TRAINING OF OCCUPATIONAL PHYSICIANS IN THE NETHERLANDS WITH REGARD TO OCCUPATIONAL HEALTH SERVICES DELIVERED TO THE POPULATION

ANDRÉ N.H. WEEL

Netherlands School of Occupational Health
Amsterdam, the Netherlands

Abstract. In the Netherlands, the need for a basically new approach to education and training in occupational medicine was felt by professionals, students, schools and occupational health services (OHS) in the early 1990s. After an inventory of the problems and shortcomings of the traditional curriculum, the Netherlands School of Occupational Health defined the framework for a new curriculum. In this article the background, principles and structure of the new curriculum are described. Three principles shape the curriculum: the needs of OHS; professional standards; and the state-of-the-art. The characteristics of the new curriculum are: interaction between theory and practice; students' self-management of the learning process; co-makership with OHS; and multidisciplinarity. The curriculum consists of a course/theory and a practical part. Most of the theoretical part is presented to so called core group of 12 students, which is to be maintained during the full course period of 4 years. The adage for the practical part to be spent in a certified OHS institution is: “the best teaching OHS are learning OHS”. In 1999, the first group of students entered the renewed curriculum. First impressions of the experience gained are presented.

Key words: Occupational medicine, Education, Training, Curriculum

INTRODUCTION

In the Netherlands, occupational medicine was not recognized as a medical speciality until the early 1960s. Nevertheless, the first attempts to give this speciality its own place date from the first years after the second world war. In 1946, the professional society for occupational medicine (NVAB) was founded. In the early 1950s, the Dutch Institute for Preventive Medicine organized the first postgraduate course in occupational medicine. One decade later, the Catholic University of Nijmegen started its own postgraduate curriculum in occupational medicine. CORVU, a co-operation between the two Amsterdam universities, began to operate in 1981. Finally the Netherlands School of Public Health founded a department of occupational health in 1992. In 2000, three of these four institutes (all except for the University of Nijmegen) amalgamated into one organization – the Netherlands School of Occupational Health (NSOH).

The traditional course consisted of a basic training in social medicine and epidemiology for one year, and an additional education in occupational medicine for two and a half years. The latter was characterized by traditional educational forms like group lectures, a standard package of issues, insufficient guidance in practical work, a passive attitude of the students, declining motivation to study, and a lack of effective testing.
In 1991, the duration of the occupational medicine course was prolonged to 4 years due to new European regulations (European Commission), and several attempts were made to improve its didactical quality. In the same period, the daily work of the occupational physician was more and more devoted to activities aimed at reducing sickness absenteeism in client organizations: consultation hours for absent workers, and control measures to be carried out by OHS. The renewal of the curriculum was hindered by those developments, because of different views presented by employers and the management of OHS on one hand, and by occupational physicians on the other.

In 1995, a new legislation regarding medical profession was introduced with more emphasis on the quality assurance of the professionals themselves. The Health Care Professions Act obliged all doctors to keep their knowledge and skills up to date, if they wanted to keep their registration as a medical specialist. A renewal of the vocational education and training, and the development of continuing medical education programs have now become an urgent concern for the schools of occupational medicine. In this article the needs and demands for renewal of the curriculum are described. What are these needs and demands, as expressed by all parties concerned? Are we able to change and do better, and how should we manage this?

NEEDS AND DEMANDS FOR IMPROVEMENTS

In 1997, the Dutch organization for scientific research (NIA-TNO) analyzed the demands of OHS with regard to education and training in occupational medicine [1]. In 1998, the CORVU Amsterdam School of Occupational Medicine made an inventory of the needs defined by professionals, students, and some large OHS centers. What did all these parties consider to be the basis for the best vocational education program in occupational medicine?

The results can be summarized as follows.

**Occupational health services** stress the importance of advisory skills and multidisciplinary co-operation with other professionals. They also emphasize that physicians should be good account managers, as well as effective in maintaining fruitful and profitable relations with their client organizations, negotiating new contracts, calculating costs of services, etc. A suggestion made by OHS has been to organize a multidisciplinary educational program. Large parts of the curriculum in occupational medicine could be shared with the training programs of other professionals, like occupational health nurses, safety engineers, occupational hygienists and organizational psychologists.

**Professionals** (occupational physicians) consider general medical and organizational knowledge as very important fields of expertise. Occupational physicians should be aware of professional standards and guidelines, and where they are lacking, they should contribute to their development. Physicians should learn to work according to the current state-of-the-art.

Advisory and communication skills are also thought to be important for a daily practice. For example, how should we deal with demanding clients?

There is a lot of discussion about competences required of occupational physicians. Up to now, there is no general consensus about this matter.

**Students** dislike classic educational forms like lectures in full classrooms. They sometimes consider the teaching to be old-fashioned and not up-to-date. Through a lack of educational incentives, some of them lose their motivation for the training. They feel the principles taught not applicable to their daily work. They often need more professional support during the practical part of their training taking place within the OHS.

REGULATIONS

Having clarified the need for improvements, we should look at the regulations with regard to education in occupational medicine. Are we able to adjust the curriculum to the direction desired by OHS, professionals and students? Looking at the European Union Directives [2] we see the principles of mutual recognition of the national qualifications, and of a general four-year duration of education. Learning contents and objectives have not been defined by these regulations at all. So the European regulations permit full space for the countries’ own educational insights.
International organizations and societies like World Health Organisation (WHO), International Labour Organisation (ILO), European Association of Schools in Occupational Medicine (EASOM) and European Union of Medical Specialties (UEMS) all emphasize the importance of good quality of education and training. They are involved in the process of defining core competences for occupational physicians [3], but they have no legislative or maintaining authority.

In the Netherlands, the national regulations have been scrutinized. In the end, the Ministry of Public Health, Well-being and Sports is responsible for the training. The Ministry has delegated this responsibility to the Royal Dutch Society of Medicine. Within this organization, the College for Social Medicine defines the educational goals. A certification committee controls the quality of the education and certifies the students that have completed the curriculum in due course. Thus the official rules dealing with the name and title of the profession, the general objectives of the education program and its overall duration, define a minimum level of quality. These rules permit space to define learning principles, choose learning methods, select themes, allocate time to be spent on different issues, and realize institutional and personal preferences.

**PRINCIPLES OF A NEW CURRICULUM IN OCCUPATIONAL MEDICINE**

At the end of 1998, the CORVU Amsterdam School of Occupational Medicine defined the basis for a renewed curriculum [4]. Education and training in occupational medicine should be based upon three pillars:

1) the needs and demands of OHS;
2) the state-of-the-art in occupational medicine: “evidence-based occupational medicine”; and
3) the available professional standards and guidelines for occupational physicians.

From these basic requirements, a number of principles for shaping the curriculum have been chosen. The renewed CORVU education and training program should be characterized by:

- an interaction between theory and practice;
- students’ self-management of the learning process;
- co-makership with OHS employing students;
- multidisciplinarity.

By means of these principles, sharing of the responsibility by all stakeholders involved is aimed at. Among them students play the main role. They are their own managers, responsible for the final outcome of the education and training processes. The institute creates good learning conditions to facilitate these processes, provides them with the necessary tools for learning, and supports them in searching for scientific data, evidence, good practice models, and asking the right questions. The institute has to develop a method for “evidence-based teaching”. But at the end, the students should be able to find their way to the sources of scientific knowledge, and define their needs.

A considerable amount of responsibility is put in the OHS. These services should offer a real learning environment. Students should not be required to carry out only routine, or only one or two tasks. They should get a sufficient broad package of tasks to be completed. These tasks should give a realistic reflection of the work of an occupational physician. They should also be supported and guided systematically by experienced occupational physicians with the affinity for education and training.

The OHS center is the only place where the students can learn to co-operate with other professionals. Students should be encouraged to bring the problems from their daily work into the group discussions at the training institute where they meet frequently.

To realize this type of sharing responsibility, some basic criteria should be met. The students should be:

- graduated physicians (medical doctors);
- active in the field of occupational health care for at least one year;
- employed by “approved” OHS centers (i.e. complying with a number of quality criteria defined by the registration committee, e.g. professional support and guidance), for at least 20 hours a week.

On the other hand, the employing OHS centers should provide the students with a real learning environment and...
professional support, and be willing to communicate with the training institute about didactical issues.

**STRUCTURE OF THE NEW CURRICULUM**

There are two main parts of the curriculum to be distinguished:

A. The theoretical part; carried out at the institute, where groups of students convene mostly one day a week. Within this part, the following teaching forms are applied:
- core group sessions (12–16 students);
- basic modules (20–100 students);
- optional modules (12–20 students).
Each core group is guided by one occupational physician and one social scientist. Each student has a mentor (the occupational physician or the social scientist).

Optional modules meet with personal educational preferences of students. At the start of the curriculum, each student defines his or her own personal education and training plan.

B. The practical part, taking place in a normal working situation at the OHS for two and a half to four days a week. The forms of practical training include:
- main form: working under supervision in the employing OHS center;
- visits and stays at other OHS centers or other health care institutions, health insurance institutions etc.;
- some specific tasks, e.g. the student’s own small research project completed with a written report.

Each student has a supervisor, an experienced occupational physician employed by the same OHS center, who is coaching and supporting him/her during the full period of a four-year curriculum.

A four-year curriculum is divided into eight semesters with five main educational themes. A brief description of the semesters and themes, including the main issues to be dealt with is given below:

**Semester 1**

**Theme 1: Playing-field of the occupational physician**

Core module: 6 days
Professional role and position

**Professional behavior**
Ethics
Draft of personal education and training plan
Intervision

**Semesters 2 + 3**

**Theme 2: Practice of revalidation and work-related diseases**

Core module: 10 days
Guidance of absent workers
Guidance of workers with work-related health problems
Occupational diseases
Socio-medical advice to companies

Basic module: 14 days
Co-operation with general practitioner
Legal and juridical aspects

Optional modules:
Clinical aspects
Branches of industry

**Semester 4**

**Theme 3: Monitoring of worker and organization**

Core module: 7 days
Methods for monitoring
Risk assessment
Health surveillance
Data processing/reporting

Preparation of one’s own research project
Basic module: 5 days
Co-operation with “core experts” in OHS

Co-operation in a company

Optional modules:
Workplace health promotion

**Semester 5**

No new themes are introduced. The students carry out their own research projects.
There is also an opportunity to visit and stay in other organizations. Students can participate in optional modules as in other semesters.

**Semester 6**
**Theme 4: Advisory organizations**
Core module: 6 days
Advisory skills
Intervision
Basic module: 6 days
Analysis of organizations
“Change management”
Optional modules:
Sickness absence policy
Cost-benefit analysis
Branches of industry

**Semesters 7 + 8**
**Theme 5: Full practice**
Core module: 5 days
Relation management
Intervision
Basic module: 4 days
In-company advisory project
Optional modules:
Acquisition
Team management
Occupational health practice abroad

**THE ROLE OF OHS IN EDUCATION AND TRAINING**
Professional practice is the best teacher. And practice we meet in the OHS. The adage for the practical part to be spent in a certified OHS center, is: “the best teaching OHS are learning OHS”. It is a matter of continuous concern of the Netherlands School of Occupational Health to discuss this issue with OHS and to insist on its importance. The relations with the OHS are getting closer, and we aim to organize some theoretical parts of the curriculum together with the OHS, even within their premises (in-company training). The latter type of training has also proven to be a useful approach to continuing medical education.

**PRELIMINARY EXPERIENCES**
In 1999, the first group of students entered the renewed curriculum. It is still too early to evaluate it thoroughly. The experience of the first year shows a greater involvement and satisfaction of students. On the other hand, the work load of mentors has increased considerably. The costs have also increased, because groups are smaller and large amount of time is needed for the organization, guidance and support. Some modifications appear to be inevitable, for example the enlargement of the core groups to 16 students.

**REFERENCES**
4. CORVU. Vocational training for occupational physician. Amsterdam: CORVU Amsterdam School of Occupational Medicine; 1998 [in Dutch].