

# An assessment of occupational health care in the Netherlands (1996–2005)

M. M. A. De Valk<sup>1</sup>, C. Oostrom<sup>1</sup> and A. J. P. Schrijvers<sup>2</sup>

<b>Background</b>	The extensive Dutch occupational health care system of the past decade has not led to the desired outcomes, namely, a decrease of work absenteeism and the associated costs.
<b>Aim</b>	To assess the differences between in-house and external occupational health care services in the process quality of occupational health care provided.
<b>Methods</b>	In total, 26 interviews were conducted with chief executive officers of occupational health services (OHS). The responses and other relevant policy documents were analysed and described. A key component of this process was to compare differences between in-house and external services.
<b>Results</b>	Notable differences in quality were found to exist between in-house and external occupational health care systems, with the in-house occupational health care services offering the highest process quality.
<b>Conclusion</b>	Our findings suggest that the effectiveness of OHS is mainly dependent on their structure (in-house versus external) and on economic factors (profit driven versus not for profit).
<b>Key words</b>	In-house and external occupational health care services; occupational health care; process quality of care; the Netherlands.

## Introduction

In some respects, the Dutch appear to lead the rest of Europe. Since 1996, all Dutch employers have been required to provide certified occupational health care. The provision of occupational health care for all workers can be considered a very progressive step [1]. In the European Union (EU), worker access to occupational health services (OHS) varies from 15 to 96%, and depends on the country in which employees live and the type and size of organization they work for [2]. The Netherlands is not the only country in which the provision of OHS is compulsory. In Belgium, employers are also required to hire the services of a 'certified' in-house or external OHS. Companies in Germany, Finland and France are not required to appoint a certified OHS, but must provide OHS to their employees. In other EU countries, the provision of OHS is voluntary. Consequently, the Netherlands has the highest cover of OHS provision for

employers: 96% for organizations >100 employees and 91% for small- and medium-sized entities (SMEs) [2]. In Sweden, Germany and the UK, ~50 to 60% of employees have access; these numbers are even lower in Spain and Italy (~15%). In addition, the ratio of occupational physicians to workers in Europe varies substantially between one per 500 (Norway) and one per 5000 workers (UK) [3].

For most workers in the Netherlands, occupational health care is supplied by large occupational health monopolies operating from outside the workplace. Just five of these external OHS are responsible for ~80% of all Dutch employees. However, some large organizations have developed their own in-house health care services, just as some large companies in the UK retain some form of OHS [4]. This latter approach is preferred by the European Court of Justice, which has stated that occupational health care should be a primary concern of the organizations themselves.

Despite the provision of occupational health care for every employee, the Netherlands has the highest recorded levels of work stress, sickness-related absenteeism and work disability in Europe [5]. It has been claimed that the 'commercial' approach that most OHS have been forced to adopt is partly responsible for a recent deterioration in the quality of occupational health care [1].

<sup>1</sup>Adviesgroep Intermedic, Koninginnegracht 101, 2514 AL The Hague, Zuid Holland, The Netherlands.

<sup>2</sup>Department of Public Health, University of Utrecht, Julius Centre, Stratenum, Heidelberglaan 100, 3584 CX Utrecht, The Netherlands.

Correspondence to: Maurice De Valk, Koninginnegracht 101, The Hague, Zuid Holland, 2514 AL, The Netherlands. Tel: +31 70 346 2513; fax: +31 70 346 7458; e-mail: m.devalk@intermedic.nl

Clearly, the comprehensive Dutch occupational health care system has not led to the desired outcomes, namely, a reduction of work absenteeism and the associated costs. Therefore, the primary aim of this study is to assess the quality of the Dutch occupational health care services, with special attention to the differences between in-house and external OHS. Our investigation was conducted using interviews and additional document analysis. The overall research question we asked was as follows:

What are the differences between in-house and external OHS with respect to the quality of occupational health care provided?

### Method

A sample of 29 OHS was selected from the data bank of Intermedic. This sample represented 12 in-house and 17 external OHS, which between them were responsible for ~85% of the working population in the Netherlands.

A formal letter of introduction was sent to the chief executive officers (CEOs) explaining the background and inviting them to take part in the study. Those who accepted the invitation were sent a postal questionnaire, which was followed up with a structured interview of approximately an hour either in person or by telephone. In addition, relevant supplementary materials such as policy documents, annual reports and memoranda of association were requested to complement and verify the data collected during the interviews.

We carried out all the interviews using a questionnaire-based interview. The questionnaire consisted of three parts, covering the establishment of the OHS, policy development and policy implementation. The questions were developed based on a previous study assessing the quality of mental health care in the Netherlands [6].

In our study, we used the framework of Donabedian [7] who conceptualized three ‘quality of care’ dimensions. ‘Structure quality’ refers largely to the attributes of the settings where the care is delivered. ‘Process quality’ refers to whether or not good medical practices are followed. ‘Outcome quality’ refers to the impact of the care on health status. Only the structure and process qualities of care dimensions have been used in this study because occupational health is a heterogeneous good with multidimensional outcomes that are difficult to measure [4]. In addition, we did not include the perspective of the clients in our investigation. Therefore, only the first of the seven pillars of quality ‘efficacy’ (the ability of care, at its best, to improve health) is considered relevant for the purposes of our study [8].

For our study, we defined 10 ‘dimensions’ or overall indicators: five structural quality indicators and five process quality indicators. For each indicator, we classified

**Table 1.** The structure quality indicators

Structure quality indicators	Categories
Branch—area of operation	Agriculture, construction or industry Commercial services, trade or transportation Health care, education or public authorities
Size of clients	No specialization, general SMEs Both SMEs and large enterprises Large enterprises
Motivation	Value driven Money driven
Commercial stance of client group	Non-profit Profit
Focus upon employee versus employer	Focus upon employee Focus upon employer Focus upon both

**Table 2.** The process quality indicators

Process quality indicators	Categories
Process quality of services	Focus upon administrative processes Focus upon availability and financial costs: extra value Focus upon advice in the primary processes
Type of service	A cooperative formula Standard custom-made goods Full service packages
Reactive or proactive activities	Reactive: focus upon sick leave management Proactive: focus upon prevention issues
Driven by supply or demand	Demand Supply
Degree of intervention	Facilitating Unmasked advising Directing Innovating

each OHS according to a number of pre-defined categories, based on the answers in the interviews and the additional requested documents (see Tables 1 and 2). Each of the authors independently classified the 26 OHS under the 10 dimensions. Any contradictions between the two judges were discussed until both eventually agreed on a classification. The process quality indicator for quality of service was regarded as the primary outcome variable because it relates to the primary concern of this study.

Quantitative data were entered into the computer application ‘Statistics Package for Social Scientists for

**Table 3.** The distribution of the occupational health care services: structure quality indicators

Structure quality indicators	In-house ( <i>n</i> = 12)	External ( <i>n</i> = 14)	Total ( <i>n</i> = 26)
<b>Branch</b>			
Agriculture, construction and industry	2 (17%)	4 (29%)	6 (23%)
Commercial services, trade and transportation	3 (25%)	1 (7%)	4 (15%)
Health care, education and public authorities	7 (58%)	3 (21%)	11 (39%)
No specialization, general	0 (0%)	6 (43%)	6 (23%)
<b>Size of clients</b>			
SMEs	0 (0%)	5 (36%)	5 (19%)
Both	0 (0%)	5 (36%)	5 (19%)
Large enterprises	12 (100%)	4 (29%)	16 (62%)
<b>Motivation</b>			
Value driven	11 (92%)	5 (36%)	16 (62%)
Money driven	1 (8%)	9 (64%)	10 (38%)
<b>Commercial stance of client group</b>			
Profit	4 (33%)	11 (79%)	15 (58%)
Non-profit	8 (67%)	3 (21%)	11 (42%)
<b>Focus upon employee versus employer</b>			
Employee	10 (83%)	3 (21%)	13 (50%)
Employer	0 (0%)	8 (57%)	8 (31%)
Both	2 (17%)	3 (21%)	5 (19%)

Windows 11.0' (SPSS). Frequencies were calculated for the 10 indicators of quality, distinguishing between in-house and external OHS (Tables 3 and 4). As the study was descriptive in nature, no statistical analysis was carried out on the data.

## Results

In total, 26 (12 in-house and 14 external) OHS eventually participated in our study, including all the five large external OHS, giving a response rate of 90%. These 26 services are responsible for the occupational health care of ~80% of the working population in the Netherlands [9].

There were considerable differences in the management of occupational care between the in-house and external OHS. The structure quality indicators (Table 3) highlighted a number of interesting features of the market. First, only large enterprises operated an 'in-house' OHS: none of the in-house services provided services to SMEs. Second, the in-house OHS were almost always value driven (92%), while external OHS were more often money driven (64%). The third finding was that in-house OHS were frequently linked to not-for-profit organizations (67%), while external services catered mainly for a commercial clientele (79%). Fourth, a large majority of the in-house OHS considered employees their clients (83%). In contrast, 57% of the external OHS saw the employer as their main customer.

**Table 4.** The distribution of the occupational health care services: process quality indicators

Process quality indicators	In-house ( <i>n</i> = 12)	External ( <i>n</i> = 14)	Total ( <i>n</i> = 26)
<b>Process quality of service</b>			
Administrative processes	0 (0%)	1 (7%)	1 (4%)
Extra value	2 (17%)	7 (50%)	9 (35%)
Advice	10 (83%)	6 (43%)	16 (62%)
<b>Type of service</b>			
A cooperative formula	0 (0%)	6 (43%)	6 (23%)
Standard custom-made goods	0 (0%)	3 (21%)	3 (12%)
Full service packages	12 (100%)	5 (36%)	17 (65%)
<b>Proactive versus reactive</b>			
Proactive (prevention)	9 (75%)	6 (43%)	15 (58%)
Reactive (sick leave)	3 (25%)	8 (57%)	11 (42%)
<b>Supply versus demand driven</b>			
Demand driven	8 (67%)	7 (50%)	15 (58%)
Supply driven	4 (33%)	7 (50%)	11 (42%)
<b>Degree of intervention</b>			
Facilitating	4 (33%)	11 (79%)	15 (58%)
Unsolicited advising	4 (33%)	2 (14%)	6 (23%)
Directing	3 (25%)	0 (0%)	3 (12%)
Innovating	1 (8%)	1 (7%)	2 (8%)

In addition, the results for process quality indicators (Table 4) displayed a number of interesting differences between in-house and external OHS. Firstly, the majority of the in-house OHS (83%) were found to focus on 'advice' (consultancy on health issues) as their primary process quality of service objective, compared to 43% of the external OHS, which more often focused upon staff availability and financial costs (50%). Secondly, all in-house OHS offered comprehensive service packages to their clients. External OHS generally offered a more limited service to their clients. Thirdly, in-house OHS were more oriented towards preventative measures, i.e. they were more proactive in their activities (75%) than external services (only 43%). Sickness absence consultation, a reactive measure, was more often the priority for external providers. Finally, almost all external OHS acted mainly as facilitators (79%) and only made interventions when asked to do so by the organizations. In-house OHS had a broader scope of operation and were better integrated into the organizations they worked with. They were more prepared to intervene earlier in the occupational health processes.

## Discussion

This descriptive study sought to evaluate the quality of in-house and external OHS in the Netherlands. CEOs of both types of OHS participated through a questionnaire-based interview and the provision of additional policy documents.

All the 26 OHS that participated are accredited every 5 years under a quality system similar to ISO 9001. Consequently, all OHS achieve a basic level of quality as required for their certification. However, as our findings demonstrate, there was significant variety in process quality, especially between in-house and external OHS. We defined quality in terms of efficacy—the ability of care, at its best, to improve health [8]—and looked at structure and process quality indicators of care [7]. This ability was highest when OHS were able to practice appropriate measures that fulfilled the specific needs of their clients. When this definition was used, in-house OHS appeared to achieve the highest process quality. They were more integrated into the organizations they worked for, provided generally the most extensive type of service, were more oriented towards preventive measures and had a broader scope of operation. The structure and working methods of in-house OHS were best suited to improve the health of the organizations they worked for and were thus better in terms of efficacy. External OHS, on the other hand, operated from outside the organization, provided less comprehensive service packages to their clients, usually employed reactive measures and concentrated on making a profit. Therefore, their structure and modes of operation were less suited to providing that highest process quality of care.

Unfortunately, there has been limited scientific research on the quality of occupational care in the Netherlands. A few studies have focused on outcome quality indicators of care; for example sickness absence rates, numbers of disability benefit recipients or client satisfaction ratings [1,9]. These examinations yielded similar results to ours, indicating higher outcome quality for in-house OHS. Our study is the first to assess the Dutch occupational health care system in terms of structure and process quality. This is the most important strength of our study. In Finland, another European country with compulsory occupational health care provision and different OHS models in use, researchers also found a great variation in both input and output indicators [10]. These findings are similar to those of our study, although we performed a more sophisticated and in-depth examination of the quality of care. A possible weakness of our study in relation to others is that we did not assess outcome quality indicators, such as the satisfaction ratings of clients. We only questioned the CEOs and not other stakeholders involved in this process.

Occupational health care legislation in the Netherlands has created an opportunity for OHS to become commercial organizations. The Netherlands is not the only EU country in which some OHS make a profit; in the UK for example, there are a number of OHS that are profit making. However, it is exceptional that >85% of the working population receives occupational health care from commercial services [11]. Nicholson [2] suggested that simply making access to occupational health a legal

obligation is not sufficient for improving employee health, which can only be achieved as a part of a wider strategy for health improvement [3]. It seems that the Dutch government has overlooked this condition, as is illustrated by its failure to introduce additional measures to improve occupational health care. Thus far, the only stakeholders who have taken advantage of this obligation are the (large) external OHS.

In July 2005, the Dutch government acknowledged the unintended consequences of its actions and discarded the legal obligation to use a certified OHS. The outcome of this latest measure is not yet clear, but the large external OHS in particular are expected to lose business given the low satisfaction ratings given by their clients [9,11]. This could be an interesting subject for future research. In addition, the outcome quality of occupational health care needs to be assessed through the questioning of other stakeholders than the CEOs.

## Acknowledgements

The authors thank Paul Doxey for his language assistance as a native English speaker.

## Conflicts of interest

None declared.

## References

1. Weel ANH, van der Beek AJ, Kroon PJ, Verbeek JHAM, van Dijk FJH. Recent changes in occupational medicine in the Netherlands. *Int Arch Occup Environ Health* 1999; **72**:285–291.
2. Nicholson PJ. Occupational health in the European Union. *Occup Med (Lond)* 2002;**2**:80–84.
3. Nicholson PJ. Occupational health services in the UK—challenges and opportunities. *Occup Med (Lond)* 2004;**54**:147–152.
4. Miller P, Rossiter P, Nuttal D. Demonstrating the economic value of occupational health services. *Occup Med (Lond)* 2002;**52**:477–483.
5. Karaian J. Sick of it: European companies can find plenty of cost savings if they address burgeoning absenteeism problem. *CFO Europe Magazine*, Dec 2002/Jan 2003:34–39.
6. Ravelli DP. *Deinstitutionalisation of mental health care in the Netherlands from 1993–2004. Nieuwegein: Budde Elinkwijk grafische producties*. PhD Dissertation, University of Utrecht, Julius Centre, 2004.
7. Donabedian A. The quality of care. How can it be assessed? *J Am Med Assoc* 1988;**260**:1743–1748.
8. Donabedian A. The seven pillars of quality. *Arch Pathol Lab Med* 1990;**114**:1115–1118.
9. Social and Economic Council of the Netherlands (SER). *Advice no. 04/03: Occupational Health Care Provision of*

*Services. Appendix 4: Analysis Occupational Health Care Provision of Services 2004.* [http://www.ser.nl/default.asp?desc=en\\_index](http://www.ser.nl/default.asp?desc=en_index) [The SER is the main independent advisory body to the Dutch government and the parliament on national and international social and economic policy] (date last accessed 17 February 2004).

10. Rasanen K, Husman K, Peurula M, Kankaanpaa E. The performance follow-up of Finnish occupational health services. *Int J Qual Health Care* 1996;9: 289–295.
11. Statistics Netherlands (CBS). *Statistics Occupational Health Services and Occupational Health Advice Agencies*. Voorburg: Statistics Netherlands (CBS), 2003. <http://www.cbs.nl/en-GB/default.htm?languageswitch=on> [Statistics Netherlands is an autonomous agency (associated with the Minister of Economic Affairs) that is responsible for official national statistics] (date last accessed 1 July 2003).

## Appendix: The questionnaire

### Investigation: an assessment of occupational health care in the Netherlands

#### CEO questionnaire

#### Part 1. Establishment of the OHS

- 1.1. How was the OHS established?
- 1.2. Which parties were *directly* involved in the establishment of the OHS?
- 1.3. What were the motives for the establishment of the *directly* involved parties?
- 1.4. What media were used by the *directly* involved parties in discussing the establishment of the OHS?
- 1.5. Which parties were *indirectly* involved in the establishment of the OHS?

- 1.6. What were the motives of the *indirectly* involved parties in establishing the OHS?
- 1.7. What media were used by the *indirectly* involved parties in discussing the establishment of the OHS?

#### Part 2. Policy Development

- 2.1. What were the policy developments?
- 2.2. Which parties were *directly* involved in policy development?
- 2.3. What were the motives of the *directly* involved parties in relation to policy development?
- 2.4. What media were used by the *directly* involved parties in discussing policy development?
- 2.5. Which parties were *indirectly* involved in policy development?
- 2.6. What were the motives of the *indirectly* involved parties in relation to policy development?
- 2.7. What media were used by the *indirectly* involved parties in discussing policy development?

#### Part 3. The Policy Implementation

- 3.1. How was the policy implemented?
- 3.2. Which parties were *directly* involved in policy implementation?
- 3.3. What were the motives of the *directly* involved parties in relation to policy implementation?
- 3.4. What media were used by the *directly* involved parties in discussing policy implementation?
- 3.5. Which parties were *indirectly* involved in policy implementation?
- 3.6. What were the motives of the *indirectly* involved parties in relation to policy implementation?
- 3.7. What media were used by the *indirectly* involved parties in discussing policy implementation?