

Organisation of disability evaluation in 15 countries

Organisation de l'évaluation de l'incapacité au travail dans 15 pays

De Boer WEL¹, Besseling JJM², Willems JHBM³

Résumé

Objectif : La législation, les concepts et les approches dans les assurances sociales diffèrent entre les pays. En 2002-2003, nous avons comparé 15 pays sur l'organisation de l'évaluation de l'incapacité au travail. Les modes d'évaluation cette incapacité dans chacun de ces différents pays ont été décrits. L'objectif était de déterminer si les différences dans ces modes d'évaluation étaient liés aux différences de critères juridiques.

Méthodes : Un modèle décrivant les processus d'évaluation, le concept du rôle social de la personne handicapée ainsi que la Classification internationale du fonctionnement, du handicap et de la santé ont servi d'outils d'analyse. L'information sur 15 pays évalués a été recueillie par une revue de la littérature, un questionnaire rempli par des correspondants locaux et des entretiens.

Résultats : Les processus d'évaluation montrent des différences en termes de procédures, d'intervention d'évaluateurs professionnels et de durée. Ces différences ne sont pas liées à des différences dans les critères d'évaluation. Les critères légaux sont formulés en termes généraux et sont assez semblables. Les demandeurs, les textes officiels applicables et les évaluateurs déterminent en partie le processus d'évaluation. Les institutions d'assurance sociale, les associations professionnelles d'évaluateurs, et les instances juridiques interviennent également dans la détermination de ces processus. Les évaluations peuvent être de types médical, fonctionnel, ou en relation avec les possibilités de réinsertion socioprofessionnelle. Les évaluations médicales sont universellement utilisées, souvent en association avec l'un ou les deux autres types de critères. Le contrôle de qualité est souvent inclus dans le processus lui-même.

Conclusion : Les critères d'incapacité de travail sont très semblables entre les pays mais leur mise en application diffèrent. Nos résultats peuvent contribuer à l'évolution des pratiques actuelles. Des améliorations sont aussi envisageables dans le contrôle de qualité. La description des modes opérationnels du handicap peut être utile dans la comparaison des processus d'évaluation décrits. Le modèle décrivant les processus s'est avéré être un outil utile pour mesurer l'influence des acteurs sur les processus d'évaluation de l'invalidité.

Prat Organ Soins 2007;38(3):205-217

Mots-clés : incapacité ; personnes handicapées ; évaluation incapacité ; évaluation capacité professionnelle ; rééducation et réadaptation ; réadaptation professionnelle ; indemnité travailleurs ; détermination de prise en charge ; assurance invalidité.

Summary

Aim: Legislation, concepts and approaches in social insurance differ between countries. In 2002 and 2003, a comparison of the organisation of work disability evaluation was carried out in 15 countries. The disability evaluation processes in each of these different countries was described. The aim was to determine whether differences in these processes were attributable to differences in legal criteria.

Methods: A script model of evaluations, the handicapped role and the International Classification of Functioning served as tools for analysis. Information on 15 countries was collected by means of desk research, a questionnaire study and interviews.

Results: Evaluation processes show differences in terms of steps involved, use of professional assessors and time consumption. These differences do not correspond to differences in criteria. Legal criteria are formulated in general terms and are fairly similar. Claimants, the law and assessors partly determine the evaluation process. Institutes of Social Insurance, assessors' professional associations, and tribunals also determine the processes. Assessments can be medical, functional or rehabilitational in nature. Medical assessments are universally employed, often in combination with one or both of these other types of assessment. Quality control is incorporated primarily in the process itself.

Conclusion: Criteria for work disability are very similar between countries but their applications differ. Our results can be used for fine-tuning or re-design of current practices. In quality control, there is room for improvement. The types of operationalisation may be helpful in comparing assessments. The script model was found to be a useful tool for elucidating the influence of actors on disability evaluation processes.

Prat Organ Soins 2007;38(3):205-217

Keywords : disability; disabled persons; disability evaluation; work capacity evaluation; rehabilitation; rehabilitation, vocational; workers' compensation; eligibility determination; insurance, disability.

¹ Senior researcher, TNO Quality of Life, The Netherlands.

² Senior researcher TNO Quality of Life, The Netherlands.

³ Professor of insurance medicine, Academic Medical Centre, University of Amsterdam, The Netherlands.

INTRODUCTION

Social security is an important focus of political activity in many countries. Today's societies set great store by promoting individual participation in society and reducing dependence on social benefits. In order to achieve these goals, governments have developed and implemented policies containing elements of income support and integration [1], as well as strategies for the prevention of disease and disability. A comparison of practices and effects between one country and another is an important element in the adaptation of policies [2]. As yet, little is known about how the structure of the social security system influences the prevalence of disability pensions [3].

The evaluation of work disability is a major issue within the context of disability policies. Studies of these evaluations tend to focus on sick leave [4]. Much less attention has been devoted to the problem of long-term incapacity for work [5].

The work disability evaluation process is associated with many problems concerning criteria, policy, and implementation [6, 7, 8]. Increasingly, these evaluations have come to be seen as instruments designed to support policies that encourage people with disabilities to work. However, there are a number of problems in this regard [9, 10]. It is difficult to compare the effectiveness of these policies. This is because the criteria for work disability differ from one country to another, as does the way in which they are applied [4, 11]. While the nature and use of work disability assessments has been researched in the Netherlands [12, 13, 14], the assessments themselves are regarded as something of a black box. It is commonly thought that assessors have great latitude in their decisions, as legal definitions are formulated in very general terms [15, 16, 17]. However, assessments are not conducted in a vacuum by the assessor and claimant. As pointed out by Stone [8] and Teulings [18], assessments take place in Institutes of Social Insurance (ISI) which actually organise processes of disability evaluation. These processes, in turn, include their own assessments. This situation has been studied empirically by Mabbett [17] and by the Council of Europe [19]. It is at the level of ISI that a balance is sought between equity and responsiveness. The uniform application of legal criteria is balanced by assessments of the individual's problems, needs and capacities [19]. Here too, the tenets of the general legal text are translated into terms applicable to a given individual medical case before being put into practice [8].

We compared disability evaluations in 15 different countries, to enhance the body of knowledge in this area. The core research questions used in this comparative study are listed below.

- How are disability evaluations structured in the countries under study?

- Are differences in structure attributable to differences in legal criteria?

This study examines disability evaluations in the context of public programmes designed to protect individuals from a loss of income due to work disability. It focuses specifically on long-term disability.

Our aim was to explore the structure of disability evaluations (see question 1), so we did not simply assume that the law would be passively applied by all those involved. Instead we used a constructivist approach, which made allowance for the translation of legal criteria into administrative and professional actions. Here we focused on the level of Institutes of Social Insurance. Our aim was to describe the process as it is currently structured. We endeavoured to identify the actors and factors that influence the process. One such factor is clearly the legal criteria, but there may well be others.

Following Donabedian [20] we looked at process, structure and outcome of the evaluation of disability. We adopted a straightforward approach to process description. This involved the use of sequential process steps, commencing at the start of sick leave and concluding at the end of the appeal and reassessment procedure. The aim of this approach was to identify the steps involved in actual assessments, and the actors who implement them. We paid attention to elements of quality control that might be included in the process itself or imposed on top of it [20, 21]. Quality control may aim at administrative quality (time consumption, completeness of dossier), legal quality (accordance with legal requirements) and professional quality (proper use of knowledge and instruments) [22]. We were especially interested in professional quality. The structure of the assessments themselves was studied using a script model of judgment making [22, 23]. Hofstee [22] describes the making of a judgment as more than just a technical process, arguing that it is also a way in which people deal with each other. On this basis, Hofstee determines the roles that key actors have in judgment making in general. This basically concerns the individual who is judged, the professional who makes the judgment, the contractor of the judgments and an authority to guarantee that parties operate in accordance with the rules. This basic approach can be adapted for different situations. According to the extended script model [23], disability evaluations can be expected to involve interactions between a number of parties, apart from claimant and assessor. The first party is the lawmaker (who establishes the legal framework, the criteria and the implementing institution). The second party is the Institute of Social Insurance (ISI hires the professionals needed to assess the claims, supports them and monitors them by means of requirements regarding process and output). ISIs are responsible for implementing the law on disability for work. These can be independent institutions (as in Italy and the

Netherlands), part of the Ministry of Social Affairs (as in the United Kingdom), the municipality (as in Denmark) or the health fund (as in France). The third party is the professional group of assessors (generally health care physicians who apply medical techniques and provide their expertise, as well as setting socio-medical norms.) Fourth are the tribunals (which intervene in the interpretation of legal criteria, and establish jurisprudence) and fifth an external supervising body (that provides checks and balances in order to ensure that evaluations are conducted properly). This model is depicted in Figure 1. In this study we took the report of the assessors to be the outcome of the processes.

We focused specifically on the relationship between ISIs and assessors. As previously indicated, this relationship is where the legal criteria intended to guide assessors are operationalised [8].

In addressing the second question (“Are differences in structure attributable to differences in legal criteria?”), we focused on those criteria that define the status of disability in terms of the sociological concept of the handicapped role [19, 24]. This concept is an adaptation of the concept of the sick role, taking account of long term disability [25]. The sick role defines the role expectations that exist between the sick individual and people in his social environment. The handicapped defines the role expectations that exist between disabled individuals and those in their social environment. With regard to work di-

sability the handicapped role involves the following issues:

- the claimants’ abilities (or inabilities) to do work that one could reasonably expect them to perform;
- health conditions that account for these abilities (or inabilities);
- opportunities and obligations to undergo treatment and rehabilitation.

We omitted non-categorical requirements for obtaining benefits, such as premium history, type of labour contract etc. These are factors that can help individuals to obtain benefits, but they are not involved in the evaluation of the disability itself.

Drawing on experience obtained in previous studies, we explored different phrasings of the criteria in question. An inability to work can be defined as a lack of labour capacity or earning capacity [17]. The health condition may, in accordance with the International Classification of Functioning, Disability and Health (ICF) [26], refer to impairments of body structure and function, anatomical damage (e.g., the loss of body parts), to restrictions of activities (sitting, lifting, concentrating) and to participation (in work and possibly other domains).

In describing our findings, we use the term “assessment” to refer to the assessment by a professional, most often a medical assessor. The term “disability evaluation” refers to the entire processing of the claim up to the final decision, a process that involves other people, including case

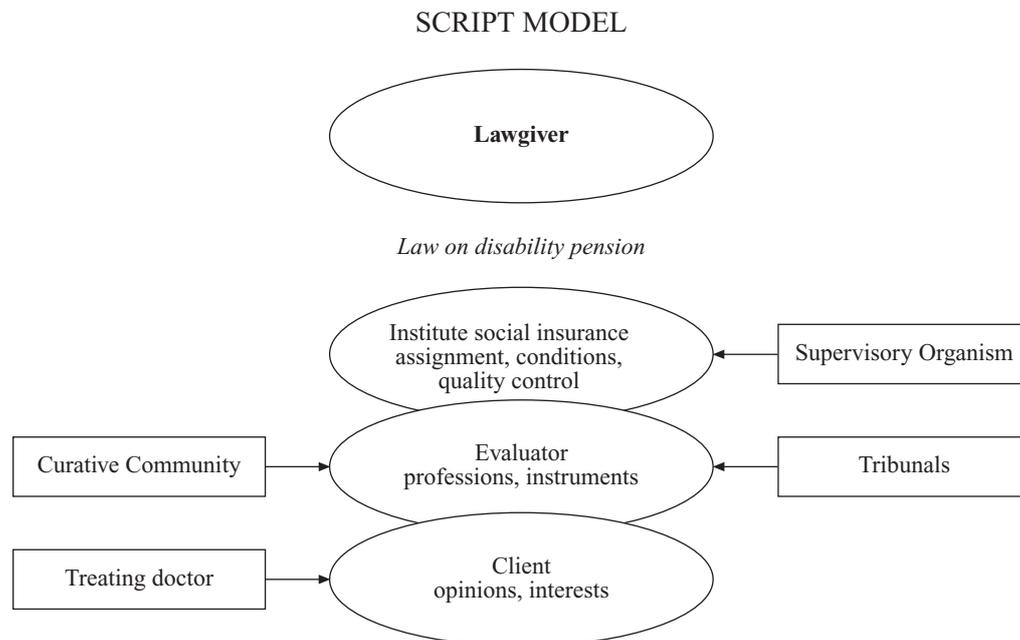


Figure 1. The extended script model.

managers (community employees, usually trained social workers) and administrative staff.

METHODS

The research project was carried out by a group of twelve researchers based in the Netherlands: two from the Dutch Ministry of Social Affairs and Employment, two from the Institute of Social Insurance in the Netherlands (UWV) and eight from the Netherlands Organization for Applied Scientific Research (TNO).

1. Questionnaire and interview

We drafted and fine-tuned a questionnaire by means of an iterative process that involved an examination of the literature, policies and practices with which we were familiar. The questionnaire addressed the following issues:

- the main characteristics of the long-term disability provisions under investigation (name of scheme, position in health field or other precise criteria, etc.);
- the actors involved in the assessment procedure (profession, education, relationships between assessors, etc.);
- the characteristics of the assessment procedure and the process steps involved (input, throughput and output, time schedule, formal power of decision, etc.);
- quality control (inherent to the process, imposed on the process, measurements, feedback, etc.).

2. Procedure

In each of the states involved, the chief medical advisors of the ISIs head office were responsible for answering or distributing the questionnaire. An ISI generally has one medical doctor who is in charge of the professional work carried out by physicians in the course of assessments. These medical officers are more intimately involved than anyone else in the issues being addressed in the present study. These individuals were approached through the channels of the European Union of Medicine in Assurance and Social Security (EUMASS) network¹. They were encouraged to invite others in their organisation to participate, if they felt the individuals in question might be able to contribute to a better understanding of the process. This resulted in the participation of medical and non-medical officers, managers, quality controllers, and other experts. Questionnaires were sent to and completed in the following countries: Belgium (BE), Denmark (DK), Finland (FI), France (FR), Germany (DE), Great Britain (GB), Hungary (HU), Ireland (IE), Italy (IT), the Netherlands (NL), Norway (NO), the Russian Federation (RU), Slovenia (SI), Spain (ES), and the USA (US).

After filling in and returning their questionnaires, the respondents were interviewed concerning the answers that they had supplied. These semi-structured interviews were conducted in person, by teams of two researchers. The completed questionnaires were submitted to the respondents for final approval.

Interviews of this type were conducted in Belgium, Denmark, Finland, France, Great Britain, Hungary, Italy, the Russian Federation, Slovenia and Spain. The other countries (Germany, Ireland, the Netherlands, Norway and USA) had recently been visited in connection with other research projects related to disability issues. These were studied using the questionnaire alone. The researchers involved in this study contacted all respondents by e-mail in order to check the accuracy of the answers and interpretations that the researchers had noted.

The fieldwork in question took place between September 2002 and April 2003.

RESULTS

1. disability evaluation process

a) Process steps

Using information derived from the questionnaires and interviews, we combined all of the steps involved in disability evaluations conducted by the Institutes of Social Insurance (ISI). This made it possible to identify the steps taken in each of the countries involved. The process model is presented in Figure 2. The process entails a period of sick leave, the actual assessment, the formalisation of the decision, and the establishment of an interface with those involved in the rehabilitation process. This involves a total of 11 steps.

In general, claimants go through a period of sick leave before applying for disability benefits. This 'waiting period' may be of fixed duration or it may be determined in each individual case. We found duration to range from 28 weeks (GB, short term Invalidity Benefit) to five years (DK). Belgium, Ireland, the Netherlands and Great Britain all had a fixed waiting period. The relevant legislation in Hungary and the Russian Federation does not define any waiting period at all.

The period of sick leave can include steps 1 and 2.

Step 1. The ISI may intervene during the period of sick leave. In France, the Medical Advisor must approve treatment and the sick leave after a period of 120 days has

¹ The European Union of Medicine in Assurance and Social Security (EUMASS) is a network of associations of medical doctors working in this field.

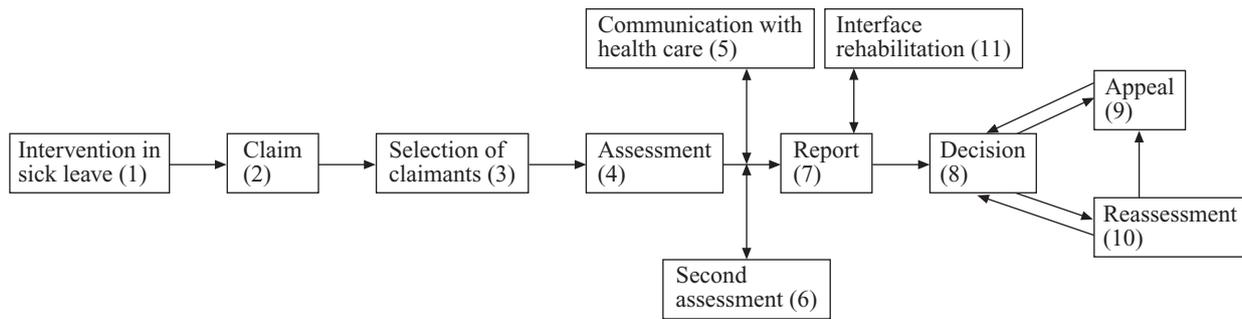


Figure 2. The process steps.

elapsed. In Germany and Norway, the Medical Advisor can prescribe rehabilitation before a claim is assessed. In the Netherlands, vocational rehabilitation is examined after 270 days, and must be approved before a claim can be processed. In Denmark, all actions taken by municipal authorities focus on rehabilitation and reintegration; disability will be considered only if rehabilitation efforts fail. ISIs in other countries do not practice any form of intervention.

Step 2. Claiming the benefit. This is generally done by claimants themselves, and only rarely by the attendant physicians (ES, RU). The application form (where applicable) contains details of the claim itself, in combination with information of a medical, social and historical nature. Most of this information concerns treatment and/or rehabilitation. Generally, these claims are submitted to the ISI².

The disability assessment may include steps 3, 4, 5 and 6.

Step 3. Claimant selection may be carried out, in order to match claimants with the best qualified assessors (SI, RU) or to award benefits to individuals whose case is so clear-cut that they are exempt from further assessment. This could be done on the basis of disease lists or the severity of the medical condition (GB, IE, NO, US).

Step 4. The actual assessment is carried out by a medical doctor (except in the US). This is often done in combination with other experts. The doctors involved are usually ISI employees. Some work on a case basis for ISI and have their own clinical practice (RU, SI), in GB they work for a private organisation that is contracted by the ISI to perform the assessments.

Method of assessment

We found the following assessment methods in the countries under study:

- assessments conducted in person (FR, HU, IE, IT, NL, RU, SI, ES);
- assessments based on a paper dossier, if necessary completed by an examination conducted in person (BE, FI, DE, GB, NO, US).

In some countries, assessments involve more than one assessor. There may be one or more additional physicians (BE, IT, RU), or a multidisciplinary team (ES, SI). In other countries, assessments are performed by a single ISI physician (FR, IE, NL). If the assessment is inconclusive, extra-information may be gathered. In the United Kingdom the physician works for a private organisation that does assessments for the British ISI.

In Denmark, evaluation is part of the process of rehabilitation and reintegration. The case manager is the one who controls this process. He consults a medical advisor and other experts when he finds this necessary. In this model, there is no single, distinct assessment. This is because case managers tend to request assessments at various points during the period of rehabilitation and reintegration.

Step 5. Allowance is usually made for some form of communication with health care professionals. In most countries, the attendant physicians are involved in issuing sick leave certificates but play no part in determining the disability pension. In general, health care professionals are only required to provide medical information. They are not required to give their opinion regarding eligibility. In exceptional cases, health care professionals are required to devise the disability evaluation process themselves (NO, RU).

Step 6. Some countries (DE, NL) include an extra-step. This is performed by a non-medical labour expert, who studies the claimant's options on the labour market in the light of the details of their medical report. In the USA, a separate step is taken by the central agency of the ISI.

² In Finland, claims are processed simultaneously by a public and a private fund. The two bodies work in close cooperation. This article examines elements from the public processing. Italy's public fund can grant a disability pension (reduction of working capacity over 2/3 and temporary) or an invalidity pension (full loss of working capacity and permanent). If necessary for this article both will be specified.

This pre-effectuation review, which is carried out by the central staff of the ISI, involves a check of the accuracy of all decisions to grant a disability pension.

After the assessment, the judgment is formalised. This is a process that can include steps 7, 8, 9 and 10.

Step 7. Drafting a report. In some countries, these reports tend to be brief, containing only the advice if the claimant meets the medical criteria and when he/she is to receive a pension (BE) while in others they can be relatively lengthy, containing a full description of the situation, argumentation and conclusions (NL, DE). In GB and NL, these reports are structured in accordance with standard formats.

Step 8. A formal decision is taken by a social insurance officer (except in BE, FR and RU, where it is the medical advisor who decides the matter, and in DE, where this is done by the labour expert). In practice, the social insurance officer almost always decides in line with the assessor's recommendations.

Step 9. Appeals are always possible, first within the Institute of Social Insurance, and thereafter at a judiciary level.

Step 10. Reassessment is almost always possible (except in IE, IT and NO). Reassessments are basically very similar to primary assessments, although their timing and degree of thoroughness may vary greatly. In Finland, Germany, Italy, the Netherlands (first reassessment), and the USA a fixed period must elapse before recourse is made to reassessment. In Belgium, France, Hungary, the Netherlands (further reassessments), the Russian Federation, Spain, and the UK, the timing of reassessment may vary.

Finally, in some cases, there may be an eleventh step.

Step 11. In several countries, dealings with rehabilitation structures run parallel to the actual assessments. Claimants may be given a copy of a report containing details of their capacities, together with recommendations regarding their rehabilitation or reintegration. This is done in order to enhance their chances of returning to work. However, as this step falls beyond the scope of our study, we will not discuss it in further details here.

The duration of the entire process differs greatly from one country to another. The interval between the submission of a claim and the moment when a final decision is made varies from approximately five days (RU) to three or four months (many countries).

The production time of the assessment process, i.e. the amount of time spent on the actual assessment by all the as-

sessors concerned, also exhibits a good deal of variation. Totalling the time required for each of the individual steps (as estimated by the respondents) gives production times that vary from under an hour (RU) to 6^{1/2} hours (NL).

b) Primary goal of the assessment process

The goal of the assessment may not be limited to checking the claimant's entitlement to disability benefits, it may also include the promotion of their rehabilitation/reintegration. We found verification of disability criteria to be the primary goal of the assessment process in Belgium, Finland, Ireland, Italy, the Netherlands, Norway, Spain, and the USA. The assessment goals listed for Denmark, France, Great Britain, Hungary, Slovenia and the Russian Federation included both verification of entitlement *and* the promotion of rehabilitation/ reintegration.

c) Actors involved

Having identified the individual steps in the assessment process, we now turn to the actors involved in assessments.

The first actor is, of course, the claimant. He/she is involved in every step of the process, either in person or in the form of their dossier. They claim benefit, support this claim by providing various arguments, and submit to a medical examination. The second actor is the assessor, who is generally a medical advisor, and who often works in conjunction with other assessors. Medical advisors establish a relevant picture of the claimant's state of health and its implications for the claimant's capacity to work. The Russian Federation, Spain, and Slovenia use committees consisting of several medical advisors. In Belgium, Denmark, Hungary, Italy, Norway and the USA, the number of assessors can depend on the specific case in question. In Denmark and Slovenia, the details of how the assessment is to be organised are decided by a case manager.

In some countries (DE, ES, NL, SI), labour experts are routinely involved. As specialists in labour market conditions and job demands, it is the labour experts' task to establish the relationship between disease, impairment, or functional capacity and participation in labour.

In most countries, it is an administrative officer who formally makes the final decision, not the medical assessor. However, this formal decision is usually in accord with the latter's recommendations.

The ISI determines both the disability evaluation process and the way in which the legal criteria are put into effect

(see below). As a result, the ISI is able to influence the process at a very fundamental level.

Assessors are usually medical doctors who are employed by the ISI. Curative health care professionals may be routinely involved in assessments (NO, US, RU) or, depending on the individual case in question, they may be called in at the request of ISI physicians (e.g. IT and NL). Curative health care also has a structural influence, both through professional education and in the establishment of medical norms. In Russia the ISI actively trains attending physicians to be aware of the effect of their treatment and of their professional advice.

Tribunals also have an influence, both at the individual level and at the structural level. The former is exemplified by the way in which their rulings influence the handling of individual cases. We encountered examples of structural influence involving the establishment of case law, the verdicts handed down in appeal cases, and the tribunals charged with the interpretation of the law. This case law is generally incorporated into the instructions that the ISI gives to its assessors. We did not examine the influence of case law in each individual country.

In the script model, the expectation is that an external supervisory body will counterbalance any potential deviations within the ISI. Interestingly, the respondents cited supervisory bodies less frequently than all other sources of influence. In our study, the Netherlands appeared to be the only country to have a supervisory body (the CTSV) with a well defined influence (within a format established for checking reports). Rather than contenting itself with merely issuing this report format, CTSV also insisted that it be routinely used within the Dutch ISI as an internal quality control instrument. The Dutch ISI was required to publish annual reports on this issue, which CTSV verified by sampling physicians' reports. In other countries, organisations such as the Ministry of Social Affairs or the US General Accounting Office check the statistics either on a regular basis, or by random sampling.

d) Quality control

To some extent, evaluation processes incorporate provisions for quality control. Several methods are included in the process steps described above.

- 1) Process input (the selection of claimants for appropriate forms of assessment).
- 2) The process itself (the number and type of assessors can influence the reliability and validity of the assessment).
- 3) The professionals involved (qualification for the case in question).

- 4) Process output (report forms can structure the decision and the reasoning).

All of these methods facilitate the task of controlling the quality of the professional (medical and non-medical), legal, and administrative processes.

Provisions for quality control are not limited to the structure of the process itself. External controls may also be imposed. This requires the identification of specific criteria.

The quality criteria, together with the indicators and standards for the quality of the assessment process reported by our respondents, were defined with different levels of precision. Timeliness appears to be clearly defined and monitored. Legal validity is monitored using the results of appeal procedures. However, the quality of decisions (validity and reliability) is poorly defined. In those countries where the monitoring of decision quality does take place, this primarily involves inspections of the individual dossiers (e.g. FR, NL, US). In the Netherlands, the dossiers are inspected using an instrument issued by the external supervisory body. This instrument defines the mandatory items to be included in the report. It also provides some general criteria governing the plausibility and consistency of the findings and reasoning involved.

Other quality control procedures

The respondents cited various other provisions for controlling the quality of assessments. These ranged from consultation between colleagues (peer review) to professional and continuous education, coaching, dedicated forms, protocols, guidelines and other bibliographical references. In some countries, such as Slovenia, appeals are used to improve the quality of assessments. Individual feedback from ISI medical staff to assessors appears to be common practice in the majority of the countries examined. We did not obtain a clear picture of these internal systems for providing feedback. This may vary from one region to another, and even from one individual to another. In some countries, (BE HU), the assessors' performance is compared to that of other assessors.

On the whole, in the course of the interviews our respondents indicated that the quality control of decisions was an issue of growing importance, and one for which definitive solutions have yet to be found.

2. Relationship between the disability assessment process and legal criteria

We explored the relationship between the process of disability evaluation and the legal criteria for disability by examining the way in which these elements are defined. The results are presented in Table 1.

Table 1. Comparison of criteria, operationalisation and disability evaluation.

	Belgium	Denmark	Finland	France	Germany	Great Britain	Hungary	Ireland	Italy	Netherlands	Norway	Russian Federation	Slovenia	Spain	United States of America
	BE (IP)	DK	FI	FR	DE	GB	HU	IE	IT	NL	NO	RU	SI	ES	USA
Concept of disability	carving capacity	labour capacity	labour capacity	labour capacity + carving capacity	labour capacity	labour capacity	labour capacity	labour capacity	labour capacity	carving capacity	labour capacity + carving capacity	labour capacity	labour capacity	labour capacity	labour capacity
Waiting time before disability	1 year	variable, max 5 years	flexible, max 300 working days	variable, max 3 years	flexible	28 weeks (short term IB); 1 year (long term IB)	undefined	12 months	12 months	52 weeks	flexible	undefined	undefined	flexible max 18 months	flexible
Levels of disability	1	1	1	2 (+1)	2	1	3	1	1	7 (+1)	6	2 (+1)	3	4	1
Time schedule reassessment	flexible	no reassessments	no reassessments	flexible, within 3 years	every 3 years	flexible	flexible or permanent	no reassessments	every 3 years (IP) or permanent (DP)	1st after 1 year, then after 5 years	no reassessments	flexible	Until 45 years every 5 years; over 45 years flexible	2 years	7 years
Operationalisation	medical + functional	medical + functional + rehabilitation	medical	medical + rehabilitation	medical + rehabilitation	medical + functional	medical	medical + functional	medical	medical + functional + rehabilitation	medical + rehabilitation	medical	medical + functional	medical + functional	medical + functional

Table 1. Comparison of criteria, operationalisation and disability evaluation.

	Belgium	Denmark	Finland	France	Germany	Great Britain	Hungary	Ireland	Italy	Netherlands	Norway	Russian Federation	Slovenia	Spain	United States of America
	BE (IP)	DK	FI	FR	DE	GB	HU	IE	IT	NL	NO	RU	SI	ES	USA
Assessors disability	medical advisor; committee of doctors	case manager; experts as needed; medical, psychological, job consultant	medical advisor	medical advisor	medical advisor; labour expert	adjudicator in social insurance medical advisor of S. Sema	2 medical advisors	medical advisor	medical advisor; medical specialists	medical advisor; labour expert	general practitioner	3 social insurance clinical specialists	case manager; 2 social insurance clinical specialists, labour expert	medical advisor; labour expert; administrative employee	adjudicator medical or psychological consultant
Goal of the assessment	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement	check entitlement
		+		+	+	+	+					+			
		promotion rehabilitation		promotion rehabilitation	promotion rehabilitation	promotion rehabilitation	promotion rehabilitation					promotion rehabilitation			
Method of assessment	paper file, in necessary face to face	face to face	paper file	face to face	paper file, in necessary face to face	paper file, in necessary face to face	face to face	face to face	face to face	face to face	face to face	face to face	face to face	face to face	paper file, in necessary face to face
Decision taker	medical advisor or committee of doctors	case manager municipal	social insurance officer	medical advisor	labour expert	social insurance officer	social insurance officer	social insurance officer	social insurance officer	social insurance officer	social insurance officer	medical advisors	social insurance officer	provincial director of ISI	social insurance officer

a) Legal definition of disability

As previously stated, definitions of the criteria for disability can vary greatly from one country to another. However, they are broadly based on the following common elements:

- the claimant's ability (or inability) to perform work that one could reasonably expect from a worker in their profession;
- health conditions that account for these abilities (or inabilities);
- opportunities and obligations to undergo treatment / reintegration.

The claimant's ability (or inability) to perform work that one could reasonably expect from a worker in their profession can be described in terms of different concepts. In the regulations that we examined, no reference was made to the claimant's own work, only to work in general (although the exact wording differed from one case to another). According to the ICF, disability can be seen as damage to the organism. This is an approach that focuses on medical signs and symptoms. Disability can also be seen as a characteristic of the individual, by focusing on a restriction of their capacity to function. Alternatively, it can be viewed as a relationship between the individual and society, focusing on a limited capacity to earn money (a criterion of participation). We found differences between the countries in this study in terms of the prevailing concept of disability:

- Earning capacity (Belgium and the Netherlands);
- Combination of labour capacity and earning capacity (France and Norway);
- Labour capacity (the 11 remaining countries).

In none of the programmes in this study damage to the organism itself, or restriction of functional capacity, was used as the sole criterion for determining disability. These criteria are used in combination with the participation criteria: there is always a connection with the claimant's actual work or possibility to work in some type of work. The requirement concerning damage to the organism is introduced by the underlying health condition that accounts for the limitations in question. All legal definitions of disability are couched in terms of damage to health. The exact phrasing varies from one definition to another, but they do not differentiate between health conditions on the grounds of their "acceptability". Examples of phraseology include: "as a direct result of the appearance, or the aggravation, of injuries or functional impairments"(BE); "due to illness, handicap or injury" (FI); "the general state of health, age, physical and mental faculties"(FR); and "any physical or mental impairment" (US).

The least explicit definition of health encountered in this

study was the one used by Denmark: "a permanent reduction in the ability to work".

Only in Norway and Spain do the legal criteria of disability make specific mention of opportunities and obligations to undergo professional reintegration. While other countries do have rehabilitation requirements, they make no mention of these in their legal criteria (DK, FR, DE, NL).

Work disability can be a matter of full or partial disability. It may also be expressed in terms of different levels or categories, indicating partial disability for work (FR, DE, HU, NO, NL, RU, SI, ES). In some countries, an extra level or category is reserved for disabled people who need constant third party assistance (FR, NL, RU).

We attempted to find a relationship between the legal definitions (including the concepts used) and elements of the processes' structure. As can be seen in Table 1, the criteria for a given concept of disability (labour capacity or earning capacity) are not significantly reflected in the structure of the evaluations. Table 1 also illustrates that any combination of structure, criterion, or concept appears to be possible.

b) Operationalisation of disability

The legal definition of disability is formulated in very general terms, so it is open to many different interpretations. There is a need to translate this definition into a more detailed concept, one that can be implemented by the assessors. An examination of the decision, and of its mandatory underlying arguments, reveals three types of operationalisation:

- medical operationalisation, which is characterised by an emphasis on symptoms, diagnoses and impairments. These findings, in themselves, call for decisions regarding disability;
- functional operationalisation, which is characterised by an emphasis on activity (or activity restrictions). These findings lead, either in themselves or through job matching, to decisions regarding disability;
- operationalisation of Rehabilitation, which is characterised by an emphasis on the options for rehabilitation, and on previous experience with this approach. These findings also lead to decisions on disability.

Using this typology, we found the following forms of operationalisation in the countries studied here:

- purely medical (FI, HU, IT, RU, US);
- medical combined with functional (IE, SI, ES, GB);
- medical combined with rehabilitation (BE, FR, NO);
- medical combined with functional and rehabilitation (DK, DE, NL).

Medical operationalisation is always involved, often in combination with functional and/or rehabilitative operationalisation.

Table 2 presents a comparison of the concept of disability (earning capacity and/or labour capacity) and the way in which the definition is operationalised. As can be seen, almost every country uses labour capacity; this is divided between all forms of operationalisation. Two countries use earning capacity, but operationalise it in different ways. The combined medical and rehabilitative operationalisation includes labour capacity and earning capacity.

Table 2. Relationship between concepts of disability and operationalisation of disability.

Operationalisation	Medical	Medical + functional	Medical + rehabilitation	Medical + functional + rehabilitation
Concept				
Labour capacity	Finland, Hungary, Italy, Russian Federation	Ireland, Slovenia, Spain, Great Britain, USA	Germany	Denmark
Earning capacity			Belgium	Netherlands

DISCUSSION

This article presents the results of a comparative study of disability evaluations in 15 countries. Studies of this type are susceptible to bias, so detailed comparisons were made between our results [27] and those obtained by Mabbett *et al.* [17] and by the Council of Europe [19]. As a result, we feel confident that we have obtained a good picture of the structure of the evaluation process and of the assessments involved, both from the standpoint of the Institute of Social Insurance and that of the assessors.

The picture we obtained is presented from the central perspective of the ISI. As a result, local or regional differences in structure, if existing, are not detected. In addition, our study concentrated primarily on structures, rather than practices. The actual practices used may vary considerably, depending on the nature of the individual professionals [14, 28], claimants [15, 29] and administrative issues involved [13, 15, 29]. The disability evaluations examined by this study took place in late 2002 and early 2003. Though some findings may therefore be outdated by the time this paper is published, we are convinced that the conceptual findings remain valid.

The sequential process model appears to be an effective instrument for describing the processes of disability evaluation with a view to identifying similarities and differences

between programmes. The individual processes were found to differ considerably in terms of process steps and duration. In the Russian Federation, three medical specialists are first supplied with extensive details about the claimant from health care sources. These specialists then simultaneously assess the claimant for a period of 15 minutes, which greatly shortens the production time. A report is not asked from them, just a decision. The entire runtime of the process is also very short (five days) as assessors are readily available and no other provisions are needed to produce the evaluations. The final decision emerges from a discussion between these specialists, during which time only very brief notes are taken. Production times in the Netherlands tend to be very protracted. This is because the physician and the labour expert have to do all the information gathering themselves. They are also required to submit a very extensive report, and to conduct job matching using the national database. The identification of differences in the way that such processes are organised may be of use when countries are thinking about redesigning disability evaluation procedures.

The handicapped role [24] appears to be an effective instrument for comparing legal criteria, as far as disability evaluations are concerned. By this means, we identified many similarities and differences between legal criteria, and in the ways in which they are put into effect. This supports the constructivist approach [15; 16], in which details of organisation and practice are only partly laid down by the law. There are diverse definitions of earning capacity and labour capacity, or of the need for rehabilitation. To say whether this variety corresponds to differences in the actual assessments will require further, more specific study.

The extended script model [23] is useful in identifying influential actors. We were able to obtain a good picture of all those actors whose involvement was predicted, with the exception of external supervisory bodies. We made no attempt to determine whether each of these actors actually possessed the range of influence predicted by the extended script model, as that would have required a longitudinal approach.

ICF [26] is helpful in distinguishing one type of assessment from another. We found three different types (and combinations thereof). This corresponds, in part, to the Council of Europe's typology, particularly with regard to the functional and economic types of assessment. Our three categories offer an impression of the assessment process itself, as they highlight the information gathered and the reasoning presented. The extent to which the typology corresponds to differences in methods and instruments of assessment is still largely a matter of conjecture. It needs to be studied in greater detail.

As noted in the introduction to this article, it is difficult to evaluate the effectiveness of the work disability provisions in each of the countries investigated in this study. Part of the problem is the difficulty inherent in attempts to describe and compare the different countries' disability evaluations. In our view, the models used in this study were helpful in furthering our understanding of these processes. We were able to describe how these evaluations are structured in the various countries. The evaluations were found to differ, they showed certain typologies that led to the legal criteria being operationalised differently in assessment practices. These differences were not fully attributable to differences in legal criteria. If the ways in which these criteria are put into effect (as identified by this study) are indeed strong determinants of assessment, then this would indicate that social policy is shaped more by the ISI and less by legislators. This conclusion has important implications for governments that, from time to time, seek to steer social policy by redefining legal criteria [2].

Our understanding of the assessments is still hampered by at least two important questions, which we will briefly address here. The first of these is: *What is the relationship between the models used?* In the assessment of disability, an individual connection is made between the legal criteria and the claimant's medical condition. We can define this as a connection between an interpretation of the handicapped role and an interpretation of ICF. These two exhibit areas of overlap, as well as differences. Both make a connection between illness and participation in society but ICF lacks a time perspective, and the grading of normality and disability is unclear in both. It would be interesting to compare assessment procedures, including instruments, in different implementations. This would make it possible to determine whether assessments – at the case level – exhibit differences in medical reasoning and in the use of instruments, and whether these lead to different results. A taxonomy of functional assessment [30] would offer a framework for identifying instruments of assessment. The value of these instruments within social security systems is still open to debate at a fundamental level [31]. This kind of research would foster the development of robust practices of disability evaluation, particularly with respect to quality control [32].

The second question is: *What is the relationship between practice and structure?* Individual assessors deal with individual claimants, each of whom has a specific situation and specific needs. Teulings *et al.* [18] showed that the application of social security provisions leads to fundamental dilemmas that must be addressed at the individual level. To what extent are rules, process structure and instruments helpful in harmonising equity and responsiveness between claimants? Then there is the element of

assessor reliability at the individual and group levels. The rigour of decision-making in this context is a matter of conjecture [14, 33]. This intrinsic problem is compounded by a relational uncertainty. To what extent do the elements of pity and conflict-avoidance dominate individual decision-making [28]?

Given the importance of disability evaluation, and the fact that it is vulnerable to a variety of factors, one might expect certain safeguards to be in place. Possibly in the form of well-established managerial units, either inside or outside the ISIs, that monitor and correct the process of evaluation. By and large, however, quality control appears to be more implicit than explicit and systematic. Our respondents report that the criteria and standards governing the quality of the assessment process are defined in a fairly general terms. The quality of the final decision is usually monitored only by the inspection of dossiers at the ISI and – on rare occasions – by external parties. Our respondents indicated that several countries were engaged in developing full-blown quality systems. While this is an interesting development, it is by no means sure that it will solve all of the present problems. Even in a relatively refined system, such as that used in the Netherlands, full compliance with, and harmonised application of, the rules and regulations is still difficult [34].

REFERENCES

1. Organisation for Economic Co-operation and Development (OECD). *Transforming Disability into Ability. Policies to Promote Work and Income Security for Disabled People*. Paris: OECD; 2003.
2. Prinz C. *European Disability Pension Policies. 11 Country Trends 1970-2002*. Vienna: European Centre; 2003.
3. Alexanderson K, Norlund A. *Swedish Council on Technology Assessment in Health Care (SBU). Chapter 1. Aim, background, key concepts, regulations, and current statistics*. *Scand J Public Health Suppl*. 2004; 63:12-30.
4. Allebeck P, Mastekaasa A. *Chapter 5. Risk factors for sick leave - general studies*. *Scand J Public Health Suppl* 2004;63:49-108.
5. Aarts L, de Jong PhR. *The Dutch Disability Experience*. In: Prinz C, ed. *European Disability Pension Policies. 11 Country Trends 1970-2002*. Vienna: European Centre; 2003.
6. De Jong PhR. *Disability and Disability Insurance*. In: Prinz C, ed. *European Disability Pension Policies. 11 Country Trends 1970-2002*. Vienna: European Centre; 2003.
7. Marin B. *Welfare Studies and the OECD Report 2003*. In:

- Prinz C, ed. *European Disability Pension Policies. 11 Country Trends 1970-2002*. Vienna: European Centre; 2003.
8. Stone D. *The disabled state*. London: MacMillan; 1985.
9. Grammenos S. *Illness, disability and social inclusion*. Dublin: European Foundation for the improvement of living and working conditions; 2003.
10. Waddell G, Aylward M, Sawney Ph. *Back pain, incapacity for work and social security benefits. An international literature review and analysis*. UK: Royal Society of Medicine Press; 2003.
11. Momm W, Geiecker O. *Disability: Concepts and definitions*. *Encyclopedia of Occupational Health and Safety*. Geneva: International Labour Organisation (ILO); 2004.
12. Willems JHBM. *Professionalisering van de verzekeringsgeneeskunde: een onderzoek naar de wensen en de mogelijkheden om de opleiding tot verzekeringsarts verder te professionaliseren*. . [Professionalising social insurance medicine: A study on the wishes and possibilities to further professionalise the education for social insurance physicians]. Den Haag: TNO Arbeid/Bureau As/tri. Ministry of Social Affairs and Employment; 2000.
13. Van de Goor AG. *Effects of regulation on disability duration*. Amsterdam: Thesis Publishers; 1990.
14. Kerstholt JH, de Boer WEL, Jansen EJM. *Disability assessments: effects of response mode and experience*. *Disability and rehabilitation* 2006;28:111-5.
15. Lipsky M. *Street level bureaucracy*. New York: Russel Sage; 1980.
16. Van der Veen RJ. *Sociale grenzen van beleid*. [Social restrictions of politics]. Leiden: Stenfert Kroese; 1990.
17. Mabbet D, Bolderson H, Hvinden B. *Definitions of disability in Europe: a comparative analysis*. London: Brunel University UK; 2002.
18. Teulings CN, van der Veen RJ, Trommel W. *Dilemma's van de sociale zekerheid*. [Dilemma's of social security] Den Haag: VUGA; 1997.
19. Council of Europe. *Assessing disability in Europe*. Strasbourg: Council of Europe; 2002.
20. Donabedian A. *The quality of care; how can it be assessed?* *JAMA* 1988;260:1743-8
21. Mul CAM, Verkleij HEM, Hazelzet AM, de Roos F. *Een verkennend onderzoek naar kwaliteitsbeleid bij periodiek arbeidsgezondheidskundig onderzoek, medische aanstellingskeuringen en WAO-claimbeoordeling* [An exploratory study into quality control in medical check ups, pre-employment medicals and assessments for disability benefit]. Den Haag: Elsevier Bedrijfsinformatie; 1999.
22. Hofstee WKB. *Principes van beoordeling. Methodiek en ethiek van selectie, examinering en evaluatie*. [Principles of assessment. Methods and ethics of selection, examination and evaluation]. Lisse: Swets & Zeitlinger; 1999.
23. De Boer WEL, Hazelzet AM, Gerven JHAM. *Vademecum Beoordelingen Arbeidsmogelijkheden*. [Catalogue of evaluations of capacities for work]. Hoofddorp (NL): TNO Arbeid; 2002.
24. Gordon G. *Role theory and illness*. New Haven (UK): College and university press; 1966.
25. Parsons T. *The social system*. Glencoe, Free press; 1951.
26. World Health Organisation (WHO). *International Classification of Functioning, Disability and Health (ICF)*. Geneva: WHO; 2001.
27. De Boer WEL, Brenninkmeijer V, Zuidam W. *Long-term disability arrangements: A comparative study of assessment and quality control*. Hoofddorp (NL): TNO Arbeid; 2004.
28. Bont AA, Boonk MPA, Berendsen L, Brink JC van den. *In de spreekkamer van de verzekeringsarts: een onderzoek naar het verzekeringsgeneeskundige deel van de WAO claimbeoordeling*. [At the doctor's office: A study of medical assessment of incapacity for work]. Zoetermeer: College van Toezicht Sociale Verzekeringen (CTSV) (Rapporten R00/03); 2000.
29. Giezen AM, Fiseler JG, Nool JW, Ramakers AF. *De uitvoering van de WAO door USZO* [Applying the Disability Act by the Social Security Fund for Public Officers. Zoetermeer: CTSV; 2001.
30. Gaudino EA, Matheson LN, Mael FA. *Development of the Functional Assessment Taxonomy*. *J Occup Rehabil* 2001; 11:155-75.
31. Matheson LN, Kane M, Rodbard D. *Development of new methods to determine work disability in the United States*. *J Occup Rehabil* 2001a; 11:143-54.
32. Matheson LN, Kaskutas V, McCowan S, Shaw H, Webb C. *Development of a database of functional assessment measures related to work disability*. *J Occup Rehabil* 2001b; 11:177-99.
33. Razenberg PPA. *Verzekeringsgeneeskundige oordeelsvorming. Inzicht in de praktijk*. [Decision making in assessment of incapacity for work. A study into practice]. Dissertation. Amsterdam: Universiteit van Amsterdam; 1992.
34. *Inspection of Work and Income. De manager de baas (Controlling Management)*. Zoetermeer: IWI; 2004.