum must provide students with general professional education, i.e. the knowledge and skills necessary to become a qualified physician. At a minimum, the curriculum must provide education in the following:

(i) The sciences basic to medicine, including-

(A) The contemporary content of those expanded disciplines that have traditionally been entitled anatomy, biochemistry, physiology, microbiology and immunology, pathology, pharmacology and therapeutics, and preventive medicine; and

(B) Laboratory or other practical exercises that facilitate the ability to make accurate quantitative observations of biomedical phenomena and critical analyses of data.

Sweden has stated in its response to the questionnaire that the curriculum of a medical school is required to provide education in the sciences basic to medicine. The required basic sciences are anatomy, histology, cell biology, physiology, microbiology, pathology, and pharmacology.

Documentation:

Sweden's response to the questionnaire

(ii) A variety of clinical subjects, including at least the core subjects of internal medicine, obstetrics and gynecology, pediatrics, surgery, and psychiatry and, preferably, family medicine.

Note 1: Medical schools that do not require clinical experience in one or another of the above disciplines must ensure that their students possess the knowledge and clinical abilities to enter any field of graduate medical education.

Note 2: Clinical instruction must cover all organ systems and include aspects of acute, chronic, continuing, preventive, and rehabilitative care.

Note 3: The medical school's program of clinical instruction must be designed to equip students with the knowledge, skills, attitudes, and behaviors necessary for further training in the practice of medicine.

Note 4: Instruction and experience in patient care must be provided in both ambulatory and hospital settings.

Note 5: Each required clinical clerkship (or equivalent) must allow the student to undertake thorough study of a series of selected patients having the major and common types of disease problems represented in the clerkship.

Sweden has stated in its response to the questionnaire that the clinical portion of the curriculum is required to provide education in a variety of clinical subjects. The required clinical subjects and the time devoted to each is as follows:

- internal medicine-24 weeks
- Dermatology/Venerology-4 weeks
- Infectious diseases-5 weeks
- Forensic medicine-1 week
- Surgery, Including Emergency Medicine and Rehabilitation Medicine-20 weeks
- Ophthalmology/Otorhinolaryngology-6 weeks
- Psychiatry-7 weeks
- Drug dependence-2 weeks
- Neurology-5 weeks
- Obstetrics and Gynecology-9 weeks
- Clinical genetics-1 week
- Pediatrics-10 weeks
- Community Health Science Medicine-6 weeks
- Geriatrics-2 weeks
- Family Medicine-2 weeks
- Oncology-2 weeks

Clinical assignments consist of 20-25 hours per week for all clinical subjects, and the length of a clinical rotation varies from 1 to 25 weeks, depending on the clinical subject.

With regard to the types of medical facilities that may provide the clinical rotation, Sweden requires "an affiliation to an academic department." As to the requirements for supervision of medical students during their clinical experience, Sweden has provided the following response:

"At each department there is one responsible physician with a MD or PhD degree."

Sweden did provide some information related to the competencies a medical student is expected to have achieved by the end of the "clinical pre-registration" period, the 18 month period that follows completion of the 22.0-week program of medical education. The documentation the country provided indicates that these competencies are set in the regulations issued in March 1999 by the National Board of Health. Students are tested for these competencies at the end of the clinical pre-registration period by means of a national exam administered by the National Board of Health. Although this

examination is independent of the medical schools, the results of these tests are taken into account in the evaluation of the schools.

In other information Sweden provided, there is a statement that another important goal is that the medical trainings should be "of sufficient basis for the subsequent 18-month pre-registration (or pre-licensure) period as a house officer." A representative of Karolinska Institute, in describing the medical education program at that medical school, said the goal of the program is to provide students with the knowledge and skills needed for the clinical pre-registration period.

Documentation:

Sweden's response to the questionnaire

Letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education

Briefing by officials of the Karolinska Institute on August 29, 2000, at the university's administrative offices in Stockholm, Sweden

(iii) Disciplines that support the fundamental clinical subjects, such as diagnostic imaging and clinical pathology.

(iv) Ethical, behavioral, and socioeconomic subjects pertinent to medicine.

(v) Communication skills integral to the education and effective function of physicians, including communication with patients, families, colleagues, and other health professionals.

Sweden has stated in its response to the questionnaire that the curriculum for the medical program must provide education in various ethical, behavioral, and socioeconomic subjects pertinent to medicine, as evidenced by the following statement:

"Subjects such as Medical Ethics, Principles in Scientific Research, Gender issues, History of Medicine, Library Skills and Literature Search, Computer Literacy, Intercultural Awareness, Leadership Training, Presentation Techniques, Health Economics, and Law and Medicine. The time devoted is approximately one week per semester."

Documentation:

Sweden's response to the questionnaire

(c). Design, implementation, and Evaluation:

(I) There must be integrated responsibility by faculty within the medical school for the design, implementation, and periodic

evaluation of all aspects of the curriculum, including both basic sciences and clinical education.

(ii) The medical school must regularly evaluate the effectiveness of its medical program by documenting the achievement of its students and graduates in verifiable ways that show the extent to which Institutional and program purposes are met. The school should use a variety of measures to evaluate program quality, such as data on student performance, academic progress and graduation, acceptance into residency programs, and postgraduate performance; the licensure of graduates, particularly in relation to any national norms; and any other measures that are appropriate and valid in light of the school's mission and objectives.

The government, through its past national evaluations and its future reviews (to conform to the recently enacted legislation requiring reevaluation every six years), monitors the medical school's processes for designing, implementing, and evaluating curricula as well as the school's processes for evaluating and documenting student achievement. For example, in the self-evaluation that the Karolinska Institute prepared for the 1996 national evaluation of undergraduate medical education, the Institute reported on the ongoing evaluation of curricula by its Curriculum Committee on Undergraduate Medical Education. This self-evaluation also described a variety of evaluation instruments: a clinical preparatory examination, comprised of written and oral components, that covers subjects studied in the first two pre-clinical years; the testing of clinical skills by the objective structures clinical examination (OSCE) method; etc.

Documentation:

Karolinska Institute's Self-evaluation for the National Evaluation of Undergraduate Medical Education, October 1996 (English translation - July 1997)

5. Medical Students

(a) Admissions, Recruiting, and Publications

(I) The medical school must admit only those new and transfer students who possess the intelligence, integrity, and personal and emotional characteristics that are generally perceived as necessary to become effective physicians.

In its response to the questionnaire, Sweden has provided the following information on the issue of admitting students to study at a medical school:

"The general standards for the admission criteria are set nationally by the National Agency for Higher Education. To be eligible for medical studies, students must fulfill these standards, which entail requirements of previously

passed courses in subjects like mathematics, chemistry, biology, physics and English. The selection of students is done by a combination of a national admission system and local test and interview procedures.

"To be admitted to higher education in Sweden, a student must first fulfill the general entrance requirements which are common to all programs or courses, and then meet the specific course requirements which can be imposed on applicants by an individual university or university college. The latter vary according to the field of education and type of course."

"As from July 1, 1993, the general entrance requirements are the completion of a three-year national program of the upper secondary school or the equivalent Swedish or foreign education. A very good command of English is a requirement for all applicants."

Additional information Sweden has provided dictates that the universities and institutions of higher education are generally responsible for the admission and selection of students.

Within a "generally formulated framework," the institutions decide what selection criteria should be used for admission to their programs or courses. In addition, they determine whether the admission procedures should be carried out locally or by using the services of the National Agency for Coordinated Admission to Higher Education, an agency of the central government, that coordinates such matters as the admission of students. If they decide to use any special tests in the admissions process, they must first obtain permission from the National Agency for Higher Education.

Documentation:

Sweden's response to the questionnaire

Booklet entitled "Higher Education in Sweden"

Letter dated June 22, 1999 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Ms. Bonnie LeBold, U.S. Department of Education

(it) A medical school's publications, advertising, and student recruitment must present a balanced and accurate representation of the mission and objectives of its educational program. Its catalog (or equivalent document) must provide an accurate description of the school, its educational program, its admissions requirements for students (both new and transfer), the criteria it uses to determine that a student is making satisfactory academic progress in the medical program, and its requirements for the award of the M.D. degree (or equivalent).

(iii) Unless prohibited by law, student records must be available for review by the student and an opportunity

provided to challenge their accuracy. Applicable law must govern the confidentiality of student records.

The National Agency for Higher Education publishes a Student Handbook each year that provides information on all higher education institutions (including medical schools) in Sweden. This handbook gives students a source of information that is independent of the institutions and allows students to compare institutions by consulting one reference guide.

Any student attending a higher education institution in Sweden has the right to request to view his or her student records.

Documentation:

Student Handbook 2000-2001

Briefings by officials of the National Agency for Higher Education on August 29, 2000, at the agency's office in Stockholm, Sweden

Briefing by officials of the Karolinska Institute on August 29, 2000, at the university's administrative offices in Stockholm, Sweden

(b) Evaluation of Student Achievement

(i) The medical school faculty must establish principles and methods for the evaluation of student achievement, including the criteria for satisfactory academic progress and the requirements for graduation.

(ii) The medical school's evaluation of student achievement must employ a variety of measures of student knowledge, competence, and performance, systematically and sequentially applied throughout the medical program, including the clinical clerkships. (iii) The medical school must carefully monitor the progress of students throughout their educational program, including each course and clinical clerkship, must promote only those whomakes satisfactory academic progress, and must graduate only those students who successfully complete the program.

In its response to the questionnaire, Sweden has provided the following information about the monitoring of medical students:

- "There are regular (1-5) written and oral examinations each semester. Furthermore, programs for quality assurance are intended to ensure that the students acquire relevant knowledge and competence at the highest level of international quality."

..

Additional information provided by Sweden under this heading includes the following:

"Important aspects are: clear and measurable goals, curriculum content and its relevance for employment, mainly within the biomedical field, the aptitude of the students for work in their prospective field, the teachers, subject competence and teaching ability, the physical study environment, i.e., premises and equipment, feedback from the students, feedback from employers and practicing professionals. Evaluation and follow-up are two important instruments for ensuring that the defined aims are fulfilled, e.g., with respect to educational and curricular goals."

Documentation:

Sweden's response to the questionnaire

(c) *Student Services*

Students must have access to preventive and therapeutic health services, including confidential mental health counseling. Policies must include education, prevention, and management of exposure to infectious diseases during the course of the educational program.

Students have access to health care services and mental health counseling through the National health care system.

Documentation:

Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

Briefing by officials of the Karolinska Institute on August 29, 2000, at the university's campus in Stockholm, Sweden

6. Resources for the Educational Program

(a) *Finances*: The medical school must have adequate financial resources for the size and scope of its educational program.

Since 1993, the universities and institutions of higher education in Sweden have been allocated resources on the basis of the number of students enrolled and their successful completion of their "study goals." Before that it was based entirely on the planned number of study spaces. The idea behind the new funding system is to encourage institutions of higher education to tailor the courses they offer to student demand. By linking the allocation of funds to results, the institutions are also given an incentive to make the most effective use of their resources.

Appropriations for premises, furniture, and equipment are included in the lump sums disbursed by Parliament to each Institution. Sixty percent of the government grant is based on the number of credit points earned by students, forty percent on full-time equivalents. The total amount that can be allocated (maximum) is based on an "education task contract" for a three-year period; the contract is the result of a dialogue between the Ministry of Education and each university or Institution of higher education.

Documentation:

Booklet entitled 'Higher Education in Sweden'

(b) Facilities:

(I) The medical school must have, or be assured use of, physical facilities and equipment, including clinical teaching facilities, that are quantitatively and qualitatively adequate for the size and scope of the educational program, as well as the size of the student body.

„ (ii) The medical school should be encouraged to conduct biomedical research and must provide facilities for the humane care of animals when animals are used in teaching and research.

Sweden has stated in its response to the questionnaire that "There are no formal requirements but the general size and quality of the physical facilities are on a high International standard."

As discussed in the previous section, facilities and equipment are the subject of discussion between the government and each institution. Thus, there may be no need for a formal standard for facilities and equipment, given the government role.

Documentation:

Sweden's response to the questionnaire

(c) Faculty:

(I) Members of the medical school's faculty must be appropriately qualified to teach in a medical program leading to the M.D. (or equivalent) degree and effective in their teaching. The faculty must be of sufficient size, breadth, and depth to provide the scope of the educational program offered.

(II) The medical school should have policies that deal with circumstances in which the private interests of its faculty or staff may conflict with their official responsibilities.

Sweden has stated in its response to the questionnaire that "There are no formal rules for the size of the faculty. However, the staff/student ratio is quite high measured against average West European standards. Most teachers would be on a full-time assignment."

The Higher Education Ordinance contains stipulations regarding the teaching posts that occur at universities and institutions of higher education. They are Professor, Senior Lecturer, Lecturer, Research Assistant, Temporary Lecturer, and Visiting Lecturer. These stipulations establish some qualifications for these ranks.

Documentation:

Sweden's response to the questionnaire
Briefings by officials of the National Agency for Higher Education on August 28, 2000, at
the agency's office in Stockholm, Sweden

(d) *Library:* The medical school must have a library sufficient in size, breadth, and depth to support the educational program and adequately and professionally staffed.

In its response to the questionnaire, Sweden has indicated that there are no formal requirements that apply to medical school libraries. However, all medical libraries are part of the general system of Swedish university libraries."

Although there is no formal standard for medical school libraries, there may be a need for such a standard, given the fact that all medical schools in Sweden are state-run schools and the government, as mentioned previously, has discussions regarding facilities with each institution. On-site inspection of the medical library at the Karolinska Institute confirmed that medical students have access to a comprehensive collection of materials and professional staff to assist them.

Documentation:

Sweden's response to the questionnaire
On-site visit to medical library at Karolinska Institute in Stockholm, Sweden, by Dr.
William Deal and Ms. Bonnie LeBold, August 29, 2000

(e) *Clinical Teaching Facilities* The medical school should have affiliation agreements with each teaching hospital or clinical facility it uses that define the responsibilities of each party.

The medical school must maintain affiliation agreements with each clinical teaching site that outline the responsibilities of the site (student monitoring, student evaluation, etc.) for the students studying at that clinical site.

Documentation:

Briefing

by officials of the National Agency for Higher Education and the National Board of Health and Welfare on August 28, 2000, in Stockholm, Sweden
Briefing by officials of the Karolinska Institute on August 29, 2000, at the university's campus in Stockholm, Sweden

PART III: Accreditation/Approval Processes and Procedures

The entity within the foreign country that is responsible for reevaluating the quality of medical education in the country and has authority to accredit/approve medical schools should have processes and procedures for granting accreditation/approval to medical schools that are comparable to the following:

1. Site Visit

The accreditation/approval process must include a thorough on-site review of the school and all its geographically separated sites, if any) during which sufficient information is collected to determine if the school is in fact operating in compliance with the accreditation/approval standards. This review should include, among other things, an analysis of the admission process, the qualifications of the faculty, the achievement of students and graduates, the facilities available to medical students (including the training facilities), and the academic support resources available to students.

As discussed in the Introduction, Sweden has just enacted a law requiring the National Agency for Higher Education to conduct "recurrent evaluations of all academic subjects and programmes in universities and colleges, beginning in 2001." Officials of the National Agency have indicated that these recurrent evaluations will include site visits to the institutions. Prior to the site visit of an institution, the school will be required to submit a self-study that must address the issues listed above as well as other issues. Members of the site visit team will be selected by the National Agency for Higher Education and will be screened to ensure that team members have no conflicts of interest that would preclude their participation as a member of the site team.

In the information it provided prior to enactment of this new legislation, Sweden indicated it would follow a formal process if a new medical school were to be accredited. Further, Sweden added that "The evaluation of the existing medical schools is also part of the processes established by Government decision in 1992."

Under the "old" system, according to Sweden, the evaluation process did include a visit to the medical school being evaluated and was conducted by a peer group consisting of representatives also from other countries. The evaluation process included interviews with faculty, students and administrators, as well as an examination of the medical school's facilities.

On the issue of whether medical schools had to submit a formal report of self-evaluation under the "old" system, regarding their compliance with the requirements for accreditation/approval, Sweden stated that "... formal reports are submitted by the board for medical education of the institution. • Sweden did submit a list of questions it used as part of its last review on medical education in Sweden, which occurred in 1996. However, it was not clear if all schools had to submit a response to the questionnaire, if the questions were used by the panel of experts conducting the site visit, or both. Also, since the questionnaire just asked for basic information, it was not clear what standard(s) the panel of experts or the National Agency for Higher Education were using to evaluate institutions' answers.

Documentation:

Letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education
Sweden's response to the questionnaire
Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

2. Qualified On-Site Evaluators, Decision-Makers, and Policy-Makers

The accreditation/approval process must use competent and knowledgeable individuals, qualified by experience and training in the basic or clinical sciences, responsible for the on-site evaluation, policy-making, and decision-making.

As previously indicated, Sweden will be implementing a new system for evaluation in 2001. As with past evaluations, the evaluations under the new system will be coordinated by the National Agency for Higher Education. That agency will select the members of the team, to include at a minimum, individuals from other countries who are knowledgeable regarding medical education, medical educator(s) from Sweden, and representative(s) from the health care system. The agency will also screen the members for any conflicts of interest and will provide the members with the necessary training in team procedures and with pertinent materials such as the self-study documents completed by the medical schools.

Documentation:

Sweden's response to the questionnaire
Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

3. Re-evaluation and Monitoring

The accreditation/approval process must provide for the regular reevaluation of accredited/approved medical schools in order to verify that they continue to comply with the approval standards. The process must also provide for the monitoring of medical schools throughout any period of accreditation/approval granted to verify their continued compliance with the standards.

As previously indicated, Sweden has just enacted a law requiring regular re-evaluations every six years.

With regard to monitoring, Sweden provided the following before the legislation establishing the new system was enacted:

"...Since Sweden is a small country with only six medical schools (all in the public sector), any problem arising would immediately be brought to the attention of the National Agency, which could start an evaluation process. Apart from this, universities and colleges are obliged to report to the Agency every year about the results of their education and research, including undergraduate examinations, etc. The Agency in its turn reports back to the government about the performance of higher education institutions. Questions may also be asked in Parliament with regard to the education in and management of medical schools."

As part of its oversight responsibilities, the National Agency for Higher Education also responds to complaints from students or others regarding higher education institutions. As necessary, the Agency will investigate complaints and take appropriate action. The Agency has the authority to do an on-site review of an institution if it determines that the nature and severity of a complaint warrants such a review.

Documentation:

Letter dated July 14, 2000 from Torsten Kalvemark, Senior Advisor, National Agency for Higher Education, to Dr. Karen Kershenstein, U.S. Department of Education
Sweden's response to the questionnaire
Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

4. Substantive Change

The accreditation/approval process must require medical schools to notify the appropriate authority of any substantive change to their educational program, student body, or resources and must provide for a review of the substantive change by the appropriate authority to determine if the school remains in compliance with the standards.

In addition to submitting annual reports to the National Agency for Higher Education, medical schools would be required, under Swedish law, to apply to that Agency for the right to award degrees and/or the right to establish areas of academic study. Resource issues are reviewed in discussions relative to the three-year contracts that institutions enter into with the Agency. Furthermore, the Vice Chancellors of the Institutions in the public sector (which include all medical schools in Sweden) report to the University Chancellor, who is an Agency staff member. Therefore, any substantive change in resources or any other aspect of the institution's operations would be brought to the attention of the Agency through regular communications between the Institution and the Agency, as well as through the annual reports.

Documentation:

Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

5. Controls against Conflicts of Interest and Inconsistent Application of Standards

The accreditation/approval process must include effective controls against conflicts of interest and inconsistent application of the accreditation/approval standards.

Sweden provided the following information regarding these issues in its response to the questionnaire:

"The National Agency is an arm of the government and has the obligation at all times to work in an impartial and fully transparent manner. According to the Swedish Constitution, all documents in an accreditation and evaluation process are open for public scrutiny."

"The decisions are taken (made) by the senior management of the board, which guarantees consistency over time."

As mentioned previously, the National Agency ensures that all individuals being considered for participation as team members in evaluations of institutions have no conflicts of interest. In addition, since all medical schools are reviewed during the same time period as part of the evaluation, the team members are using the same assessment framework when reviewing the self-studies and conducting the on-site reviews.

Documentation:

Sweden's response to the questionnaire

Briefings by officials of the National Agency for Higher Education on August 28, 2000, at the agency's office in Stockholm, Sweden

6 Accrediting/Approval Decisions

The accreditation/approval process must ensure that all accreditation/approval decisions are based on the accreditation/approval standards. It must also ensure that the decisions are based, in part, on an evaluation of the performance of students after graduation from the medical school.

According to the supplemental information Sweden submitted to the Department, "Universities and colleges are independent organizations which are responsible for their own activities, standards and improvements. The National Agency for Higher Education evaluates and assesses the work done by the universities and colleges to improve their standards."

Under the Swedish system, the quality improvement efforts of universities and colleges are evaluated by the National Agency, which monitors their efforts through quality assessments and through data collection and evaluation. Data collected include the performance of medical students on their final medical school exams as well as the

performance of Interns during their clinical pre-licensure program.

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Documentation:

Sweden's response to the questionnaire