

Review Article Open Access

How Physicians Deal With the Task of Sickness Certification in Cause-Based and Comprehensive Disability Systems – A Scoping Review

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Citation: How Physicians Deal With the Task of Sickness Certification in Cause-Based and Comprehensive Disability Systems – A Scoping Review. Am J Nur & Pract. 2019; 2(1): 01-10.

Submitted: 02 April 2019; Approved: 07 April 2019; Published: 08 April 2019

Abstract

This scoping review aims to identify differences in research on sickness certification in cause-based versus comprehensive work disability systems. The question was whether guidelines for sick-listing physicians, and the challenges physicians meet in the task of sickness certification, differ between the systems.

Method: A systematic search of English-language peer-reviewed articles published between 2000 and 2014 and targeting government-led programmes, policy or legislation on work integration of people with health disabilities yielded a final sample of 723 articles. For this synthesis we targeted articles that addressed healthcare providers. In all, 22 articles were included.

Policies and guidelines for physicians on work integration and income support after injury, illness or impairment are often unclear. Most studies in the cause-based systems focus the physician's role and challenges in relation to medico-legal aspects. In comprehensive systems studies explore physicians' and patients' views on sickness certification, and the physicians' dual role and dilemmas in being gatekeeper and the patient's advocate. Gaps in work disability policy research are identified and discussed.

Keywords: Work Disability System; Physician; Guidelines; Jurisdictions; Practice

Introduction

There has been an increase in the amount of time spent on sick leave and the number of long-term claims for disability benefits more or less world-wide during recent decades. Possible reasons for this are that people are working until a higher age, chronic diseases are treated more efficiently, globalisation is increasing and working populations are becoming more diversified (Future of Work Institute 2012). Work disability systems, as well as the professionals working in the systems, face new challenges in supporting work disability prevention and labour market participation (Letrilliart and Barrau, 2012; Wynne-Jones et al. 2010). High sick-leave rates place a high financial burden on society, employers and insurance companies, and this

has led to considerable changes in rehabilitation and return-to-work policies in a number of countries. Work ability assessments are based on the assumption that most people do have some capacity to work, the critical question is then what capacity is left. In some countries guidelines and activation policies have been implemented to support the medical evaluation of work disability (de Boer et al. 2009). The OECD (2013) defines activation policies as a combination of policy tools that provide support and incentives for people to engage in job search and job finding that lead to independence from public support benefits.

Systematic reviews of research on work disability prevention and return-to-work show that the most efficient programs to shorten sick-leave and imp-

-rove function are multidisciplinary and target health, accommodations at the workplace, and coordination of interventions (Cullen et al. 2017; EU-OS-HA 2016).

Understanding the role played by a physician in this context is important to the conceptualization of the return to work process (Lippel and Lötters 2013). A great diversity of contexts, policies and stakeholders are involved in work disability systems in different jurisdictions. In most systems the physician, most often a general practitioner (GP) is assumed to be the gatekeeper for the system. As their gatekeeper role seems to be pressured with increasing numbers of people becoming entitled to sick leave, policies and guidelines have been developed with explicit criteria and formal procedures to help physicians to make more "objective" and uniform assessments of patients' ability to work, rather than of their lack of ability to work. Entitlement to sickness benefit is based on the physician's assessment of the patient's medical condition and on medical evidence and a diagnosis. A common assumption is that functional limitations can be derived objectively from a medical condition or diagnosis (Stone 1984), and that functional ability is essentially the same as work capacity.

Different jurisdictions place different demands on the physician regarding the task of sickness certification. The two major types of jurisdictions are cause-based and comprehensive disability systems. In cause-based systems, coverage for illness or injury is only provided if it can be attributed to a specific cause. The claimant has to demonstrate causation to access benefits. Among the cause-based compensation systems, workers' compensation systems are the most universal and designed to compensate for injury or illness due to work tasks or work conditions (Lippel and Lötters 2013). In these jurisdictions it is necessary to determine illness or disease, as well as work-related causes for the disability. The comprehensive systems are common in European countries and provide sickness and disability insurance for all forms of work disability independent of causality. There are differences between countries; the lowest common denominator is that these systems provide compensation for disability independent of cause. Considerable changes have occurred in these jurisdictions during recent years, with the aim of reducing sick-leave rates by focusing on work capacity rather than work incapacity.

A scoping review conducted by MacEachen et al. (2017) identified research articles that address government laws, policies and programmes designed to foster labour market integration of people who, due to illness or disability, face challenges entering

or staying in the workforce. The review of peer-reviewed research articles published between 2000 and 2014 yielded a final sample of 723 articles The review examined the extent, range and nature of research activities in the field. A subsequent analysis focused on a subset of articles that distinguished cause-based and comprehensive benefit systems with the aim to summarise and disseminate research findings and identify research gaps for future studies. The present synthesis focuses on a subset of articles from the scoping review in order to identify research articles that address policies and guidelines for physicians in the two types of disability systems with regard to the task of sickness certification.

The following research questions have directed the review:

- 1. What characterises research methods and types of studies from the two types of work disability systems?
- 2. Are there guidelines to assist physicians in their task of sickness certification?
- 3. What is the role of the physician with regard to the sickness certification task and return-towork?
- 4. What are the challenges for the physicians in the systems?

Methods

Scoping reviews are used to map existing research about an issue, in order to understand topics, research designs and other aspects of how the issue is being approached by researchers. They involve systematic search and data extraction approaches, and are distinguished from systematic reviews in that they have a relatively broad focus, and do not specify study designs in advance or involve a structured quality appraisal process (Arksey and O'Malley 2005). As such, scoping reviews provide descriptive results (e.g. how studies are conducted, their substantive focus) rather than definitive findings (e.g. conclusions about effectiveness of policy interventions). A scoping review suited our goal of mapping the recent literature on work disability policy and the task of sickness certification.

Identifying Relevant Studies

Our literature search was limited to studies published in English between the years 2000 and 2014. The starting year was selected to capture established policies and practices emerging from a general trend to return-to-work policies that began in the 1990s. The search for peer-reviewed articles was conducted using four databases. EMBASE (Ovid), MEDLINE (Ovid), PubMed and Web of Science.

Four key concepts were central to the search strategy: work, disability, policy, and government.

Synonyms were identified for each concept, including keywords and phrases as well as database-specific subject headings (MeSH headings and EMTREE terms). Further, keywords from a list of 'must have' references provided by content experts were also reviewed and categorised into the four concepts.

Due to the complexity of the terminology and breadth of research in the field of work disability, three different search strategies were used to ensure a comprehensive literature search (MacEachen et al. 2017).

Study Selection

Titles and abstracts of articles were screened to ensure that included articles were from peer-reviewed journals, published in the year 2000 or later in English language, and were more than two pages long (to avoid brief news items and reviews). The articles could be based on any study design (qualitative, quantitative, mixed) and could include reviews and narrative commentaries, such as editorials or legal case studies. A key requirement was that the article should address government-led programmes, policy or legislation on work integration and/or income support after injury, illness or impairment. Overall, our key guiding questions for the main scoping review were: Does this article address research, intervention, evaluation, policies, laws or key contextual conditions for work integration of people with disabilities or health conditions? Does the article include a discussion or explanation of government laws, programmes and policies to address work disability?

Title and Abstract Screening

The last three authors tested and refined screening questions on a subset of articles that included a mix of studies ranging from high to low relevance. Throughout the study, articles were screened for relevance by the same authors. Inter-rater reliability testing was conducted across several sets of 20 articles with each reviewer until ratings were over 95 percent consistent. Regular meetings of the last three authors addressed articles for which categorising was unclear.

Charting the Data

Articles in the final sample were sorted by jurisdiction. A later synthesis organised the jurisdictions into cause-based and comprehensive systems (MacEachen et al. 2017). In cause-based systems, workers' compensation is distinct from the social insurance system. In contrast, comprehensive systems provide a single overall system of insurance for work-related and non-work-related accidents.

For this synthesis we targeted articles that met the inclusion criteria for our scoping review and also addressed health-care providers. Our search terms were variations on the terms: "doctor", "physician", "family doctor", "general physician", and "healthcare practitioner". We systematically examined papers for type of study and methods used, reports of guidelines for physicians, role and challenges for physicians with regard to sick-listing.

Results

Twenty-two papers were included: nine articles from cause-based countries and 13 from comprehensive countries.

Research Methods and Types of Studies

Three studies (see Table 1 for references) came from the USA (1; 5; 8), two each were from Singapore (3; 4), and Australia (6; 9), and one each from Japan (7) and Canada (2). The articles from causebased systems often essentially described guidelines or checklists for physicians in their assessments of work capacity to facilitate that appropriate information is provided in disability claims. Most studies mainly focused on the physician's role and challenges in relation to legal aspects, and were in general biomedical in their approach, as medical evidence is the main basis for assessments of work disability. Three papers provided descriptions of correct practice for physicians in order to facilitate effective and correct completion of disability forms (1; 5; 6). One study from Japan (7) described checklists to be used by physicians, patients and other stakeholders, in order to decide whether a sick-listed person with mental disorders should be allowed to return to work. Two studies from Singapore (3; 4) discussed occupational health physicians' risks of litigation claims. The Canadian paper (2) described guidelines for physicians in different Canadian provinces, challenges for physicians, collaboration with employers, and their role in the RTW process. One study from the USA described structural changes leading to new reasons for sickness certification (8). One study from Australia described current management of mental health claims (9).

Six articles focused on general disability, three on mental disability. Two studies (8; 9) were based on original research, and used qualitative methods (interviews, ethnographic methods). Another three studies used case descriptions (3; 4; 6). The remaining studies were essentially narrative. Further details on individual study methods, size, location and type of guidelines are presented in Table 1.

Thirteen studies were from countries with comprehensive systems (see Table 2 for references). Eight were from the UK (11; 13; 15-19; 22), two each from the Netherlands (12; 20), and Norway (10; 14), and one from Ireland (21). Most papers

Table 1: Studies from cause-based systems

Author	Country	Author's stated pur-	Methods and ma-	Disability in fo-	Type of guideline / act	Role of physician	Challenges
1.Barron, 2001.	USA	Facilitate effective completion of disability forms	Describes the disability system	Cus All disabilities	ADA for permanent impairment. AMA Guides to the Evaluation of Permanent Impairment. About 60 different and occupation-specific disability systems and definitions of disability. Sickness certification is an aid in the decision-making process younger process. Administrative law judge is decision maker Physician has no role in final determination.		Differences among legal, administrative, social and cultural definitions of disability. To apply correct definition of disability and appropriate information in certificate. Under ADA, to have a thorough understanding of workplace demands to assess fitness for job.
2. Reynolds et al. 2006.	Canada	Review the collab- orative nature of phy- sician – stakeholder relationship	Describes guide- lines	All disabilities	Canadian, Alberta, Manitoba, Ontario Medical Associations. OMA guidelines for timely RTW programs and for physicians' interaction with insurers. To provide appropriate permanent or temporary restrictions, with regard to the patient's abilities. To provide medical treatment and guidance.		Limited training in Disability Management. Limited knowl- edge of workplace demands.
3. Lee and Koh, 2008.	Singapore	Provide information for Occupational Health Physicians and their risk of litigation claims in pre-employment assessments	Case descriptions of tort claimants	All disabilities	Legal aspects. Suggests ground rules for assessment of fitness for work – duty of care To assess fitness for work for job applicants.		When to disclose medical information to the employer. Fair knowledge of demands of the job and hazards in the working environment.
4. Lee et al., 2009.	Singapore	Work Injury Compensation Act (WICA) in relation to occupational physicians' legal responsibilities	Case descriptions of tort claimants of negligence in civil claims, when Work Injury Compen- sation Act is not applicable	All disabilities	Work Injury Compensation Act (WICA), with time limitations constraining rights to claim. Code standards for exposure to different environmental risks. To provide appropriat permanent or temporary restrictions, with regard to the patient's abilities.		Risk assessments. To assess workplace hazards in relation to employee health. Tarasoff (to predict risks for other people). May need information from other professionals, e.g. toxicologists.
5. Ky et al. 2009.	USA	Describe current medical principles, legal process and social controversy for correct practice for IME	Describes principles for conducting IMEs and medico-legal considerations.	Any disability / Pain	Occupational Safety and Health Act. Guidelines by American medical Association. American College of Occupational and Environmental Medicine. ADA. IME examinations should include assessments of musculoskeletal and functional impairment and include social and emotional impairment rating scales.	To provide a correct sickness certificate. IME lies outside traditional payment methods and offer competitive compensation for physicians.	Medical disclosure to the patient. Identify causality. i.e. more than 50% chance that illness/injury is related to the workplace. What type of information is required by the physician to avoid malingering?
6. Bird, 2011.	Australia	Describe correct sickness certification	Narrative, case study and recom- mendations	All disabilities	Good Medical Practice Code, New South Wales Medical Council's Medical Certificates Policy. To provide a correct sickness certificate.		To be correct in spite of other demands from patient.
7. Yoshitsugu et al. 2013.	Japan	Describe a new method for occupa- tional physicians, for handling RTW in employees with mental disorders	Describes implementation of checklists to identify criteria for safe RTW	Mental disorders	Guidelines by Ministry of Health, Labor and Welfare, 8 bullet points on individual's abilities, requiring occupational physicians to take an active role in RTW sup- port. Checklists aim to help implementation of guidelines in practice	Sharing of written infor- mation, based on MHLW guidelines, checklists, to other stakeholders.	To assess when employee is fit for work.
8. Hansen et al, 2014.	USA	Describe structural changes leading to new reasons for sickness certification – pathologization of poverty	Case studies, ethnographic field studies, 127 ethnographic interviews with patients, providers and health system administrators, field observations	Mental disability	Personal Responsibility and Work Opportunity Act and Temporary Assistance for Needy Families (TANF)	Compensation of limited access to social benefits through diagnosis of mental disability. SSI as a survival strategy.	Structural changes. Disability and mental illness is reinterpreted as a legitimate responsibility to secure stable survival income.
9. Brijnath et al, 2014.	Australia	Describe current management of MHC claims and identify barriers to RTW	93 Qualitative interviews with 25 GPs, 26 com- pensation agents, 25 employers, 17 injured persons	Mental disability	WorkSafe Victoria	Diagnosing and assess- ing work-relatedness of disorder.	Clinical uncertainty surrounding MHC claims, assessment and diagnosis, resulting in conflicting medical opinions about injury severity, management and RTW prognosis. Cultural stigmas surrounding mental health and compensation claims.

explored physicians' and patients' views on sickness certification. There were in general no references to guidelines, except for the fit note in the UK. Underlying several studies there are governmental activa

tion policies and the implicit directive of assessing the patient's ability to work, rather than their lack of ability to work.

Eight studies concerned any disability, two studies focused on musculoskeletal and mental disorders, two on musculoskeletal disorders only, and one on depression. Nine studies used qualitative methods, interviews, focus groups or ethnographicmethods (12-14; 16; 18-22), two collected data from both GPs and patients (10; 22), three studies used ques

Table 2: Studies from comprehensive systems

tionnaires (10; 15; 17), two of them to GPs only and one to both GPs and patients, one paper was a discussion paper (11).

No study concerned the role of other professions in issuing sickness certificates. Further details on individual study methods, size, location and type of guidelines are presented in Table 2.

Author	Country	Author's stated purpose	Methods and material	Disability in focus	Type of guideline /act	Role of physician	Challenges
10. Reiso et al., 2000.	Norway	Explore the level of work ability assessed by patients and their GPs in new episodes of sickness certification, degree of consistency, whether associated with medical conditions or work demands	Questionnaire to 49 GPs about 408 patients and to 268 newly sick-listed patients.	All disabilities	n.a.	Assessor of work ability, negotiating with patient con- cerning sickness certification.	n.a.
11. Sawney, 2002.	UK	To discuss how to handle the sick role to prevent long-term incapacity	Discussion paper. Formulates bullet points for doctors to consider when advising patients on fitness for work.	All disabilities	Disability Discrimination Act. Health and Safety at Work Act.	Gatekeeper vs. patient's advocate.	To have relevant clinical knowledge and skills relevant to sickness certification. To manage the patient's condition and expectations in order to achieve the best overall outcome for the patient within available resources.
12. Meershoek et al., 2007.	The Nethe- rlands	How and with what methods physicians assess individual cases and how a client's medical condition may impact their assessments	Ethnographic observa- tions of 10 occupational physicians, 513 observed meetings and interviews with the physicians.		All disabilities	Dutch Sickness and Disability schemes: 1.1s the client with health complaints able to do his/her own job? 2.1s the client able to do work in general? Assess whether the client's complaints justify sick leave or disability benefits.	To consider health complaints and functional limitations without identified medical pathology. To assess possible consequences for the client's long-term opportunities in the labour market.
13. O'Brien et al., 2008.	UK	To explore patients' views of sick- ness certification in GP consultations	Qualitative interviews with 19 patients	Physical and psychological	Sick note	Time to listen. Guidance.	Continuity of care. Place sickness certification in the context of illness, work and home life.
14. Krohne and Brage, 2008.	Norway	To explore how GPs conceptualise functioning and functional ability in relation to their sickness certifica- tion practice	Four focus groups with 23 GPs	Physical and mental	Simplified Functional Assessment scheme on sickness certification forms and a mental scale.	Determine work-related functional ability.	Relating functional abilities to patient's work situation. Discrepancy between functional ability and work capacity. Insufficient knowledge of work.
15. Coole et al., 2009.	UK	To identify GPs' current practice in managing patients whose ability to work is affected by low back pain	Questionnaire to 241 GPs	Low back pain	Sick note	Sickness certification and work advice.	Lack of training. Too many regulations.
16. Cohen et al, 2010.	UK	To explore GPs' perceptions of management of individuals in long-term incapacity	Focus groups with 22 GPs	All disabilities	Fit note. Pathways to Work (PTW) programme.	Manage patients' health-re- lated issues only.	Keeping up to date with changes of government systems.
17. Walters et al., 2010.	UK	To identify need for sickness certification training	Survey to 51 junior doctors, knowledge test of guidelines, use of forms and self-certification	All disabilities	Guidelines published by Department for Work and Pensions for sickness certification	Assess functional capacity for work and optimal duration for certification.	Certification systems fail to address complex, chronic or doubtful cases. Lack of knowledge and skill.
18. Macdon- ald et al., 2012.	UK	To explore GPs' views of sickness certification in relation to depres- sion and the RTW process	Qualitative interviews with 30 GPs	Depression	Fit note	Gatekeeper for the work-in- capacity benefits system.	Difficulty in determining whether work is a help or a hindrance. Threat to advocacy role.
19. Welsh et al., 2012.	UK	To evaluate GPs' views and use of the fit note. To explore whether further actions are required for the fit note to achieve its objectives	Qualitative interviews with 15 GPs.	All disabilities	Fit note	Four options to consider in fit note: phased RTW, altered hours, amended duties, workplace adaptations.	Employers still request a medical statement of fitness for work. Lack of employer engagement in RTW.
20. Meershoek, 2012.	The Nether- lands	To explore how doctors judge the legitimacy of clients' claims for sickness and disability benefit. How do they use their medical expertise? What other sources do they use to determine eligibility? How do they account for the judgements they make?	Ethnographic observa- tions of 20 physicians during >500 consultations.	All disabilities	Dutch Sickness and Disability schemes: 1. Is the client with health complaints able to do his/ her own job? 2. Is the client able to do work in general?	Assess whether the client's complaints justify sick leave or disability benefits	Encourage clients to internalise norms of active and responsible behaviour. Medical diagnoses are not sufficient evidence for eligibility for disability benefits.
21. Foley et al., 2013.	Ireland	To explore problems associated with sickness certification	Focus group with 8 GPs	All disabilities	Sickness certificates to provide proof of illness for employers are unregulated. No statutory requirement for sickness benefit and no legislation.	Gatekeeper – decide on fitness for work.	Employment structures in public and private sectors. Lack of communication with other healthcare providers and employers
22. Wain- wright et al, 2015.	UK	To explore the structural tensions between the interests of patients and the government's objective of reducing sick leave	Qualitative interviews with 13 GPs and 30 patients	Chronic pain	Fit note	Four options to consider in fit note: phased RTW, altered hours, amended duties, workplace adaptations.	Double uncertainty of managing medically unexplained symptoms onto capability decisions – lack of objective evidence behind decisions and lack of knowledge about patients' workplaces.
22. Wain- wright et al, 2015.	UK	To explore the structural tensions between the interests of patients and the government's objective of reducing sick leave	Qualitative interviews with 13 GPs and 30 patients	Chronic pain	Fit note	Four options to consider in fit note: phased RTW, altered hours, amended duties, workplace adaptations.	Double uncertainty of managing medically unexplained symptoms onto capability decisions – lack of objective evidence behind decisions and lack of knowledge about patients' workplaces.

n.a.= not applicable

Guidelines for physicians

In cause-based systems there are a number of different guidelines as the specific disability systems vary between states and provinces. American studies described algorithms for effective completion of certifications for disability claims and in what ways physicians need to consider different types of insurances (1; 5). Essentially, these guidelines take a biomedical perspective on the role of the physician, and objectivity, observations and measures are emphasised in order to avoid malingering. According to the Americans with Disability Act (ADA), the worker has a right to a safe and accessible workplace and the right to legal recourse if injury occurs (5), and

physicians should consider occupation and work conditions in their assessments. In Canada, different provincial medical associations have presented guidelines (2). The guidelines emphasise that the physician's responsibility lies in providing the employer with appropriate permanent or temporary restrictions with regard to patients' abilities. Several of the Canadian guidelines define the role of the physician in return-to-work as being shifted away from making work ability assessments in isolation to providing information to other stakeholders, which reduces the physicians' role of gatekeeper/ adjudicator. According to the guidelines, the physician is expected to plan for return to work early in the disability period, and to be familiar with the demands and safety conditions at work.

In the Asian countries, studies focused on assessments of medical fitness for work to avoid unhealthy workers becoming exposed to health risks at the workplace. In Singapore the Work Injury Compensation Act (WICA) requires the physician to determine medical fitness for work. Incapacity after a worker has ceased employment may require the worker to bring a claim to a civil court through the tort law of negligence. The focus was on occupational physicians' risk of litigation claims, and suggestions included ground rules for assessment of fitness for work examinations (3; 4). In Japan there are governmental guidelines for handling sick-listed employees with mental disorders. The role of the physician is to certify that the sick-listed person is allowed to return to work. Yoshitsugu et al. (7) presents methods for improving the returnto-work (RTW) process through sharing basic and structured written information between physicians, personnel officers and the employee, thereby also including other stakeholders in the assessment. One article from Australia (9) was based on 93 interviews with GPs, compensation agents, employers and injured persons concerning how to assess work disability, and handle claims for sick-listed persons with mental disorders. The clinical uncertainty and structural difficulties surrounding mental health claims were identified, and the need of guideline and protocol development was emphasized. Another study, an ethnographic case study from the USA (8), also problematises structural difficulties involving cuts in social benefits, which lead to increasing medicalisation of public support through the pathologisation of poverty for marginalised groups, thus creating new challenges for the physician.

Studies in cause-based systems hence are concerned with how physicians should assess medical fitness for work and how to fill in sickness certificates for disability to facilitate the claims process.

The Canadian guidelines differ in their bio-psychosocial approach and emphasis on return-to-work.

In studies from comprehensive systems, where new regulations with a focus on functional ability have been implemented in some countries, there is little explicit focus on guidelines for physicians or other professions in the articles. In most countries, GPs are responsible for work disability assessments. For instance, in the Netherlands the assessment is performed by physicians employed by private health and safety organisations. Their physicians inform employers about the legitimacy of their employee's sick leave and provide socio-medical coaching to the employee. There are no formal guidelines for these physicians (12). In Ireland, GPs operate as private businesses and as gatekeepers for the Department of Social Protection (DSP). Sickness certificates that are used to provide proof of illness for employers are unregulated. There is no statutory requirement for sickness benefit in Ireland and no legislation. (21).

In the UK, the content of the sickness certificate, the "sick note" was changed into the "fit note" in 2009, focusing on capacity rather than disease. The fit note includes a remarks section where GPs can give advice on, for instance, amended duties or workplace adjustments, and it is meant to assist discussions concerning return to work between employee and employer in order to reduce sick-leave rates. A national education programme provided information on how to fill in the fit note correctly, but not on how to negotiate and communicate with the patient (22). One study (19) determined that GPs do not take overall responsibility for return to work, and they have limited knowledge of other stakeholders. Sawney (11) stated that evidence-based guidelines are not adequate for assessment of work capacity. One article (17) found that a majority of junior doctors do not follow guidelines in practice and had no training in sickness certification.

Studies in comprehensive systems often have a biopsychosocial perspective and are concerned with how GPs reason in their meeting with a patient and what difficulties they experience in assessing work capacity in cases when there is no medical or "objective" evidence while regulations require a diagnosis. Guidelines are not discussed in these articles. The articles point to difficulties for physicians due to the structural and discursive context for sick-listing.

Role of Gps in Sick-Listing and Return To Work

The role of the physician in the sick-listing process varies between countries. In cause-based systems the role of the physician is to issue objectively determined medical certificates which are handled

by the insurers. Physicians are mainly involved with other stakeholders with regard to legal aspects in the claims process and not in the return-to-work process. In general, however, the physician should have knowledge about workplace conditions or work-task demands. In the Canadian guidelines the physician is expected to assist the employer and the employee in the RTW process by providing the employer with appropriate recommendations for accommodations. There is a clear focus on the process of RTW and the guidelines place the main responsibility for a successful RTW on the employer and the employee. In Japan, physicians have developed checklists to be used by all stakeholders in assessments of ability to return to work.

In the comprehensive systems, physicians seem to struggle to keep the patient involved and motivated in the decision process, as this is deemed important in a long-term perspective to promote return to work. Apart from determining the diagnosis and expressing recommendations in the certificate concerning appropriate actions to facilitate return to work, the physician's role is generally limited regarding collaboration with stakeholders. In the UK, physicians need to consider workplace conditions and recommendations for accommodations in order to fill in the fit note. In the Netherlands, private occupational physicians coach sick-listed employees. In most other countries, GPs do not seem to be actively involved with other stakeholders or in the RTW process.

Challenges

For physicians in cause-based systems, the main challenges seem to be in relation to regulations and insurance demands. In the USA, each state maintains its own systems and laws, and workers' compensation encompasses almost 60 different systems and definitions of disability. Generally they address the extent of disability and the duration of disability. Physicians need to consider the type of insurance (short-term vs long-term), the definition and duration of disability, the definition of occupation (own, regular, any), as well as the patient's mental and physical work capacity in relation to workplace demands (1). An administrative law judge or other adjudicator assumes the role of decision maker in the process, rather than the GP. If forms are completed inadequately, there is a risk that claims will be rejected on the basis of insufficient information. In the Canadian guidelines the physician is said to have responsibility for both the patient and society, and may be required to put the public interest first, i.e. to be a gatekeeper (2). The physician should provide the employer with appropriate permanent or temporary restrictions with regard to the patient's

abilities. It is the employer who determines if such work is available, a challenge for the physician. Physicians in Japan and Singapore are required to provide employers with adequate information regarding fitness for work, including an assessment of fitness in relation to work demands; here the challenges seem to be mainly in relation to the insurance demands and legal aspects.

In comprehensive systems, there is a strong focus on the physician's dilemma in assessing work capacity without formal guidelines, for example regarding pain or mental disorders, although there are differences in organisation of work disability assessments between the countries. Several qualitative studies from the UK and the Netherlands (12; 13; 18; 20; 22) have explored how physicians and patients judge the legitimacy of patients' claims for sickness and disability benefits in practice and highlighted dilemmas experienced by physicians in this task. Generally, they experience tensions between their role as a gatekeeper for the system and the role as an advocate for the patient. Physicians do not consider the medical diagnosis as adequate or sufficient evidence to determine whether a client is eligible for disability benefits. In practice, medical evidence, the personality and social circumstances of the client and the assumed consequences of a decision on future participation in the labour market are all integrated in the decision.

Discussion Types of studies

Research within cause-based and comprehensive systems of work disability show differences in types of studies, as well as in methodology. Sickness certification requires a medical diagnosis in all systems, and the diagnosis is expected to be based on medical "objectivity", reflecting a biomedical approach and relying on measurements. Physicians have a gatekeeper role in all systems.

Most studies were directed towards general disability and few were concerned with musculo-skeletal or mental disorders. Only one study from cause-based jurisdictions was based on empirical data from physicians, while 11 of the studies from comprehensive countries were based on empirical data from physicians as well as from patients.

It is apparent that the type of jurisdiction and the special problems encountered by physicians due to the regulations have an influence on the focus for research. In cause-based systems the legal and insurance aspects are dominant. Studies from cause-based systems are concerned how to fill in the sickness certificate in a correct manner, in order to fulfil legal and insurance demands, and facilitate the claims process. Several cause-based jurisdictions

have a number of different regulations in different states or provinces that need to be considered by the physician in the decision process. The guidelines express a biomedical perspective on assessment of work disability, where the physician is an adjudicator. Physicians are restricted by medico-legal demands, and except for the Australian study (9), research neither concerns the interaction with the patient nor the decision process of the physician.

Studies of how physicians deal with the task of sickness certification in comprehensive systems focused on their challenges in managing medically unexplained symptoms and how to map these into capability decisions, and the dilemmas arising from the dual role of being a gatekeeper for the system versus being the patient's advocate. There was a more social, contextual and interactional perspective in several of the studies from comprehensive systems and a clear questioning of the biomedical perspective in regulations, since work capacity was also considered to be due to workplace conditions, social conditions, personality, and norms.

Knowledge about workplace conditions or work demands is a necessary condition for physicians when they assess whether a patient's functional abilities are sufficient for performing a work task. Several studies, from both types of jurisdictions, identify challenges with obtaining adequate information about work demands, and often there is no communication between physician and employer.

Guidelines

In the USA, the Americans with Disabilities Act (ADA) provides general guidelines which require physicians to have a thorough understanding of workplace demands. In addition, there are many different and occupation-specific disability systems, as well as requirements from insurance organisations that physicians need to consider in their assessments. The Canadian guidelines in some provinces differ by shifting the role of the physician to that of assisting the core stakeholders, i.e. the employer and the employee, in the return-to-work process. However, in practice these guidelines seem to be difficult to implement. Also, the Work Injury Compensation Act (WICA) in Singapore and governmental regulations (Guidelines by the Ministry of Health, Labour and Welfare) in Japan provide the framework for physicians' work. Japanese guidelines take on a more paternalistic approach but involve representatives for the employer in the decision process. Guidelines in Japan and Singapore focus on assessments of whether the patients should be allowed to work, in order to prevent work-related diseases, rather than if the patient has some work capacity, as in many comprehensive systems.

Guidelines for how to fill in the sickness certificate was not a research issue among studies from comprehensive countries, with the exception of the implementation of the fit note in the UK, which has generated several studies. The fit note emphasises functional ability and requires that the physician is also able to recommend changes at the workplace or in work tasks. Several countries do not have regulations or guidelines for work disability assessments and some studies express difficulties for physicians in assessing work demands. Studies from other countries have shown that physicians have difficulties in following guidelines due to low awareness of guidelines, lack of training in sickness certification, conflicting views or understanding of GPs role compared with other involved stakeholders (Roope et al., 2009; Mazza et al., 2015).

Role of Physician

In both types of jurisdiction, the main role of the physician is to determine a medical diagnosis, on which to base an assessment of functional limitations in relation to work demands, and decide on the optimum duration for certification. The certificate has different implications in the two types of jurisdictions for the continued process. In causebased systems the certificate is important for compensation claims to insurers and in the legal process. In comprehensive systems the certificate has fewer implications for legal and insurance aspects, but determines eligibility for Social Insurance benefits or, as in the Netherlands, benefits from employers, independent of the cause of disability. As part of the gatekeeping role, physicians in comprehensive systems express that their role in a long-term perspective is to prevent long-term sickness absence. In this, they balance between the role of gatekeeper for society and the role of advocate for the patient.

Challenges

The focus on biomedical diagnosis in the sickness certificate complicates the task of certification, since work capacity may be reduced due to other reasons than a medically confirmed diagnosis. This dilemma was most apparent in studies from comprehensive systems. Guidelines aim to help physicians make more objective and uniform assessments of patients' ability to work, and the focus has shifted from disability to functional ability. Several studies in comprehensive systems indicate that physicians find that medical knowledge provides information about plausible complaints, but the patient's problems and limitations cannot be based on them (12; 13; 22), thus pointing to the difficulties in using standardised guidelines.

Wainwright et al. (2015) suggest that policy-makers assume that physicians and patients

are unaware of the evidence that work is good, and that patients can return to work provided their duties are appropriately amended. They found that sick-listing rather is a social negotiation process, and hence a function of the quality of social relations between doctor and patient. Policymakers have assumed that defining more explicit criteria and formal procedures will improve the quality of medical judgements and make them more transparent (Meershoek et al., 2007). Changes in jurisdictions and policies affect the role of the GPs with regard to sick-listing. Stricter regulations imply a more formal role for the GP, demanding closer adherence to regulations and guidelines and less leeway for individual considerations.

According to Meershoek (2012) and Meershoek et al. (2007), physicians do not consider their assessments to be the technical matters on which policy proposals are based, but rather judgements of contextual and normative aspects. Social, psychological and physical aspects interact and influence each other, and do not become transparent in guidelines. Hence, studies on how doctors act in practice show that the decision-making process involves careful weighing up of different social and individual aspects, rather than being based on medical knowledge alone. Most countries struggle with growing numbers of sickness absences due to mental health problems and the lack of guidance for GPs in this task. Standardised guidelines are considered incompatible with practice. This conflict between regulations, guidelines and practice was not discussed in studies from the cause-based system, as there is a lack of studies on the physicians' decision process in these systems. The requirement of medical evidence and a medical diagnosis seems to restrict the physician's possibility to use his/her broader knowledge about the patient's situation. The guidelines in their present form limit the physician's ability to make the "best" decision, in terms of incorporating the patient's whole situation into the assessment, compared with the "correct" decision, based on medical evidence alone.

Study Limitations

This scoping review was based on search of four databases and journal articles captured by them. It was restricted to English-language articles only, and it is possible that articles published in other languages and with no English abstract would have provided additional information. The review was based on articles that address work disability policy and within this frame the subset of articles that addressed healthcare providers. It is possible that other screening criteria would have given a wider scope of articles, as studies on sickness certification

with no reference to the disability system were not included in the systematic search. Strengths of this study are the experience and skill of the research team, together with the integrated knowledge dissemination strategy, in which an expert work disability legal stakeholder participated in the decision-making of the research team from the early planning stages to the end of the study.

Research Gaps

Studies on how physicians perform their sickness certification task is influenced by type of jurisdiction and work disability management policies. Research in cause-based jurisdictions reflect a medico-legal perspective and research in comprehensive jurisdictions reflect a bio-psychosocial perspective. The scoping review reveals the need of more empirical studies in cause-based systems concerning the physician's decision process in the task of sickness certification in relation to medico-legal aspects. Research neither concerns the interaction with the patient nor the decision process of the physician.

In both types of jurisdictions there is a lack of knowledge about how the bio-medical requirements in work ability assessments affect the decision in the sickness certification and return-to-work process.

The usefulness of guidelines and how guidelines should be designed and developed to be helpful for the physician in the assessment process needs further consideration in research. This concerns in particular for patients with mental disorders or pain.

There is a need of studies on structural changes leading to increasing medicalisation of public support through pathologisation of poverty for marginalised groups, thus creating new challenges for the physician. In general, there is a need of studies on how education and training in sickness certification should be implemented for both physicians and other involved stakeholders.

Conclusions

The scoping review identified differences in types of research aim and research methods between cause-based and comprehensive jurisdictions. The limited number of articles indicate that research on policies and guidelines for physicians on work integration and income support after injury, illness or impairment need more research. The studies rather boil down to studies of correct practice in the cause-based systems while the decision process and dilemmas of physicians is more studied in non-cause-based systems.

There were some common challenges for physicians independent of the type of jurisdiction, arising from the demands of a biomedical assessment of functional ability in relation to work demands. In

cause-based systems this challenge was expressed in relation to legal and insurance aspects, while in comprehensice systems it was rather expressed in relation to the dual role of gatekeeper for the system and advocate for the patient. Standardised guidelines limited the physician's ability to make the "best" decision, in terms of a holistic assessment, compared with a "correct" decision, based on medical evidence alone. There was a lack of studies from cause-based jurisdictions concerning the physician's assessment process. In both jurisdictions there is a lack of studies regarding how guidelines should be designed to be useful for physicians in the certification process.

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