CHAPTER 1

GENERAL INTRODUCTION
CASE DESCRIPTION
A young worker moved to another city to start a new job. In this new situation, his long-term relationship comes to an end and his work stagnates in different ways. Then he starts to doubt everything. He consults his general practitioner (GP) and receives referral to a psychotherapist. In the following months he can’t stop his negative thinking, loses his interest for work and leisure activities, sleeps bad and occasionally feels incompetent. Although the consultations with his psychotherapist are supportive, he doubts the effectiveness and approach, and he quits the treatment. When he reports sick for work, he is invited by the occupational health service to consult the occupational physician (OP) 3 weeks later. Meanwhile, he has informed his employer about his mental health problems and his incapacity for work. The main question of the worker, the employer, the OP and this thesis is: what is the most effective way of treatment for the worker to return to work successfully?

INTRODUCTION
In the past decades, the relationship between work and mental health has changed enormously. There is a worldwide increase in the experience of stress in the workplace for a range of reasons, including structural changes, changing work contexts, the shift to more knowledge-based work and the continuous introduction of new technology (van der Klink, 2002). Western societies have changed from industrial to service economies, which implies that the work of most of the working population is no longer physical but mental. Meanwhile, workers started to perceive work as an important contributor to quality of life, in which ambitions can be fulfilled.

Worldwide, common mental health problems in workers, such as adjustment disorders, depression and anxiety, may affect functioning and often lead to reduced productivity at work and sick leave (Wang et al., 2006; Lerner & Henke, 2008). As the work content and the perception of work have changed, a new type of support was sought by workers from professionals in occupational health care. Nowadays, workers need tools to cope with mental aspects of and in work, besides protection from riskful physical work demands. Therefore, specific interventions need to be initiated in occupational health care of workers on sick leave due to common mental health problems.

Primary and secondary care usually focused on recovery of symptoms instead of return to work (RTW). The general practitioner (GP) and the occupational physician (OP) often lack time and skills to optimally deal with these workers, resulting in a minimal approach (Anema et al., 2006; Nieuwenhuijsen, 2004). As an alternative, ways have been sought to encourage OPs to play a more active role. In 2000, the Dutch Society of Occupational Medicine (NVAB) published a new practice guideline, which promotes a more active role of the OP facilitating RTW of the worker, instead of a minimal role. The focus of this thesis will be the evaluation of this practice guideline entitled ‘The management by OPs of workers with common mental health problems’. Aim of this thesis is to contribute to quality improvement of occupational health care for these workers.

This chapter started with a case description of a worker with mental health problems. From here, the introduction continues with an explanation of the main concepts used in this thesis, followed by a description of recent developments in (Dutch) occupational health care. Specifically, the role of the OP is explained in the context of the guideline on the management of workers with mental health problems. The elements of the guideline for the OP can be placed in a widely accepted conceptual model that serves as theoretical framework for this thesis. According to this framework, the objectives and outline of this thesis are described.
GENERAL INTRODUCTION

MAIN CONCEPTS AND SETTING

Common mental health problems
Common mental health problems, or common mental disorders, reflect a broad term that applies to conditions ranging from experiencing stress symptoms to severe psychiatric disorders, such as psychosis. In working populations, the following common mental disorders constitute the majority of mental health problems: adjustment disorder (stress-related disorder), depression, and anxiety disorder. Adjustment disorder is an accepted diagnosis in DSM-IV and ICD-10, and refers to a maladaptive reaction to an identifiable stressor, occurring within a short time after onset of the stressor (APA, 1994; WHO, 1992; van der Klink & van Dijk, 2003). Such a reaction is characterized by depressive symptoms, anxiety, and/or inappropriate behaviour. Stressors may be related to work or family life. Although generally considered as minor psychiatry, adjustment disorders may have extensive disabling consequences. Most patients with an adjustment disorder recover within two to six months, even when no specific guidance or therapy is given, but there is a considerable risk of prolonged disability. In occupational settings, this diagnosis can be applied to many overlapping stress-related concepts and diagnoses, such as neurasthenia, nervous breakdown, burnout, and surmenage. These concepts and diagnoses have distress symptoms and malfunctioning in one or more social roles in common (van der Klink, 2003).

Depressive and anxiety symptoms are terms to describe minor, and usually mixed, syndromes often seen in primary care, as well as major conditions classified by the DSM-IV (APA, 1993). Common mental disorders do not only share a high incidence, they also show communality of symptoms. While adjustment disorders are often accompanied by depressive and anxiety symptoms, anxiety and depressive disorders in terms of the DSM-IV classification are considered more severe. This notion is reflected by the DSM-IV criteria, which state that an adjustment disorder diagnosis is not allowed if the severity and duration threshold for anxiety or depressive disorder are reached (APA, 1994). In these more severe mental disorders, an individual's vulnerability plays a dominant role, which is relatively independent of the interaction with the environment. There is a gradual transition from adjustment or stress-related disorders that are fully determined by the interaction between individual and a demanding environment up to more severe mental disorders, such as depression and anxiety disorder, which are determined by other factors as well. Factors that constitute a risk for more severe disorders are a hereditary vulnerability, a developmental vulnerability, less adequate coping styles, stressors on several domains of life, a quantitative or qualitative lack of social support, and physical co-morbidity (van der Klink, 2002). This thesis concerns all common mental disorders mentioned above, as they prevail in the occupational health care setting.

Mental health problems and work disability
The WHO (2002) predicts that by 2020, mental illness will be worldwide the second most important cause for work disability after heart disease. Studies on mental health policies and programs affecting the workforces of Finland, Germany, Poland, UK and USA showed that the incidence of mental health problems is increasing (ILO, 2000). In these studies it was reported that as many as one in 10 workers suffer from depression, anxiety, stress or burnout, with problems leading to unemployment and hospitalisation in some cases. Wang et al. (2006) reports a one-year prevalence of mental health problems in the working population of developed countries ranging from 10 to 18%. Mental health problems often affect functioning to such an extent that they result in sick leave and may
lead to chronic disability and loss of work (Nieuwenhuijsen *et al.*, 2003; Anema *et al*., 2006; Wang *et al*., 2005).

Mental health problems account for one third of all disability benefits in The Netherlands. The morbidity leading to disability benefits is different in the Netherlands from that in other West European countries, with a relative overrepresentation of less severe mental disorders (van der Klink, 2002; IMF, 2004). It has been shown that a majority of these workers are at risk for chronic disability, while they only suffer from minor reversible psychiatric disorders with stress-related symptoms (Schaufeli & Kompier, 2001).

As Dutch workers are required to visit their OP for independent judgement of sick leave and RTW purposes, the Dutch OP has an optimal opportunity to find the people at risk and to influence RTW (Nieuwenhuijsen *et al*., 2003). The occupational health care setting in which the Dutch OP has been working, changed dramatically in the last decades (Schaufeli & Kompier, 2001). Since the comprehensive Sickness Insurance Act for workers (WAO) was introduced in the Netherlands in 1967, there has been a strong and ongoing disability debate in Dutch society and politics. Initially, the protective function of the system was of central concern: the system offered insurance against loss of income, with a guaranteed minimum income for everyone. As the number of workers collecting disability benefits increased from 150,000 by the start in 1967, to almost one million in the 1990s (around 10% of the working population), the public debate focused largely on sick leave and work disability. In order to diminish duration of sick leave and work disability rates, the government decided to make all stakeholders more aware of the need to limit the number of claims. Therefore, in 1996 the Sickness Insurance Act was privatised, and by means of the ‘gatekeeper model’ the responsibility of both employers and workers was increased. In this way, employers became responsible for the reintegration of workers in the first year of sick leave (Post, 2005).

**The Dutch setting: occupational health services**

Since 1994, Dutch organisations had to be affiliated with a certified Occupational Health Service (OHS, arbodienst), according to the Working Conditions Act (Arbowet). The main reason for the government to introduce this measure was the obligation to implement European policy stating nation legislation to regulate a level of assistance in prevention of health and safety at work (Post, 2005). However, an extra compulsory assistance of workers on sick leave was instigated by the Dutch government, which had to be provided by OPs. This measure was accompanied by the introduction of the commercial OHS in order to stimulate competition in the OHS market. This led to a formation of about 200 OHSs, a number that due to mergers decreased to approximately 90 OHSs in 2004. During this study the five largest OHSs were responsible for the occupational health care of about 90% of all workers in The Netherlands.

Each OHS had to employ at least one certified professional from each of the following fields: occupational medicine, occupational safety, occupational hygiene, and work & organisational psychology. These professionals were meant to work together as a team. If reported sick, Dutch workers have been required to visit their OP for independent judgement of sick leave and for rehabilitation purposes (Schaufeli & Kompier, 2001). OHSs have been internally or externally organized. By far most Dutch employers, as the Dutch police force in the presented study, have contracts with independent externally organized OHSs. This should help employers to improve their working conditions and to prevent sick leave and work disability.
Recent developments in Dutch disability legislation: The Donner Committees
Because of the high number of individuals entering the Occupational Disability Insurance Act (WAO) and because of the high proportion of claims that were due to mental problems, the government formed a committee to address these issues (Donner committee). This Donner committee concentrated on the rise in disability due to mental health problems and made various recommendations to improve the prevention, care, treatment, and RTW in case of sick leave due to mental health problems (CPA, 2001). In 2001, a second Donner committee was formed, to further analyse the problem of sick leave and work disability. This committee advised that only fully and permanently disabled individuals should be eligible for disability benefits. The proposals of the Donner committees have been translated into new plans of the government for redesigning the WAO. In the Gatekeeper Improvement Act (Wet Verbetering Poortwachter), the obligations of employers and workers are stated with respect to their activities aimed at activation and RTW in the first year of sick leave. Also the responsibilities of the institutions involved were more clearly discerned: the OHSs should assist the employer and worker to prevent sick leave and promote RTW, whereas the Workers Insurance Authority (UWV) is responsible for evaluating RTW efforts. Under the current legislation, employers have a higher financial risk. They have to continue to pay the wages for the first year of sickness by themselves, a period that was stretched to two years in January 2004. This should encourage employers to have better policies concerning working conditions. For workers, the level and duration of benefits are currently less favourable. In April 2002, the Gatekeeper Improvement Act came into force. The societal effects of the Gatekeeper Improvement Act seem favourable as sick leave and the number of disability benefits declined (OECD, 2004).

The compulsory assistance of workers on sick leave and the introduction of the commercial OHS resulted in new relationships between employer, worker and OHS. Employers were often inclined to conclude minimum contracts with the commercial OHSs, which do not give OHSs much opportunity of intervention if necessary (Post, 2005). Furthermore, the commercialization of the OHSs can affect the independent position of the OP. Within these complex relationships it was important for the OHS to ensure a good quality of care. In recent years several professional guidelines for OPs have been developed for this purpose as well. These guidelines are based on a time contingent approach towards treatment and RTW, which means that the activities of the worker on sick leave increase according to a prestructured time schedule. This was in contrast to the traditional symptom contingent approach in which the course of the symptoms was the guiding principle towards treatment and RTW. A time contingent approach focuses on the activities, which the worker should be able to despite the symptoms.

Since 2006 the Work Conditions Act has changed in a less regulating law, creating a situation in which employers are not obligated anymore to be affiliated with an OHS. However, nowadays still the majority of employers do have contracts with OHSs, and many OPs still work for OHSs, although some have started their own corporation.

OCCUPATIONAL HEALTH CARE OF MENTAL HEALTH PROBLEMS
Occupational medicine plays a different role in the provision of occupational health care worldwide (e.g. Ladou, 2005; Grove, 2006). However, some trends can be seen in relation to the development of occupational mental health care of workers with mental health problems. Here, the focus will be on the Dutch situation as this may be seen as a trendsetter in this field, instigated by the Dutch worker’s compensation system and the specific role of the Dutch OP.
In 1993, a study by Schröer clarified that the existing style of guidance by OPs on common mental health problems was ineffective. In 1994, Terluin published a study on ‘surménage’, which is French for mental overload or nervous breakdown. Surmenage is a diagnosis commonly used by GPs and OPs to denote a maladaptive response to psychological stress in everyday life. This diagnostic concept, closely related to the DSM diagnosis Adjustment Disorder, reflected problems that could be handled in primary care (Terluin, 1994). At the same time, van der Klink et al. (1993) published a handbook for OPs on guidance for mental disorders related to work. An activating policy was recommended, aimed at both the individual worker and the work environment. These studies represent a change in attitude from a passive, reactive, non-directive style of guidance to a more activating, proactive, therapeutic style.

In the early 1990s, the role of OPs regarding sick leave and work disability was seen as predominantly supporting the RTW of the patient from the moment that a more or less stable state of recovery was established. In the years thereafter, the profession aimed to change the recovery process itself in cases of stagnation, prompted by the high risk of disability. Inspired by the Individual Placement and Support model in the vocational rehabilitation for people with severe mental illnesses (Bond et al., 2008; Michon, 2006), activation became the key concept, based on cognitive behavioural principles and graded activity (van der Klink, 2002).

According to Van der Klink (2002), an individual experiences a lack of control in his or her direct interaction with actual features of the environment. An adjustment disorder may result in depression or anxiety disorders, if the instigating crisis remains unsolved. Therefore, he argued that minimal interventions should focus on the stress-related component, and enhance problem-solving capacities for workers to cope with regular problems in work. In this manner, adequate and early guidance of individuals with adjustment disorders could prevent the development of more serious psychopathology.

In addition, enduring sick leave in itself has secondary consequences that are potentially harmful: loss of daily structure, diminished social contacts, and deterioration of self-esteem. Graded activity may be an important element that can help individuals RTW, as it signifies that individuals resume work partially, in order to enable full RTW (Blonk et al., 2006). Partial RTW can be viewed as a type of gradual exposure to the work situation. This type of exposure may promote full RTW through various mechanisms. By gradual work resumption, experiences of success may be fostered. That is, by performing the tasks that one is able to, individuals may acquire a sense of self-efficacy and control (Bandura & Adams, 1977). Exposure to work may also provide experiences that challenge dysfunctional beliefs (Tryon, 2005). Partial RTW might also help to establish a daily working rhythm, it may offer distraction, and it may promote commitment towards one’s work and colleagues. The importance of gradual work resumption is also advocated in the literature with respect to physical injury (Briand et al., 2007; Durand & Loisel, 2001). Gradual work resumption can be established by steps such as the implementation of worksite accommodations, temporarily assignment to alternative job tasks, and gradual increase of the worker’s hours or involvement in performing increasingly demanding job tasks (Franche et al., 2005; Shrey, 2000).

Until recently, OPs did not have the tools for such specific interventions. In the past it was not even considered a legitimate role for OPs to initiate therapeutic interventions, even though they were in a favourable position to do so. GPs were expected to initiate therapy, but were in a less advantageous position with regard to knowledge of the patient's work and work situation. The last decade, mental ill workers have been referred frequently to specialized psychological care. As the focus of mental health specialists has been mostly symptom-based, instead of work-based, workers may not get the optimal care they need and productivity loss may be higher than necessary. As
an alternative, ways have been sought to encourage OPs to play a more active intervening role.

**Guideline on the management of mental health problems**

Since 1999, the Netherlands Society of Occupational Medicine (NVAB) has been developing and disseminating evidence-based practice guidelines, as they are one of the most promising and effective tools for improving the quality of occupational health care (Grol & Wensing, 2001; van der Weide et al., 1999; Hulshof et al., 1999). In 2000, the NVAB (2000; van der Klink & van Dijk, 2003) published a practice guideline titled ‘The management by OPs of workers with common mental health problems’. It promotes an active attitude and activating approach of the OP, instead of a minimal role.

Inspired by the mentioned context, professional developments and findings of a literature study, van der Klink (2002) developed and evaluated a brief activating intervention for OPs. This was based on cognitive behavioural principles and included graded activity (van der Klink et al., 2003). The main aim of the intervention was to activate patients to develop and implement problem-solving strategies for daily (working) life problems. In a randomised cluster design, this intervention was compared with ‘usual care’ (UC), a treatment by OPs that was based on “empathic counseling, instruction about stress, lifestyle advice, and discussion of work problems with the patient and company management”. A significant difference was found in the duration until full RTW in favour of the activating intervention. The activating intervention was not superior with respect to psychological complaints; both groups reported a decrease in psychological symptoms over time. However, the intervention was considered to be successful and, together with existing evidence, experience in adjacent fields, and consensus procedures, this resulted in the new guideline. After its publication in 2000, the guideline was mailed to all members of the NVAB and several courses emerged to inform OPs about the content of the guideline.

The guideline was mainly based on the results of a study by Van der Klink et al. (2003). In a cluster randomized trial, the intervention consisted of a training in an activating approach by OPs, in which OPs may operate as counselors using elements of cognitive behavioral therapy (CBT) and facilitating RTW by work interventions. The intervention appeared to be effective in reducing productivity loss (i.e. fastening RTW) for workers with adjustment disorders, if compared to a passive UC. In a prognostic study, Nieuwenhuijsen et al. (2003, 2005) showed that guideline-based care may reduce productive loss by fastening RTW for workers on sick leave with common mental disorders, but reduces treatment satisfaction of the worker.

The guideline focuses on five aspects of the management of mental health problems. First, a problem orientation in which the OP acknowledges the interaction between the disabled worker and his surroundings (work, personal and care). Second, a simplified classification of mental health problems is introduced, with only four categories: adjustment disorder (distress, nervous breakdown, burnout); depression; anxiety; and remaining psychiatric disorders. Third, early and activating interventions by the OP are promoted, in which time contingent RTW is part of the recovery process, even if the mental health problems are not related to work. The OP is stimulated to operate as counsellor, applying cognitive behavioural techniques, of workers with stress- and/or work-related problems. Fourth, time contingent evaluation in which the OP acts as case manager, who intervenes when recovery stagnates. Finally, relapse prevention is an integral aspect of the treatment.
CONCEPTUAL MODEL

World Health Organization Model of Functioning (ICF)
Occupational health care typically has a multidimensional focus on health since it addresses not only physical and mental disorders, but also social functioning. The World Health Organization (WHO) explains in its International Classification of Functioning, Disability, and Health (ICF model) how disease and disability are related (Figure 1). The model considers the influence of disease and its intermediaries on an individual’s participation in society. Diseases or disorders affect the triad of “body structure and function”, “activities”, and “participation”, which lead to either disability or no disability, depending on important conditional factors of environmental origin, such as heavy physical work, and of personal origin, such as personal ideas about disability (WHO, 2001). By using the ICF in the coaching and treatment of workers, a shift from a medical assessment to a broader ‘biopsychosocial’ evaluation is promoted (Heerkens et al., 2004). The ICF model is supported by many studies that have investigated the prognosis for RTW among patients suffering from a variety of diseases. From these studies, it can be concluded that the severity of the disease resulting in impairment of body function or structure usually has the largest influence on the time needed to RTW, but environmental factors and person-related factors play an additional role (Spelten et al., 2003). Looking further into personal factors, it has been found that the expectation of the patient about recovery best predicts the time taken to RTW and is better than those of the physician (Fleten et al., 2004; Nieuwenhuijzen, 2004; Cole et al., 2002).

Conceptual model of this thesis
Figure 1 shows the ICF model applied to RTW of workers with mental health problems (Sanderson et al., 2008; Nieuwenhuijzen, 2004; Cole et al., 2002). This model can be helpful in understanding the dimensions of sick leave due to mental health problems and factors that influence RTW (Wasiak et al., 2007; Schultz et al., 2007). The model has been used as a conceptual model for this thesis, especially regarding factors that influence RTW, based on the adaptations by Verbeek (2006). With respect to sick leave of workers with mental health problems, the point of departure is a worker who is on sick leave due to his or her health condition. This condition (for instance a depression) has led to an impairment of mental functions, e.g. impaired energy function leading to fatigue (Cieza et al., 2004). This impairment interacted with environmental factors, such as work characteristics, and personal factors, such as coping style, in determining the extent of the limitations in activities and participation (sick leave).

RTW from sick leave is the central outcome of this thesis. In accordance with the multi-factorial view on sick leave, we assume that regaining health does not necessarily result in RTW. When related to RTW, concepts of the ICF model can be specified as following. Impairments in mental functions (‘Body Functions and Structure’) may be made operational as experiencing fatigue, anxiety, or depressive symptoms. Irrational cognitions, which are assumed to be one of the causes of psychological symptoms, can also be categorised as belonging to the concept of impairment in mental functioning. RTW was initially considered within the Activities and Participation domains, which are said to give an indication of the experience of disability (Wasiak et al., 2007). In this thesis, we assume impairments in work performance as activity limitations, while we view RTW as the end of participation limitations (Verbeek, 2006; Nieuwenhuijzen, 2004). Contextual factors, such as work characteristics and supervisory behaviour during the RTW process, may be regarded as environmental factors. Personal factors include demographic variables, such as age, coping style, and recovery expectations of the worker.
We assume that a reduction of mental impairments and activity limitations will contribute to RTW of the worker on sick leave. However, environmental factors and personal factors will also influence this process. In workers who are on sick leave due to mental health problems, this notion is substantiated by the finding that symptom reduction is not always immediately followed by RTW and earlier RTW is not always accompanied by less symptoms (van der Klink, 2002).

How do the elements of the guideline fit into this model? In general, in congruence with the ICF-model, the guideline assumes that the OP acknowledges the interaction between the disabled worker and the different stakeholders (work, personal and care) (NVAB, 2000). The model offers three opportunities for interventions by OPs: a) regaining proper mental functioning by means of reduction of impairments; b) restoring activities by means of reduction of activity limitation; c) participation by RTW (Verbeek, 2006). Focussing on the health condition and the first opportunity (a), a simplified problem orientation and diagnostic classification of mental health problems is introduced (1). This aims to improve the diagnostic skills of the OP and to initiate an early and activating guidance, in which RTW is part of the recovery process. The second opportunity (b), regarding environmental factors, advocates process management in a cyclic manner (diagnosis, intervention and evaluation), time contingent evaluation with patient, work and curative care, and workplace adaptations to prevent disability and facilitate RTW (2).
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The third opportunity (c), regarding personal factors, provides OPs with counseling to improve or learn skills to the worker (supported employment; Crowther, 2001) (3). Additionally, OPs can do counseling using cognitive behaviour principles to change irrational recovery expectations of the worker (Nieuwenhuijzen, 2004). Counseling in primary care and workplace counseling on stress prevention has proven to be effective in the reduction of stress symptoms and is not associated with more costs (Huibers et al., 2007; Bower et al., 2005 & 2006; Henderson et al., 2004; Verbeek, 2004; McLeod & Henderson, 2003). The guideline stimulates the OP to counsel workers on work-related issues and workers with adjustment disorders on the individual level. When recovery stagnates and/or when the OP diagnoses a depression, anxiety or remaining psychiatric disorder, the OP needs to communicate with/refer to the GP and/or to a professional in secondary care. The third opportunity regarding counseling work- and stress-related problems is the most renewing element, compared to the management by OPs before the introduction of the guideline (van der Klink & Terluin, 2005).

OBJECTIVES
The main aim of this thesis is to contribute to quality improvement of occupational health care of workers with common mental health problems. The first way to attain this goal is to evaluate the implementation and (cost-)effectiveness of the guideline on RTW and treatment satisfaction. Therefore, we conducted the CO-OP study, to evaluate the effectiveness of counseling by OPs according to the guideline. In a randomised controlled trial we examined the effects of training of the guideline on RTW and satisfaction of workers with common mental health problems, compared to usual care with a minimal involvement of the OP and frequent and immediate referral to a psychologist. Second, this thesis focuses on the quality of the process of occupational health care among workers with common mental health problems and to relate this process to RTW according to the ICF model (Verbeek, 2006).

OUTLINE OF THE THESIS
First, in chapter 2 a systematic review is presented on RTW interventions for adjustment or stress-related disorders. These are common mental health problems in occupational health care. Chapter 3 describes the design of the CO-OP study, in which the intervention by OPs, guideline-based care of police workers, is evaluated and compared to care as usual. The results on return to work and treatment satisfaction are described in chapter 4. Chapter 5 presents results of an economic evaluation performed alongside the trial. A process evaluation was done to examine which elements of the treatment explain possible effects on RTW. These results are described in chapter 6. In chapter 7 results of a cross-sectional study are given, which explored the implementation process of the guideline on mental health problems by Dutch OPs. Written as separate articles for scientific journals the chapters have some overlap. The thesis concludes with a general discussion in chapter 8. Finally, this thesis contains a summary in English and Dutch.

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