

Workplace Practices for Healthy and Sustainable Return to Work

Iuliana Nastasia
Marie-José Durand
Marie-France Coutu
Cécile Collinge
Ana Cibotaru

STUDIES AND
RESEARCH PROJECTS

R-1047

OUR RESEARCH is working for you !

The Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), established in Québec since 1980, is a scientific research organization well-known for the quality of its work and the expertise of its personnel.

Mission

To contribute, through research, to the prevention of industrial accidents and occupational diseases and to the rehabilitation of affected workers;

To disseminate knowledge and serve as a scientific reference centre and expert;

To provide the laboratory services and expertise required to support the public occupational health and safety network.

Funded by the Commission des normes, de l'équité, de la santé et de la sécurité du travail, the IRSST has a board of directors made up of an equal number of employer and worker representatives.

To find out more

Visit our Web site for complete up-to-date information about the IRSST. All our publications can be downloaded at no charge.

www.irsst.qc.ca

To obtain the latest information on the research carried out or funded by the IRSST, subscribe to our publications:

- *Prévention au travail*, the free magazine published jointly by the IRSST and the CNESST (preventionautravail.com)
- [InfoIRSST](#), the Institute's electronic newsletter

Legal Deposit

Bibliothèque et Archives nationales du Québec
2019

ISBN : 978-2-89797-068-0

ISSN : 0820-8395

IRSST – Communications and Knowledge
Transfer Division
505 De Maisonneuve Blvd. West
Montréal, Québec
H3A 3C2

Phone: 514 288-1551

publications@irsst.qc.ca

www.irsst.qc.ca

© Institut de recherche Robert-Sauvé
en santé et en sécurité du travail

June 2019

Workplace Practices for Healthy and Sustainable Return to Work

Iuliana Nastasia¹, Marie-Josée Durand²,
Marie-France Coutu², Cécile Collinge¹
Ana Cibotaru²

¹ IRSST

² Université de Sherbrooke



Disclaimer

The IRSST makes no guarantee as to the accuracy, reliability or completeness of the information in this document.

Under no circumstances may the IRSST be held liable for any physical or psychological injury or material damage resulting from the use of this information.

Document content is protected by Canadian intellectual property legislation.

A PDF version of this publication is available on the IRSST Web site.

STUDIES AND
RESEARCH PROJECTS

R-1047





PEER REVIEW

In compliance with IRSST policy, the research results published in this document have been peer-reviewed.

ACKNOWLEDGEMENTS

First, we wish to thank the participants in the case studies for having shared their work experiences so generously with us.

Many thanks also go to the members of the follow-up committee for their ready availability and enriching comments. Their comments gave us much food for thought about the practical aspects of this study. We would particularly like to underscore the substantial support provided by Diane Parent and Alain Lajoie during the organization recruitment phase.

Our gratitude goes to library technician Lynda Cloutier and IRSST librarians Ginette Vadnais and Maryse Gagnon for their invaluable help in deploying the article selection strategy.

Lastly, we wish to salute Julien Quertainmont, a trainee at the IRSST who participated actively in data collection and analysis in a first case study, and Louise Sutton, an IRSST knowledge transfer advisor who facilitated the meetings and discussions between the research team and follow-up committee and provided constant support throughout this project.

SUMMARY

In Québec, under the *Act Respecting Industrial Accidents and Occupational Diseases* (AIAOD), all workers who sustain employment injuries that cause them permanent physical or mental impairment are entitled to the rehabilitation that their condition requires, with a view to their social and occupational reintegration. The AIAOD also provides such workers with a right to return to work when they are again fit to perform their jobs. Organizations and workers alike are thus directly concerned by the implementation of appropriate, sustainable, and effective return-to-work (RTW) solutions. While the recent literature tells us much about the evidence-based principles for healthy and sustainable return to work (best practices), few studies to date have documented actual workplace practices in this regard for workers with musculoskeletal disorders (MSDs). The overall goal of this study was to assess possible discrepancies between evidence-based best RTW practices and actual workplace practices, and then to suggest possible improvements. The following specific objectives were defined: (1) determine, based on the literature, the best practices for fostering sustainable RTW and preventing long-term disability among workers with MSDs; (2) describe actual RTW practices and identify the conditions facilitating their implementation in Québec workplaces; and (3) assess the discrepancies between the best practices recommended in the evidence-based literature and actual practices in workplaces, and ultimately to propose ways for improving the transfer from theory to practice.

An integrative literature review was conducted to achieve Objective 1. This is a specific review method that synthesizes the theoretical and scientific literature to provide a more in-depth understanding of a given phenomenon. Based on a systematic search for literature reviews, scientific reports, and practice guides developed for workplaces on the topic of RTW interventions, the researchers in this study were able to describe what is currently known and recommended in research on the best practices of this type, and, using an analytical grid with pre-established categories, to identify the main strategic elements applicable to the Québec context.

To achieve Objective 2, a qualitative multiple-case study design with various nested levels of analysis was used to identify, from complementary data sources, the policies, procedures, and practices of four organizations operating in two different activity sectors. A case (called an “organization case” in this report) includes all the formal and informal RTW procedures and practices, as well as the conditions facilitating or hindering RTW, in a given workplace. Three units of analysis were examined for each organization case. The first consisted of all the written documents collected from the organization. These documents underwent content analysis to establish the formal RTW procedures. The second unit of analysis consisted of the viewpoints of the key players involved in a general way in the RTW process, as documented in interviews. Content analyses of these interviews helped to clarify the informal procedures, actual practices, and conditions facilitating or hindering the RTW process in general and to describe the gaps between what the organization prescribes in its formal and informal procedures and what occurs in actual practice. The third and last unit of analysis consisted of a set of RTW situations, described on the basis of interviews with workers and other players involved in the RTW. The actions taken in each RTW situation were described, synthesized, and then compared with elements prescribed in the organization’s formal or informal procedures. Intra-organization case analyses were performed to describe the procedures and practices, and the conditions facilitating or hindering RTW, in each organization case. Inter-organization case analyses were then performed to identify similarities and differences between these elements, depending on the different organizational contexts. A total of 45 interviews were conducted with 32 key players

(workers, administrator/counsellor responsible for internally managing disability claims and RTW [referred to in this document as disability RTW administrator/counsellor], supervisors, preventionists, union representatives, etc.) for all the organization cases. The practices and conditions involved in the concrete RTW situations were described on the basis of the semi-structured interviews conducted with 14 workers and 21 key players involved in their RTW.

To achieve Objective 3, the main elements of the best practices, extracted from the evidence found in the literature (Objective 1), were compared with elements of the organizations' actual practices (Objective 2) in order to produce a qualitative description of the discrepancies between what is recommended and what is actually done.

The results of the literature review revealed that a number of publications concur about the effectiveness of workplace intervention. While numerous interventions of this type have been proposed and evaluated by the authors, few studies have established an effectiveness relationship between any specific workplace intervention strategy and the RTW. General characteristics of organizational policies and procedures, as well as strategic elements of workplace interventions (activities, strategies, and resources), were extracted from the literature in order to compare the best practices recommended in research with the actual practices of the participating organizations.

Based on the multiple case study, we were able to describe the actual practices for each organization case in its particular context. Several major findings emerged from this description. First, the activities outlined in the organizational policies and procedures were consistent with the legal provisions of the AIAOD (right to RTW, temporary assignment, rehabilitation, etc.). However, other essential activities not stipulated in the AIAOD were found to be theoretically understood by most of the players, but rarely applied in reality. Next, a gap was also found between what was written or formally recognized as the organization's procedures and what was done in actual practice in the workplace. A last finding concerned the diversity of these practices. For instance, specific actions (e.g., assigning the worker to light tasks, making sure a temporary assignment involves gratifying work, having the worker gradually resume job tasks) taken by one or more players (supervisor, disability and RTW administrator/counsellor, worker, etc.), attitudes fostering communication and cooperation among all internal and external players involved in the worker's RTW process, and concerted action by the supervisor and worker regarding work adjustments and accommodations were all procedural elements that were applied differently, depending on the varying conditions found in the organizations. The lack of formalization of organizational policies and procedures could explain this wide variation. Formal procedures (e.g., accident investigation and temporary assignment) were applied in different ways, even when the players appeared to be familiar with the procedures. The lack of formalization of other procedural elements (e.g., contacting the worker as soon as possible after the accident; choosing, planning, implementing, and following up on the RTW solution, etc.) left room for a wide range of practices within a given player category (supervisor, disability and RTW administrator/counsellor, union) and within a given organizational context.

Lastly, the multiple case study highlighted a number of similarities and differences among the participating organizations' practices. Similarities were found in the implementation of the legal provisions regarding accident prevention (Québec's *Act Respecting Occupational Health and Safety*, or AOHS) and the right to return to work (AIAOD), and were specific to the Québec context. Thus, the establishment of temporary assignments and the adaptation of work stations and jobs, even before medical consolidation of the injury, were rigorously applied in all the organizations. These provisions stem from legal obligations and reflect the chronicity prevention

policies of Québec's Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST, or labour standards, pay equity, occupational health and safety board). Differences were associated with various elements of the organizational context. For instance, according to the players interviewed, a prevention culture that fosters dialogue between supervisors and workers helps not only to prevent other accidents of the same type, but also to accommodate workers as they progress toward a sustainable recovery. Moreover, it allows players to better prepare for RTW situations. In addition, the key players' RTW experience with returning workers differed from one organization to the other. The more workers that the supervisors had to supervise, the more likely they were to have to deal with RTW situations. Conversely, those who supervised small teams rarely had to face such situations and, unless they were well equipped (training, procedures stipulating formally defined roles and responsibilities, etc.), they were ill-prepared to meet production requirements while also respecting the workers' limitations.

The comparison of the best practices gleaned from the literature with the actual practices described on the basis of the multiple case study brought three types of discrepancies to light. They concerned the different ways of carrying out the activities essential to sustainable RTW, the structures and resources made available to the key players to facilitate the actions associated with these essential activities, and the lack of formalization of policies and procedures within the organizations studied. It would be advisable for these organizations to heed some key messages emerging from the highlighted discrepancies in order to come up with ways to improve the transfer of theoretical knowledge into practice. First, formalization of the organization's RTW policies and procedures, along with providing players with information and training on the different actions to be taken, would help clarify their roles and responsibilities, as well as facilitate joint decision making about work adjustments and accommodations and about process improvement. Next, resources and structures that foster both the supervisor's and worker's involvement in choosing, implementing, and following up on the RTW solution would help take into account the fit between production requirements and the worker's functional capacities, and establish a forum for dialogue conducive to work adjustments and accommodations. The RTW solution should be envisaged as soon as possible after the accident, taking into account tasks that are gratifying and meaningful for the worker, while respecting the progression in his capacities. Lastly, coordination by players in the organization and the carrying out of essential activities, such as communication and collaboration among all players (both internal and external), should promote the co-construction of an RTW solution that is appropriate and fair for both the injured worker and the other workers in the organization. To reduce the discrepancies between theoretical and scientific knowledge, on the one hand, and actual practices, on the other, organizations should consider four possible courses of action: (1) develop clear and formal procedures that specify the actions associated with essential activities in the RTW process, for the players and various stages/phases of the process; (2) promote structures based on communication and cooperation among all players concerned; (3) raise management's and workers' awareness of the importance of an early RTW; and (4) provide key players with training on the essential activities to be carried out to facilitate the RTW of workers compensated for MSDs.

These results offer a number of benefits. From a scientific standpoint, the synthesis of best practices highlights certain strategic elements (the main phases/stages in the RTW process, the actions needed by phase/stage and by key player) applicable at different levels of action (characteristics, principles of action, strategies essential to successful RTW) in the Québec context. At the same time, the multiple case study documents how the RTW process is actually understood and applied in the organizations. The comparison of the results of the multiple case study with the findings of the literature review brings to light a number of discrepancies and

provides insight into the contextual elements underlying these variations in Québec organizations. To the best of the authors' knowledge, this study is one of few to have compared what is recommended in research with what is applied in organizations in actual practice, using concrete RTW situations. Based on current knowledge, this study provides partial or possible solutions for managing workers in RTW situations following MSDs, taking into account the specific requirements of Québec legislation. From a practical standpoint, for the participating workplaces, the results of the study help clarify the strong points and the weaker areas where procedures and practices could be improved with regard to their impact on the RTW. This study could serve as the basis for a future study on the development/revision of the RTW procedure.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	I
SUMMARY	III
LIST OF TABLES	IX
LIST OF FIGURES	XI
LIST OF INITIALISMS AND ACRONYMS	XIII
1. INTRODUCTION	1
1.1 Occupational Health and Safety Problem.....	1
1.1.1 Work disability: issues and consequences.....	1
1.1.2 Legal context in Québec.....	2
1.2 State-of-the-Art Knowledge Review	3
1.2.1 Return to work: an important issue in preventing long-term disability.....	3
1.2.2 RTW intervention practices in the rehabilitation context.....	4
1.2.3 Return-to-work practices in the workplace	5
1.3 Conceptual Framework.....	6
2. OBJECTIVES	9
2.1 General Objective	9
2.2 Specific Objectives.....	9
3. METHODOLOGY	11
3.1 Objective 1: Determine, Based on the Literature, the Best Practices for Fostering Sustainable RTW and Preventing Long-term Disability among Workers with MSDs	11
3.1.1 Research questions.....	11
3.1.2 Document search and selection.....	11
3.1.3 Quality assessment	12
3.1.4 Data extraction	12
3.1.5 Analyses.....	13
3.1.6 Presentation of results.....	13
3.2 Objective 2: To Describe Actual RTW Practices and Identify the Conditions Facilitating their Implementation in Québec Workplaces	14
3.2.1 Definitions of a case and the units of analysis	14
3.2.2 Case selection.....	15
3.2.3 Data sources by case	15
3.2.4 Recruitment of workers and key players	15
3.2.5 Data collection instruments.....	16
3.2.6 Data collection procedure	16
3.2.7 Preparation of material for analysis	17
3.2.8 Analyses.....	18

3.3	Objective 3: Assess the Discrepancies between the Best Practices Recommended in the Evidence-Based Literature and Actual Practices in Workplaces.....	19
3.4	Ethics and Confidentiality.....	19
4.	RESULTS.....	21
4.1	Literature Review.....	21
4.1.1	Description of the publications retained.....	21
4.1.2	Effectiveness of interventions in the workplace.....	29
4.1.3	Intervention strategies for sustainable RTW.....	35
4.1.4	Synthesis of best practices.....	41
4.2	Multiple Case Study.....	47
4.2.1	Organization A.....	47
4.2.2	Organization B.....	55
4.2.3	Organization C.....	60
4.2.4	Organization D.....	67
4.2.5	Cross-case synthesis.....	72
4.3	Discrepancies between Best Practices and the Organizations' Actual Practices.....	82
5.	DISCUSSION.....	87
5.1	Best Practices for Sustainable RTW.....	87
5.2	Actual Practices and Conditions Facilitating Sustainable RTW.....	88
5.3	Discrepancies between Best Practices and Actual Practices.....	89
5.4	Applicability of the Results.....	91
5.5	Strengths and Limitations of This Study.....	93
5.6	Benefits of This Study and Avenues for Future Research.....	93
6.	CONCLUSION.....	95
	BIBLIOGRAPHY.....	97
	APPENDIX – QUESTIONS AND THEMES RAISED WITH THE WORKERS AND KEY PLAYERS DURING THE INTERVIEWS.....	105

LIST OF TABLES

Table 1. Selection criteria 12

Table 2. Description of publications 23

Table 3. Findings regarding the effectiveness of interventions in the workplace 30

Table 4. Intervention strategies in the workplace 37

Table 5. Guidelines and recommendations for workplaces 39

Table 6. Best practices in the workplace: characteristics, strategic elements, and activities specific to a phase/stage or category of player 43

Table 7. Organization A – Procedures and practices, and conditions facilitating or hindering RTW 51

Table 8. Organization B – Procedures and practices, and conditions facilitating or hindering RTW 57

Table 9. Organization C – Procedures and practices, and conditions facilitating or hindering RTW 64

Table 10. Organization D – Procedures and practices, and conditions facilitating or hindering RTW 69

Table 11. Synthesis of the context and information sources, by organization 75

Table 12. Similarities and differences between the organizations’ actual procedures and practices 76

Table 13. Facilitating and hindering conditions cited in the organizations by the various categories of players 80

Table 14. Discrepancies between best practices and actual practices 84

LIST OF FIGURES

Figure 1.	Conceptual framework	7
Figure 2.	Units of analysis, methods, and data sources used.....	14
Figure 3.	Summary of the literature search strategy.....	22

LIST OF INITIALISMS AND ACRONYMS

AIAOD	Act respecting industrial accidents and occupational diseases
BEM	Bureau d'évaluation médicale (medical evaluation office)
CLP	Commission des lésions professionnelles ¹ (employment injury board)
CNESST	Commission des normes, de l'équité, de la santé et de la sécurité du travail ² (labour standards, pay equity, and occupational health and safety board)
CSST	Commission de la santé et de la sécurité du travail ³ (occupational health and safety board)
GRTW	Gradual return to work
HR	Human Resources (department)
HSC	Health and safety committee
IVAC	Indemnisation des victimes d'actes criminels (crime victims' compensation)
MSD	Musculoskeletal disorder
OHS	Occupational health and safety
RAMQ	Régie de l'assurance maladie du Québec (Québec health insurance corporation)
RCT	Randomized controlled trial
RTW	Return to work
SAAQ	Société de l'assurance automobile du Québec (Québec automobile insurance corporation)
TA	Temporary assignment
TRTW	Therapeutic return to work
WP	Workplace

¹ The Tribunal administratif du travail (administrative tribunal of Québec) replaced the Commission des lésions professionnelles (CLP, or employment injury board) on January 1, 2016.

² <http://www.cnesst.gouv.qc.ca/a-propos-de-la-CNESST/Pages/a-propos-de-la-CNESST.aspx>

³ The Commission de la santé et de la sécurité du travail (CSST) became the Commission des normes, de l'équité et de la santé et de la sécurité du travail (CNESST) on January 1, 2016.

1. INTRODUCTION

1.1 Occupational Health and Safety Problem

1.1.1 *Work disability: issues and consequences*

Despite the major prevention and occupational health and safety efforts of the past few years, in terms of both research and interventions, work disability still affects a large proportion of the population. In 2010, 5.1% of full-time Canadian employees were absent from work owing to an occupational disease or disability. In Québec, the figure was higher, at 8.9% (Statistics Canada, 2011). In 2014, according to the Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), 82,321 workers were the victims of industrial accidents and 5,725 contracted occupational diseases, thus affecting a total of 88,046 workers (CNESST, 2016⁴). Even though the number of injuries is on the decline in Québec (there were 92,112 claims for compensation for industrial accidents and occupational diseases in 2010, 89,640 in 2012 and 88,363 in 2013; CNESST, 2016), an average of 225 workers were still injured at work every day in 2014 (CNESST, 2016).

Musculoskeletal disorders (MSDs) remain one of the main causes of worker disability and rank among the most costly employment injuries. Medically speaking, MSD-type injuries are inflammatory or degenerative impairments of the musculoskeletal structures caused by overuse of joints (application of excessive, repetitive, or continuous force, sometimes combined with a constraining posture, or exposure to vibrations or cold temperatures). Work disability caused by an MSD is the result of the interaction among a number of factors, including the worker's condition, how it is managed in the clinical setting and the workplace, the ergonomic demands of the work, several psychosocial factors, and broader contexts such as the socio-economic and legal environments. MSDs represent a heavy economic burden for employers, workplaces, and society in general; they also cause suffering to the workers concerned and their families.

In Québec, in 2015, the number of MSD-type injuries stood at 23,630, representing 27.0% of the claim files opened and accepted by the CNESST. Since 2012, this proportion has remained relatively stable, i.e., a little over one quarter of all files opened and accepted. Also in 2015, it was in the medical and social services sector that the proportion of this type of injury was highest (41.0%). Moreover, it was the only sector where the proportion of MSDs was greater than one-third of all the injuries in the same sector (CNESST, 2016). In 2015, MSD-type injuries were concentrated in nursing, therapy, and related assisting occupations, which accounted for 4,249 cases (19.1%), and in material handling and related occupations, with 2,111 cases (9.5%). For the years 2012 to 2014, these two occupational categories also ranked first and second. However, between 2012 and 2015, these types of injuries increased by 2.3% in nursing, therapy, and related assisting occupations and decreased by 13.1% in material handling and related occupations. In 2015, MSD-type injuries affected more men than women, with 12,727 cases (57.2 %) versus 9,533 cases (42.8%) respectively. The proportions have been similar since 2012, even if, between 2012 and 2015, the number of MSD injuries declined by 5.3% in men while increasing by 4.0% in women. In 2015, the number of MSD cases was higher among workers aged 50 to 54 (by 3,108), aged 35 to 39 (by 2,879), and aged 45 to 49

⁴ The Commission de la santé et de la sécurité du travail (CSST) became the Commission des normes, de l'équité et de la santé et de la sécurité du travail (CNESST) on January 1, 2016.

(by 2,855). For each year from 2012 to 2014, the number of these cases was higher in workers aged 45 to 48 and workers aged 50 to 54. For the 2012 to 2015 period as a whole, the number of cases was much lower in workers under the age of 20 and in workers aged 60 or over. In 2015, the lumbar region, with 9,552 cases (42.9 %), the shoulder (including the clavicle and shoulder blades) with 2,898 cases (13.0%), and the thoracic region, with 1,885 cases (8.5%) were the injury sites involving the highest proportions of MSD-type injuries, accounting for nearly 65% of this type of injury. Strains, sprains, and tears involving the back represented over 55% of MSD injuries for each year from 2012 to 2015. Their numbers were relatively stable during that period, with a low of 12,934 cases in 2015 and a high of 13,101 cases in 2012. Cases of shoulder tendinitis and of strains, sprains, and tears involving the shoulder or neck were also numerous during the period observed. In 2015, their numbers stood respectively at 1,414, 1,284 and 899.

The consequences of work disability are not only financial. A report commissioned by the Department for Work and Pensions in the United Kingdom stated that improving the health of the labour force is essential for ensuring economic growth and increasing social justice (Black, 2008). In fact, when a worker is off work following an employment injury, numerous repercussions can be seen within a vast interrelated system. This system involves not only the workers facing their health problems, but also their employers, who must deal with productivity and profitability constraints; co-workers, whose workload may be heavier; and families and friends, whose well-being and daily balance can be disrupted (Martin and Baril, 1993). One study on social and occupational reintegration processes reports that workers experience fears and insecurity arising from lack of clarity surrounding the evaluation of their health condition and their own lack of knowledge of the administrative and legal rules and regulations. They also appear to experience a loss of motivation regarding their occupational reintegration, social isolation, a drop in quality of life, and a feeling of loss of dignity and autonomy (Baril *et al.*, 1994). As work disability constitutes such a major issue on both the socio-economic and personal levels, the implementation of winning return-to-work (RTW) practices should therefore be of interest to both managers and workers or their representatives.

1.1.2 Legal context in Québec

In Québec, the *Act respecting industrial accidents and occupational diseases*, adopted in 1985, applies to workers who have had work-related accidents or contracted occupational diseases and whose employers had an establishment in Québec when the accident occurred or the disease was contracted (Arguin *et al.*, 1999, *Act respecting industrial accidents and occupational diseases* RSQ c.A-3.001). Among other things, this law provides such workers with a right to RTW when their injury is consolidated or their health permits. There are, however, time limitations on this right. Workers retain job priority at their employer's for one year from the start of their sick leave if the organization has 20 or fewer workers, or for two years if their organization has 21 workers or more. In the case of workers who are no longer able to perform their pre-injury jobs due to permanent impairments, their employers are obliged to modify their work tasks or adapt their work stations accordingly. If that proves impossible, their employers must offer them the first suitable employment that comes available. The temporary assignment of workers to lighter tasks is a right that lies exclusively in the hands of employers. As the name indicates, such assignments must be temporary; they must consist of a productive activity related to the type of activities carried out by the organization and must promote the workers' return to their regular tasks (CNESST, 2015, *Politique 3.06*). An employer wishing to give an employee a temporary assignment must provide the physician with a complete description of the job envisaged, duration of the temporary assignment, tasks and workload involved, working

conditions, and work schedules anticipated, and these must be approved by the worker's physician (AIAOD, section 179). By law, this work must be beneficial to the person's rehabilitation (*Ibid*). If needed, workers are also entitled to a rehabilitation program (physical, social, and occupational) to help them return to their jobs or, if that is impossible, to access other jobs. It should be noted that in Québec, the collective agreement in place in the establishment or the health and safety committee determines how the RTW will unfold. In the absence of this type of agreement or committee, the worker and employer must reach an agreement. The CNESST only intervenes as a last resort, at either the worker's or employer's request.

To assist organizations in applying the law, beginning in 1993, the CNESST developed a policy regarding maintenance of the employment relationship. Its main objective is to increase the percentage of workers who return to their employer's following an industrial accident or occupational disease (CSST, 1993). Under this policy, Québec organizations must promote workers' healthy and sustainable return to work. Thus, the employers and players responsible for absence and reintegration management programs for workers following sick leave due to a work-related injury or illness are directly concerned. To the authors' knowledge, there are no studies describing how this policy is applied in the workplace or identifying the various facilitating or hindering conditions in organizations.

1.2 State-of-the-Art Knowledge Review

1.2.1 Return to work: an important issue in preventing long-term disability

A number of studies have investigated the determinants of work disability. The importance of factors other than clinical and demographic factors has been underscored in the literature for approximately three decades (Spitzer, 1986). Several studies have since confirmed that a RTW as soon as possible after an injury or illness has completely healed or subsided is in everyone's best interest. Generally speaking, in research, the RTW of workers injured in a work-related accident or having contracted an occupational disease is now recognized as an important issue, not only for workers and their families, but also for organizations, the health care system, the compensation system, and society at large (Frank *et al.*, 1998, Loisel *et al.*, 2001a, Pransky *et al.*, 2004, Young *et al.*, 2010).

Substantial progress has been made in the past three decades in conceptualizing the RTW. In general, the concept of RTW is used in prognostic studies as a measure of the number of victims who recover from a work-related disability and is then associated with the resumption of a productive activity. In evaluative studies, it is used to measure impacts following a specific intervention. Regardless, today, there is increasing recognition of the merit of seeing RTW as a process, as a set of factors related to the implementation of an interdisciplinary occupational rehabilitation intervention aimed at reintegration into the workplace either before or after the physical return to work (Loisel *et al.*, 2005, Pransky *et al.*, 2004). Conceptualized as a process, the RTW comprises several phases/stages: sick leave, return to work, employment continuation, and occupational advancement (Young *et al.*, 2005). Considerable efforts have been made in research to develop explanatory models for disability and the RTW. The traditional biomedical approach, which emphasizes an illness-based vision of disability and essentially advocates treatments hinged on identifying and eliminating the cause of the symptoms, has proved inadequate in terms of acting on the overall disability and RTW process. The dominant conceptual model currently used to understand the work disability phenomenon is the biopsychosocial model (Gatchel, 2004; Verbrugge and Jette, 1994, Feuerstein, 1991).

Although it takes into account the anatomical causes that can be corrected, this model focuses on the more complex determinants and systems within which rehabilitation professionals and their interactions, as well as the role played by the context and the individual, are key elements (Loisel *et al.*, 2005). The biopsychosocial model integrates economic, social, physical, and environmental factors into the disability development and intervention processes, while underscoring the relationship between the physical and social environments surrounding work disability and the importance of external factors that influence the development of work disability (Durand *et al.*, 2002, Loisel *et al.*, 2001a).

Regarding the management of disability and RTW cases in the rehabilitation context, a number of studies have shown that disability is due not only to workers' personal traits (physical and psychological), but also to their environment – the workplace, the compensation system, and even the health care delivery system (Durand *et al.*, 2002, Loisel *et al.*, 2001a). Thus, the old model based solely on treating the disease is gradually turning into a disability management approach based on reassuring the patient and carrying out interventions involving workplaces (Loisel, 2005, Durand *et al.*, 2002, Loisel *et al.*, 2001, Frank *et al.*, 1998). This approach to disability prevention, which encourages clinicians, employers, unions, insurers, and researchers in the field to work together from the perspective of the disability paradigm, appears to be the best way to ensure healthy and sustainable RTW and to avoid an unnecessary progression toward long-term disability (Loisel *et al.*, 2001). The adoption of this model means that today, the problem of disability is seen as complex and multi-dimensional and as requiring the active involvement of all stakeholders (insurer, health care system, employer and worker) in order to bring appropriate, concrete, and sustainable RTW solutions that are also efficient for organizations and the parties concerned.

1.2.2 RTW intervention practices in the rehabilitation context

The RTW process poses numerous challenges for employees, employers, health care providers, and insurers (Waddell *et al.*, 2002, Loisel *et al.*, 2005). A wealth of knowledge exists on the clinical, administrative, organizational, and personal factors at play in the process (Frank *et al.*, 1998, Loisel *et al.*, 2001, Pransky *et al.*, 2004). Studies aimed at acting on these various factors have yielded considerable evidence, particularly regarding the principles of intervention in the context of rehabilitating workers with MSDs and of preparing for a successful RTW (prompt management of the disability as soon as it appears, the supervisor's role in assigning work tasks, the fit between the work demands and the worker's capacities, and effective collaboration and communication among the players in the various systems involved). In this regard, the RTW interventions taking place in organizations, including temporary assignments, light tasks, phased exposure to work, gradual return to work, and therapeutic return to work, have been described at length in the rehabilitation literature (Durand 2001, Krause *et al.*, 1998, Loisel *et al.*, 1994). Yet little is known about the content and durability of the work adjustments and accommodations applied in the context of these interventions.

Innovative interventions have been put forward, but to date, evaluation of their implementation and long-term outcomes has provided little conclusive evidence of their effectiveness. Advances have been made in the field of rehabilitation interventions with regard to the preparation and execution of appropriate and sustainable RTW processes in organizations (Loisel *et al.*, 2005, Franche *et al.*, 2005, Durand *et al.*, 2007, Waddell *et al.*, 2009). It has thus been shown that intervention by a multidisciplinary team helps target workers at risk of long-term disability and identify the factors requiring priority action (Anema *et al.*, 2007, Loisel *et al.*, 2005). In addition, participatory ergonomic approaches, whose effectiveness has been demonstrated in some

contexts, are today regarded as a promising challenge that must be met if successful RTW interventions are to be achieved in organizations (Anema *et al.*, 2003, Loisel *et al.*, 2001b, Vermeulen *et al.*, 2011). There is increasing recognition in research of the need to involve workplaces in order to meet the needs of individual workers and help them overcome their disabilities. RTW management in fact presupposes that organizations assume responsibility for prevention, early intervention and the reintegration of work-disabled or injured workers (Waddell *et al.*, 2002). Evidence-based practices – called *best practices* in the context of this research project – have also been associated with various key players involved in the RTW process (e.g., physician, physiotherapist, disability and RTW administrator/counsellor, supervisor) and in the appropriate management of workers during rehabilitation (Krause *et al.*, 1998, Stock *et al.*, 1999, Baril *et al.*, 2000, Pransky *et al.*, 2004, Loisel *et al.*, 2005, Campbell *et al.*, 2007, Franche *et al.*, 2005, MacEachen *et al.*, 2006, Durand *et al.*, 2007).

There appears to be consensus among researchers that intervention in the workplace is essential to the prevention of long-term disability (Anema *et al.*, 2004, Durand *et al.*, 2007, Franche *et al.*, 2005, Krause *et al.*, 1998, Loisel *et al.*, 2005, MacEachen *et al.*, 2006, Nastasia *et al.*, 2011, Schultz *et al.*, 2007, Steenstra *et al.*, 2009). However, this type of intervention clearly reflects much more often the concerns of rehabilitation professionals than those of workplaces. Moreover, studies reporting on such interventions provide insufficient descriptions of the real context within organizations and of the work context in which the worker resumes activities. For example, carrying out a gradual return to work may have a significant therapeutic effect on workers who are on the road to recovery as they feel supported and fairly treated by their employer (Durand *et al.*, 2007). Yet some studies report that in certain organizations, as soon as workers are back at work, they are expected to be productive or risk being seen as an instability factor in production (Waddell *et al.*, 2008).

1.2.3 Return-to-work practices in the workplace

As mentioned earlier, much interest has been shown in the practices of various professionals involved in rehabilitation (physician, physiotherapist, psychologist, etc.) in the workplace in terms of preparing for the RTW, but very little in describing the actual practices of organizations in their particular contexts and of the various RTW players within the organizations. Discrepancies appear to exist between evidence-based practices as described in the literature (*best practices*) and their real implementation in workplaces (*actual practices*). For example, it is now recognized that maintaining the supervisor/worker relationship is essential if the worker is to regain self-confidence and look positively on the RTW (Nieuwenhuijsen *et al.*, 2004). Yet a recent Québec field study in fact revealed that in some organizations, supervisors receive clear directives from their organizations *not* to contact absent workers in order to avoid harassment complaints, and not to speak to the workers about their health condition when they return (Lemieux *et al.*, 2010). It therefore appears that the strategic elements identified in the literature as vital to a successful, healthy, and sustainable RTW and to preventing long-term disability are not necessarily implemented in organizations. Understanding the “how” and “why” of these discrepancies from the standpoint of the organizational players involved in the RTW process should point to ways of adapting these various strategic elements to the varying organizational contexts.

Two pioneering studies describing Québec organizations’ practices have advanced explanations regarding the dimensions involved and the roles of the various players (worker, supervisor, manager, union representative, insurer, co-worker) in the RTW process (Baril *et al.*, 2000, Stock *et al.*, 1999). The Baril *et al.* study (2000) is noteworthy for the theoretical model

and various organizational dimensions proposed as a means of explaining organizations' capacity to maintain the employment relationship with injured workers. The Stock *et al.* study (1999) provides a portrait of the factors possibly facilitating or hindering the RTW in organizations operating in the electrical and electronics industry. The study also informed the development of decision-making support tools (Stock *et al.*, 2005) designed for organizational players to help them factor MSD risks more effectively into their interventions. However, the systemic and generic perspective of these studies did not allow for a description of the actions actually taken in the workplace by the players involved in the RTW process within organizations. Yet such scientific knowledge offers immense potential in terms of understanding the conditions at play in organizations and of integrating strategic elements into the design and implementation of approaches aimed at the healthy, sustainable, and successful RTW of workers with MSDs.

In conclusion, despite research progress regarding rehabilitation interventions over the past three decades, particularly the interest in the RTW, it remains impossible as yet to determine how the evidence (best practices) is concretely applied in workplaces. The aim of this project was therefore to describe organizational practices in order to better understand how the best practices described in the literature are integrated into the RTW practices of Québec organizations and to identify more clearly the conditions that facilitate healthy, sustainable, and successful RTW.

1.3 Conceptual Framework

Figure 1 depicts the conceptual framework of this study. It highlights the dynamic co-construction of RTW solutions using both the research findings (best practices) and workplace practices (actual practices). This co-construction process should make it possible to establish optimal practices conducive to the healthy and sustainable RTW of workers with MSDs and adapted to various organizational contexts. According to this dynamic, optimal practices would constitute the result of integrating and adapting best practices (based on the evidence emerging from the literature) into actual organizational practices, while taking into account the particularities of each workplace. Several phases/stages are necessary to carry out this process. First, it is essential to establish what exactly the best practices are, and then to determine what is actually done in RTW situations, assess the discrepancies between them, and develop solutions for reducing these discrepancies.

Lastly, to determine the optimal practices for a given context, consultation with the parties involved (workplaces, stakeholders in the RTW process) appears necessary if we are to ensure both the adaptability of the solutions envisaged and stakeholder adherence. The results of this project could then be used to carry out the subsequent and final step.

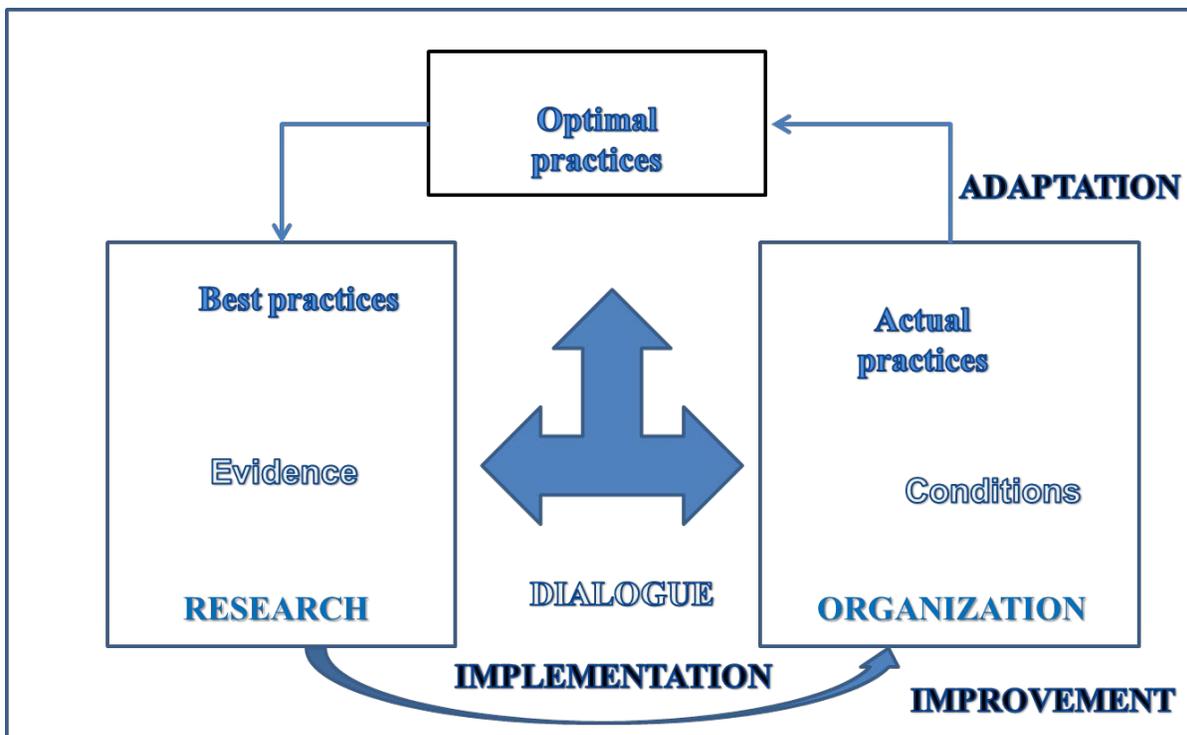


Figure 1. Conceptual framework

2. OBJECTIVES

2.1 General Objective

The general objective of this project was to identify and describe the discrepancies between the best evidence-based practices emerging from research and the actual practices of a handful of Québec organizations with regard to the RTW of workers with MSDs. The ultimate goal was to propose courses of action for reducing these discrepancies.

The hypothesis underlying this project was that few best practices, defined on the basis of the research evidence, are currently implemented in Québec organizations. By assessing the discrepancies between what is recommended and what is actually done, we sought to improve understanding of the courses of action to pursue to improve and transform them into optimal practices.

2.2 Specific Objectives

- 1) Determine, based on the literature, the best practices for fostering sustainable RTW and preventing long-term disability among workers with MSDs;
- 2) Describe actual RTW practices and identify the conditions facilitating their implementation in Québec workplaces;
- 3) Assess the discrepancies between the best practices recommended in the scientific literature and actual practices in workplaces.

3. METHODOLOGY

Several methods were used to attain the three study objectives. For the sake of clarity, the methodology will be presented separately for each objective.

For Objective 1, an integrative literature review was conducted to determine the best practices for workplaces to adopt in order to foster sustainable RTW and prevent long-term disability among workers with MSDs.

For Objective 2, a multiple case study was carried out to describe workplace procedures and practices and identify the contextual elements facilitating their implementation in Québec workplaces. A case was defined as all the RTW-related formal and informal procedures and practices applied in a given workplace. To assess each case, four data sources were used: documents from the organization, and interviews with three types of interlocutors, namely, workers back at work following a work-related musculoskeletal injury, and the players involved directly and indirectly in the RTW of these workers.

For Objective 3, a qualitative descriptive design was used to assess the discrepancies between the best practices and actual practices, as well as the conditions facilitating and hindering RTW in the workplace.

3.1 Objective 1: Determine, Based on the Literature, the Best Practices for Fostering Sustainable RTW and Preventing Long-term Disability among Workers with MSDs

An integrative literature review (Whittemore and Knafl, 2005) was conducted first. It is a specific type of review method that synthesizes the theoretical and scientific literature in order to provide an in-depth understanding of a phenomenon. The methodology of our study is presented in accordance with the guidelines for integrative reviews (Grant, 2009, Whittemore and Knafl 2005).

3.1.1 Research questions

Two research questions were investigated in this review: (1) what are the characteristics and components of workplace interventions that facilitate healthy and sustainable RTW? and (2) what are the contextual elements facilitating their implementation in Québec workplaces?

3.1.2 Document search and selection

Systematic searches of the literature published after 1986 were conducted by a librarian specialized in 11 electronic databases: PUBMED, EMBASE, PSYCINFO, ERGONOMICS ABSTRACTS, ABI-INFORM, INRS, Social SciSearch, PASCAL, FRANCIS, OSHUPDATE, and OSHLINE-CANADIANA. The year 1986, the year in which the Spitzer Report was published (1986), was retained as the starting year for the pertinent reference search. This report signalled the development of research on the importance of non-clinical aspects (importance of biopsychosocial factors) in the spinal conditions of workers who are back at work. Moreover, based on the finding made by this working group, namely, that the capacity to return to work decreases as the number of days spent on work disability increases, an entire series of clinical and non-clinical interventions have been tested in research in order to reduce the risk of long-term disability through an early RTW. The database descriptors were searched using keywords

related to workplace interventions for workers who were back at work following an MSD (RTW, intervention, practice, work-related MSD, pain, and organization). A manual search was also performed by consulting the bibliography and the list of publications identified in the prior step. The documents retained were not limited to published scientific articles. Research reports, theses, briefs, book chapters, and practice guides were also considered. The document search was essentially conducted over a two-month period, from September to November 2012. An updated search followed in early 2016 (February). Only documents in English and French were retained. Table 1 describes in detail the selection criteria applied in this study.

Table 1. Selection criteria

<p>Inclusion criteria:</p> <p>Types of materials: qualitative or quantitative literature reviews, practice guides, scientific reports and guides based on various levels of evidence (systematic reviews with or without quality assessment, meta-analyses, integrative reviews, reviews of reviews, experts' opinions);</p> <p>Themes: RTW interventions, sick-leave or work-disability management programs, organizational RTW practices and strategies in the workplace.</p>
<p>Exclusion criteria:</p> <p>Types of materials: books, conference proceedings, randomized controlled trials (RCTs), cohort studies, and any other types of studies that were not reviews;</p> <p>Themes: primary-prevention and pain-management-with-no-sick-leave interventions and programs, employee assistance programs (EAPs), health promotion programs, strictly clinical rehabilitation programs with no clear RTW goal (e.g., rehabilitation studies in medical clinics).</p>

3.1.3 Quality assessment

Unlike classic systematic reviews, in which quality assessment is based on a hierarchy of evidence, the quality of the documents identified in this review was not systematically assessed. This decision was based on the fact that most of the documents retained (reviews, reviews of reviews, reports) provided a quality assessment of the evidence in the original articles that was conducted using standardized methods (GRADE, PRISMA, GRACE, etc.). However, the research team members made a judgment regarding the pertinence and scientific rigour (methodology and interpretation) of each of the documents studied. The significance of the results was weighted on the basis of this judgment.

3.1.4 Data extraction

The documents retained were first annotated and then classified under various headings in an Excel database. A data extraction form was developed by the research team members to record the different elements sought. Two types of headings were used in this form. The first type was descriptive; these headings included the authors' names, year of publication, main objective (effectiveness, description of components, description of concepts in a workplace intervention context), the number and type of articles reviewed, the range of years covered, the site and stage of the injury studied, and the study populations. The second type of heading was

analytical and served to break down the relevant information contained in the document and categorize it under one of the following headings: (1) type of program, policy, procedure, and component(s) in the workplace; (2) quality assessment method used in the articles retained; (3) findings regarding the effectiveness of the RTW interventions and the measures implemented; (4) concepts and theories underlying the program components in the workplace; (5) program resources; (6) elements of the process; (7) role and responsibilities of the players; and (8) contextual elements.

3.1.5 Analyses

First, descriptive analyses were performed in order to characterise the publications in terms of authors, country of the first author, year and type of publication, site and stage of the MSD injury studied, main objective. Content analyses were performed next. Basic semantic units (themes) (Bardin *et al.*, 1977, Negura *et al.*, 2006) were first identified by type of objective (effectiveness of the interventions and strategic elements applied in the workplace). To this end, based on a close reading of the articles, the significant ideas were first identified, codified, and categorized according to the specific issues addressed in the review (headings) (Negura *et al.*, 2006). The themes identified concerned effective or strategic elements referring to a policy, practice, intervention, concept, or action mechanism in the workplace. The headings consisted of strategic elements or best practices.

By comparing these headings across the various publications, by type of publication (review, scientific report, practice guide), it was possible to determine and synthesize the evidence-based data and any similarities in the authors' conclusions, and thereby to discern patterns in best practices. In the case of certain scientific publications (practice guides), this comparison was limited to a few headings, as information for some categories was missing or published elsewhere.

Decisions regarding the extraction of information by heading and the assignment of themes (codification) were made on a consensus basis by two members of the research team. The documents were analyzed separately by these two members and the results then compared. Any discrepancies were discussed. Interrater agreement ranged between 80 and 90%, depending on the heading.

3.1.6 Presentation of results

Tables were completed according to the questions explored in the review (description of the articles, effectiveness of the intervention programs and their components in the workplace, description and evaluation of the various RTW strategies, etc.). A first table includes the descriptive analyses of the review publications. A second table presents the findings and conclusions reached by the various authors on the effectiveness of the RTW intervention and the description of the components in the workplace. A third table describes the main components presented by the authors as effective or promising for RTW. A final table summarizes the main elements of the best practices by their action mechanism and their similarity across the various publications. A list derived from this table was used in relation to Objective 3 to describe the discrepancies between the best practices and the actual practices, and to envisage ways to improve the transfer from theory to practice.

3.2 Objective 2: To Describe Actual RTW Practices and Identify the Conditions Facilitating their Implementation in Québec Workplaces

A multiple-case study design with several nested levels of analysis was used to attain this objective (Yin, 2003). This type of design is particularly useful in situations where a more in-depth understanding is sought of complex phenomena, in situations where researchers have little control over the events studied, and in situations where attention is focused on contemporary phenomena in a real-life context (Collerette, 1997; Eisenhardt, 1989; Yin 2003). Multiple case studies provide a broader view of a problem; they are recommended when there is little knowledge of the subject and when the focus of the study is complex and related to various contextual issues (Yin, 2003).

3.2.1 Definitions of a case and the units of analysis

A case, referred to in this study as an “organization case,” was defined in our study as all the formal and informal RTW-related procedures and practices in a given workplace, as well as the facilitating and hindering conditions. Three units of analysis were used to document each organization case: the organization’s written documents (A), the generic players’ representations of the RTW process (B), and the workers’ concrete RTW situations (C). Figure 2 synthesizes the sources, methods, and units of analysis used for each organization case, as well as the various levels of information sought.

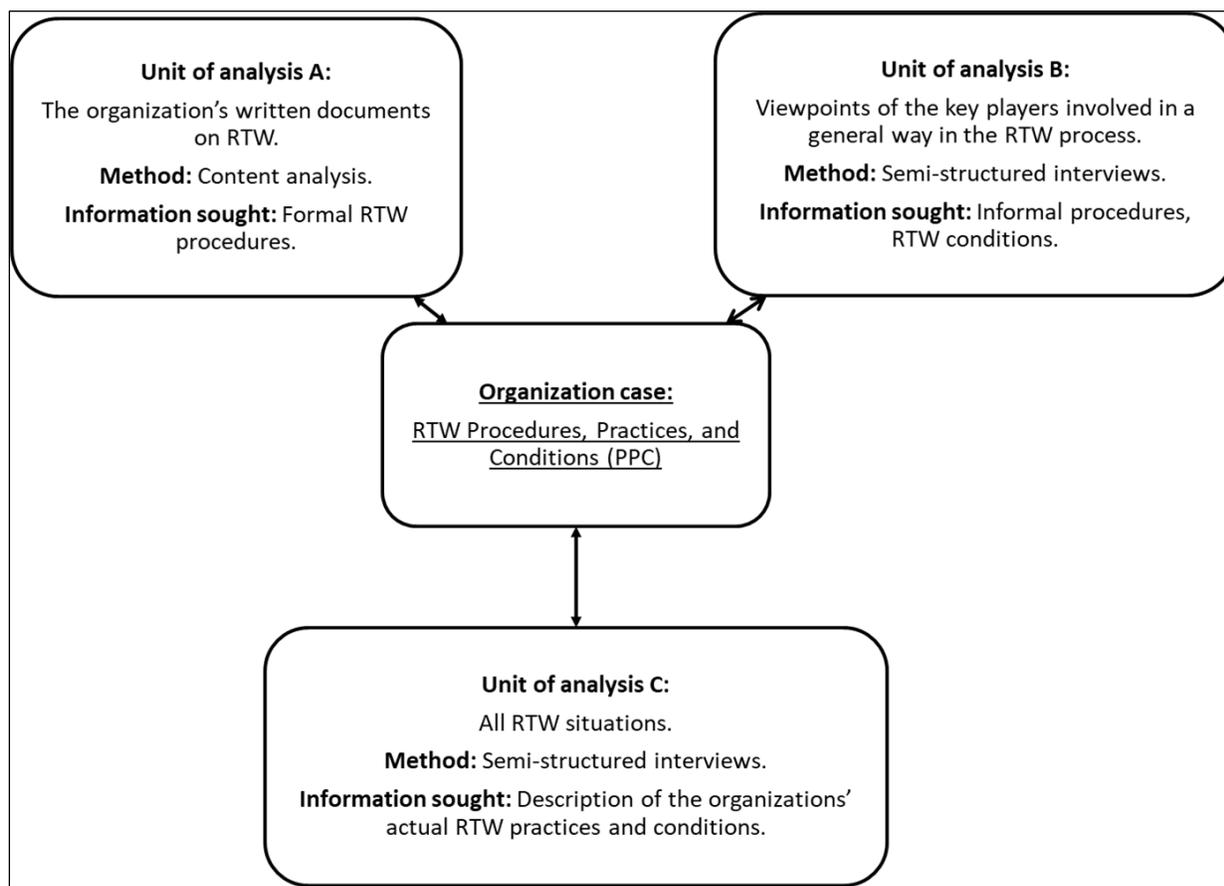


Figure 2. Units of analysis, methods, and data sources used.

3.2.2 Case selection

Four organizations – two private companies and two public organizations – formed the “organization case” basis for this study. Recruitment of the organizations was facilitated by the collaboration of six associations (employer, union, and joint sector-based). Twenty companies and public organizations were approached and the research project was presented to ten of them. A degree of variety was sought in terms of organization context: different activity sectors, varying characteristics (e.g., size, unionized status, priority sectors targeted by CNESST for active surveillance and intervention, sectors with predominantly female or male workforces).

For an organization case, several RTW situations (unit of analysis C) were described by different key players. A return-to-work situation consisted of all the practices implemented by the key players involved in a RTW situation and of the perceptions held by both the workers and key players in this regard, as well as the conditions facilitating or hindering a sustainable RTW.

3.2.3 Data sources by case

The data on each organization case came from four sources: (1) documents provided by the organization; (2) workers back at work following a musculoskeletal disorder; (3) key players directly involved in the RTW situations of these workers (disability and RTW administrators/counsellors, supervisors, preventionists, etc.) and (4) key players involved in a general way in the RTW process (managers, union representative, etc.).

3.2.4 Recruitment of workers and key players

The workers were selected with help from the person responsible for managing RTW cases in the organization. The worker inclusion criteria for the study were: back at work for six months or more following a sick leave of at least six weeks from their regular job within the two years preceding the study for a work-related musculoskeletal disorder diagnosis compensated by the CNESST. The exclusion criteria were: involved in a litigious case, assigned definitively to another job due to the accident, and involved in a conflictual situation with managers, co-workers, or union representatives. Participation in the project was voluntary.

To recruit key players, the workers interviewed had to identify who, in their workplace, had played a role in their RTW process. Between two and five key players were named by each worker. These key players were met wherever possible. Some people had changed jobs or organizations or were on maternity leave at the time of the interviews. The key players named by the workers and met were employer’s representatives, disability and RTW administrators/counsellors, supervisors, union representatives, preventionists, external professionals, and co-workers.

Lastly, the key players involved in a general way in a RTW process (source 4) consisted of a member of senior management who had an overview of the organization’s RTW process, and a few supervisors and disability and RTW administrators/counsellors who, at the time of the worker’s accident, did not occupy the position they held at the time of the interview. This was the case, for example, of a newly hired preventionist and of a supervisor who had just changed positions within the organization.

3.2.5 Data collection instruments

Two interview guides were developed by the research professional and one of the researchers on the team approximately one month before data collection began. Inspiration for the sociodemographic information to be collected and themes to be broached during the interviews was drawn from work done by two members of the research team (Durand *et al.*, 2014) in order to develop the interview guides. To help the key players organize their reflections on the RTW, the themes broached during the semi-structured interviews related mainly to the different phases/stages in the RTW process (Durand *et al.*, 2014): (1) accident, (2) sick leave, (3) temporary assignment, (4) gradual return to work, (5) worker's return to his job and regular duties, and (6) follow-up. Some questions also concerned the possible accommodations implemented following the accident, as well as the factors that might have facilitated or hindered a healthy and sustainable RTW. A table showing the various themes raised during the interviews, by category of player, is presented in Appendix 1.

A first guide was designed for the purpose of collecting the workers' perspectives. It had two parts. The first part contained sociodemographic questions: age, sex, duration of employment in the organization and in the job held at the time of the accident, and nature of the tasks. The second part covered themes related to the workers' experience during their RTW process.

A second guide, designed to collect the key players' perspectives, also had two parts. The first concerned the players' job title, training, and employment tenure in their organization, and, in general terms, their experience with RTW situations. In the second part, the themes were broached according to the source considered, i.e., type of player. For the key players involved in one or more RTW situations of the aforementioned workers, the themes concerned the concrete actions taken, as well as the conditions perceived as facilitating or hindering attainment of a sustainable RTW, depending on the situation experienced. For the players who had not participated in any of the aforementioned RTW situations, the themes of this second part of the guide concerned organizational practices: procedures, responsibilities in the RTW, conditions under which these responsibilities were carried out, and the conditions (in their view) facilitating or hindering sustainable RTW.

3.2.6 Data collection procedure

A resource person acting as an interface between the research team and the organization was responsible for collecting the organizations' internal RTW-related documents (source 1). The team's research professional was thus able to compile all the documents concerning the RTW process, including policies and procedures, among other things.

Information on the workers' perspectives (source 2) and on the perspectives of two categories of key players (sources 3 and 4) was obtained during the semi-structured interviews, each of which took place in two separate parts. The first part consisted of a presentation of the interview objectives and the ethics consent form, a period of questions about the project and the ethics procedure, and the signing of the consent form. This first part of the interview lasted approximately 12 minutes.

In the second part, after having obtained sociodemographic information on the worker, or information on the key player's function, training, and experience, the worker had to recount his⁵ RTW experience from the time of the accident until his situation following the definitive RTW had stabilized. For their part, the key players directly involved in the RTW situations had to explain, first, the RTW procedures and their role in the RTW process, and then how this process had unfolded in concrete terms. The players involved in a general way in the RTW process were asked to explain the organization's RTW procedures and to identify the conditions facilitating or hindering sustainable RTW. This second part of the interview lasted more or less than an hour, depending on the quality of the exchanges.

Each person had given his consent to participate in an audiotaped interview. Data collection was performed by the research professional and one of the researchers on the team, between January 2014 and September 2015. Data was collected intensively or spread over time, depending on the availability of the participating organizations.

3.2.7 Preparation of material for analysis

The documents provided by the organizations were digitized and integrated, by organization case, into the database created using QSRNVivo software (Gibbs, 2002). First, the interviews were transcribed in the form of reports. The reports consisted of a structured transcription of the answers obtained by theme. As the interviews were semi-structured, the themes of the reports varied slightly from the questions included in the interview guides. Each report was written up according to the following themes: (1) RTW procedures; (2) sick leave period or period preceding the return to the regular job or pre-accident job; (3) temporary assignment period; (3) gradual-return-to-work period; (5) contacts during the sick leave, temporary assignment, and gradual return to work; (6) evaluation of work capacities and job demands; (7) physical and organizational adjustments and accommodations; (8) return to regular work; (9) follow-up; (10) factors facilitating or hindering the RTW; and (11) other comments. The reports were then transferred into NVivo software following the time sequence of the RTW process.

The material was organized and coding performed using QSR.NVivo software (Gibbs, 2002). The main categories contained in the coding tree were pre-established according to the themes broached in the semi-structured interviews: (1) the key players, (2) the description of the company/organization; (3) the procedures, (4) the phases/stages in the RTW following the accident; (5) the factors facilitating or hindering the RTW; (6) the positive and negative perceptions of the RTW process, as well as the irritants; and (7) suggestions and possible solutions.

To ensure that the themes assigned to the various categories of information were clear, pertinent, and true to their definitions, the coding process required obtaining a level of agreement of over 80% between the principal coder and one of the researchers, both of whom were trained in content analysis. The analyses were performed between August 2014 and September 2015.

⁵ The masculine gender is used throughout this document solely to facilitate reading and has no discriminatory intent.

3.2.8 Analyses

All the material underwent content analyses (Bardin, 1977; Landry, 1997). This work involved several nested levels of analysis. First, intra-organization case analyses were performed in order to document, by participating organization, the units of analysis retained according to the research questions. It is important to recall that the first unit of analysis consisted of the organization's written documents on its organizational policies and procedures. Content analyses of these documents resulted in the identification of the formal RTW procedures and a description of the main elements.

The second unit of analysis consisted of a series of RTW situations. Each RTW situation was first described from the perspectives of the workers and of other key players directly involved in the RTW, with respect to the accidental event, the time from the accident to the sick leave, the temporary assignment, the gradual return to work, the return to regular work, follow-up, the evaluation of work capacity and of the work itself, work adjustments and accommodations, facilitating or hindering factors, and emotions. Next, the series of situations was synthesized by theme (accident declaration, exchange of information about the case, accident investigation, information sent to the union, medical authorization of the temporary assignment, temporary assignment budget, temporary assignment tasks, RTW, evaluation, preventive solutions, definitive RTW, follow-up, litigation, role of the employer's physician), while distinguishing between procedural elements and the practices cited by the various categories of players (worker, disability and RTW administrator/counsellor, supervisor, employer's representative, union representative, preventionist, external professional, and co-worker). The various facilitating or hindering conditions cited in relation to these situations were also noted for each procedural element. Comparisons between the RTW situations pointed to similarities and differences between the implementation of these practices within the same organization, as well as to correspondences between what was prescribed and what was actually done.

The third unit of analysis consisted of the various perspectives of the players with general involvement in the RTW process (RTW manager, union, etc.). Content analyses were performed using the reports of the interviews conducted with these players. They provided additional information on the formal procedures, elements of informal procedures, and better descriptions of the context and of the conditions facilitating or hindering the RTW within the organizations. Next, comparisons between the formal procedures (unit of analysis A) and informal procedures (unit of analysis B), and with the organization's practices (unit of analysis C) revealed whether there were correspondences or gaps between what was prescribed and what was actually done in each organization, and second, between the conditions cited as facilitating or hindering the RTW within the same organization.

Inter-organization case analyses were then performed to highlight the similarities and differences between the procedures and practices of the four organizations, and between their respective facilitating or hindering conditions. Organization cases were compared for each unit of analysis.

Each analysis was performed by two members of the team and subject to a consensus-agreement procedure.

3.3 Objective 3: Assess the Discrepancies between the Best Practices Recommended in the Evidence-Based Literature and Actual Practices in Workplaces

To describe the discrepancies between the best evidence-based practices and the organizations' actual practices, as well as the conditions facilitating or hindering their application in the workplace, a comparative analysis was performed using the results obtained from the integrative literature review (Objective 1) and the multiple case study (Objective 2). The number of discrepancies was calculated, by element of best practices.

A synthesis table was developed using the list of elements of best practices drawn up in the context of Objective 1 and of actual practices studied in the context of Objective 2. The presence or absence of discrepancies is reported in this table for the various organizations.

3.4 Ethics and Confidentiality

The research protocol was approved by the Université de Sherbrooke's Comité institutionnel d'éthique de la recherche avec les êtres humains [institutional committee on the ethical conduct of research involving human subjects]. The information collected was to remain confidential and be used strictly for research purposes. The participants signed a form giving their free and informed consent after a member of the research team informed them of the study objectives, what was expected of them, and the possible advantages and disadvantages of participating in the study.

4. RESULTS

4.1 Literature Review

The results are presented in accordance with the guidelines put forward in the integrative review (Whittemore and Knafl, 2005). As can be seen in Figure 3, which details the bibliographic search process and the number of references retained after each step in the methodology, 1,780 titles were initially selected. After examining the abstracts to assess their relevance, 84 documents were read in their entirety to verify the application of the selection criteria. A total of 29 of these documents met the criteria.

4.1.1 Description of the publications retained

Table 2 provides a description of the 29 publications retained, by author(s), year of publication, type of publication, main objective, type and stage of the injury that was the focus of the publication, and the target population. These publications fell into three main categories: 22 literature reviews, four research reports, and three practice guides. The reviews comprised 15 systematic reviews, only one of which included a meta-analysis. The others were narrative, integrative, and realist syntheses.

The populations studied in the different publications were diverse: workers who were or had been on sick leave, workers who remained at work despite symptoms, or workers who had been off their regular jobs for varying lengths of time. Eighteen reviews out of 22 focussed on MSDs in general, irrespective of injury site (lower back, upper extremities, and neck), and often on other health problems (e.g., mental or physical health problems, fibromyalgia, or osteoarthritis). Of the 20 publications that investigated interventions by particular phase/stage of injury – acute (3 articles), sub-acute (9 articles), and chronic (8 articles) – ten dealt with only one phase/stage of injury. In terms of the time intervals used by the authors to define the stages of disability caused by musculoskeletal injuries, despite slight differences from one author to the other, they generally corresponded to the definitions given by Waddell *et al.*, (2001): the acute phase, of less than 4 weeks; the sub-acute phase, of between 4 and 12 weeks; and the chronic phase, of more than 12 weeks.

Generally speaking, three types of intervention-related research objectives were pursued: (1) determine the effectiveness of intervention programs having one or more workplace components (19 articles); (2) describe the components of the intervention in the workplace (types of actions, process, and players) and the mechanisms underlying the process (three articles and four reports); and (3) identify the conditions facilitating implementation of these components and their uptake in the workplace (three practice guides).

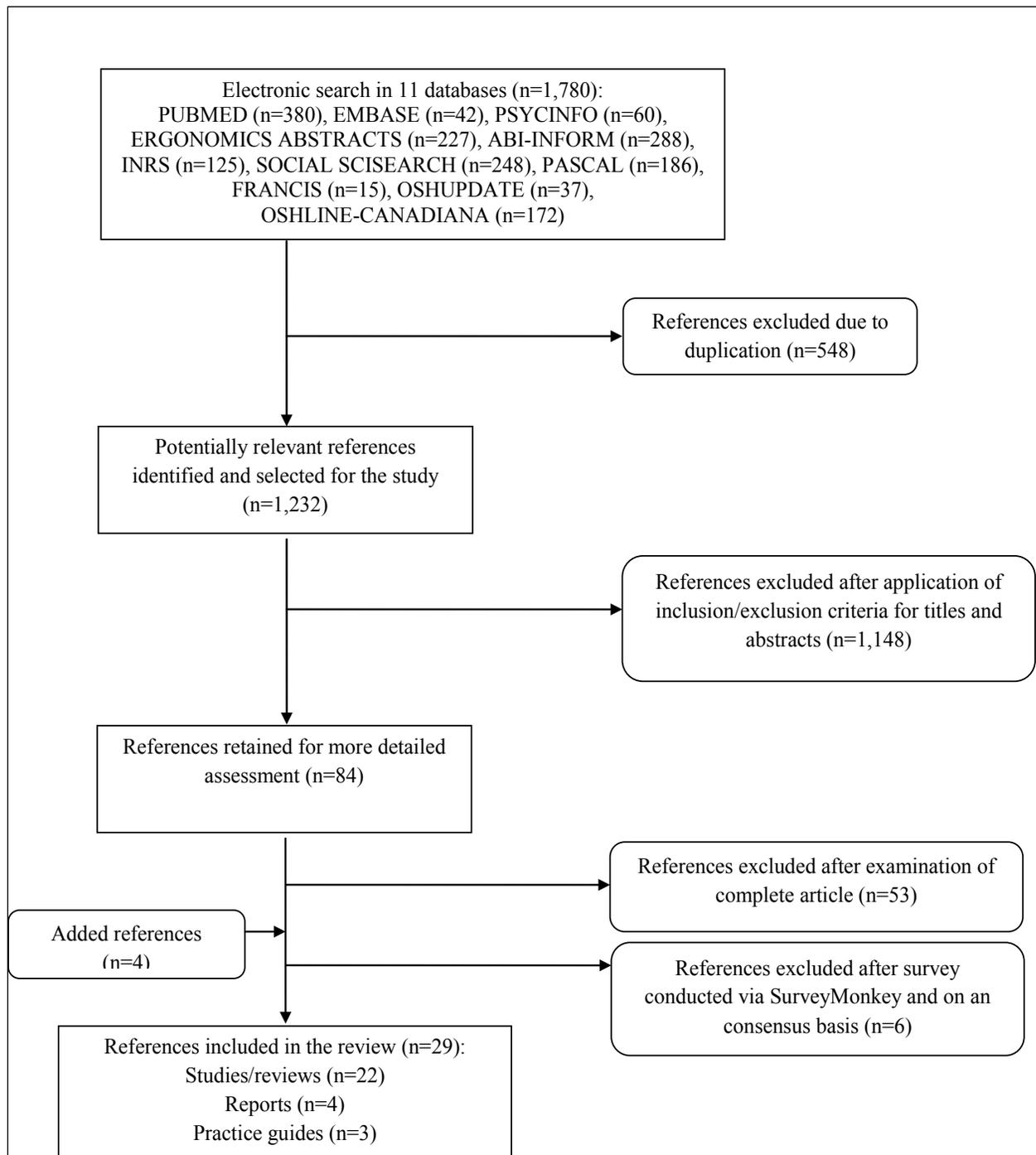


Figure 3. Summary of the literature search strategy.

Table 2. Description of publications

Author(s) Year	Type of publication/ Number of articles	Objective	Injury site/type	Study population Sick leave duration	Injury phase/stage Health problem
Aas <i>et al.</i> , 2011	Systematic review (Cochrane) N = 10 studies, including 2 meta- analyses 1991-2008	Evaluate effectiveness of interventions in the WP.	Neck	Workers at work or on sick leave Sick leave duration: N/C	Acute: < 6 wk. Sub-acute: 6-12 wk. Chronic: > 12 wk.
Boocock <i>et al.</i> , 2007	Systematic review N = 31 studies 1999-2004	Evaluate the results of ergonomic interventions in primary, secondary, or tertiary MSD prevention.	MSDs Neck + upper extremities + fibromyalgia	Workers followed ≥ 2 mo. Sick leave duration: N/C	N/C
Briand <i>et al.</i> , 2008	Review of systematic reviews N = 14 studies 2000-2006	Establish the components of work rehabilitation interventions.	Physical injuries: MSDs, etc.	Workers on sick leave Sick leave duration: N/C	Sub-acute: 4-6 wk. Chronic: > 6 wk.
Burton <i>et al.</i> , 2009	Narrative systematic review No. ref.*=101 1995-2007	Determine the MSD management strategies.	Upper extremities	Working-age adults Sick leave duration: N/C	N/C
Carroll <i>et al.</i> , 2010	Systematic narrative review N = 13 articles, 14 economic studies 1992-2007	Evaluate the effectiveness of interventions involving the WP in improving RTW rates (compared to interventions with no WP involvement)	Lower back	Workers, full-time or part-time. Sick leave duration, long: ≥ 2 wk.	N/C
Durand <i>et al.</i> , 2014	Review of reviews N = 17 documents	Identify the best sick-leave management practices and	MSDs and common mental	Workers on sick leave	N/C

Author(s) Year	Type of publication/ Number of articles	Objective	Injury site/type	Study population Sick leave duration	Injury phase/stage Health problem
	(articles, reviews, practice guides) 2003-2012	propose an RTW approach designed to assist organizations.	disorders (CMDs)	Sick leave duration: N/C	
Durand <i>et al.</i> , 2007	Descriptive review N = 21 articles, 16 studies 1992-2004	Determine the objectives of interventions in the WP conducted as part of a rehabilitation program, and describe the activities carried out.	MSDs	Workers: absent > 50% of the work time Sick leave duration: N/C	N/C
Elders <i>et al.</i> , 2000	Systematic review N = 12 articles 1977-1998	Evaluate the effectiveness of the RTW strategies in preventing long-term sick leave.	Back: non-specific pain	Workers Sick leave duration: < 1 yr.	Acute: < 30 days Sub-acute: between 30 days and 12 wk. Chronic: ≥ 12 wk.
Franche <i>et al.</i> , 2005	Systematic review N = 25 articles, 10 studies 1994-2003	Evaluate the effectiveness of the RTW interventions in the WP.	MSDs and other pain-related conditions	Workers on sick leave, both compensated and non-compensated Sick leave duration: N/C	N/C
Higgins <i>et al.</i> , 2012	Realist review N = 269 articles 1976-2011	Identify and evaluate the dominant theories underlying the best practices for managing long-term sick leave in the WP.	Illnesses or injuries, including MSDs	Workers on sick leave Sick leave duration: long: ≥ 4 wk.	N/C
Hlobil <i>et al.</i> , 2005	Systematic review N = 13 articles, 9 randomized	Explore the effectiveness of RTW interventions on absenteeism, functional	Lower back: non-specific pain	Workers on sick leave Sick leave duration: N/C	Sub-acute: between 4 wk. and 3 mo.

Author(s) Year	Type of publication/ Number of articles	Objective	Injury site/type	Study population Sick leave duration	Injury phase/stage Health problem
	controlled trials (RCTs) 1992-2004	status, and pain compared to that of regular care.			
Hoefsmit <i>et al.</i> , 2012	Systematic review N = 23 articles 1997-2010	Identify the characteristics of interventions that facilitate the RTW after sick leave.	Pain, including that associated with an MSD	Workers on sick leave, irrespective of diagnosis Sick leave duration: N/C	N/C
Lysaght <i>et al.</i> , 2010	Integrative review N = 37 articles 1984-2008	Examine the best rehabilitation and work reintegration practices.	MSDs	Workers Sick leave duration: N/C	Acute: ≤ 12 wk.
MacEachen <i>et al.</i> , 2006	Systematic review N = 13 qualitative studies 1994-2003	Gain a better understanding of RTW dimensions, processes, and practices.	MSDs + pain	Workers Sick leave duration: N/C	N/C
Ozguler <i>et al.</i> , 2004	Review of reviews N = 10 articles 1996-2003	Document interventions that are effective in terms of RTW.	Lower back	Patients with low back pain Sick leave duration: > 3-4 wk.	Sub-acute: from 3-4 wk. to 3 mo. Chronic: 3 to 6 mo.
Palmer <i>et al.</i> , 2012	Systematic review N = 42 studies, including 34 on RCTs 1992-2010	Evaluate the effectiveness of interventions in the WP in order to manage sick leaves related to job loss.	MSDs	Workers on sick leave Sick leave duration: 12 mo.	N/C
Schandelmaier <i>et al.</i> , 2012	Systematic review and meta-analysis N = 17 articles,	Compare the effectiveness of RTW coordination programs in preventing	MSDs	Workers back at work for at least 80% of their work time	N/C

Author(s) Year	Type of publication/ Number of articles	Objective	Injury site/type	Study population Sick leave duration	Injury phase/stage Health problem
	including 8 on RCTs 1993-2010	long-term work disability compared to that of usual disability management practices.		Sick leave duration: 4 wk.	
van Oostrom <i>et al.</i> , 2009	Systematic review (Cochrane) N = 15 articles, including 6 on RCTs 1994-2007	Determine the effectiveness of interventions in the WP compared to that of usual clinical care interventions, in terms of work- and health-related outcomes.	Disability caused by all types of conditions, including MSDs	Workers, working-age adults, on sick leave Sick leave duration: long-term.	N/C
Waddell and Burton, 2001	Systematic review N =34 articles 1993-2000	Provide scientific evidence in order to develop a workplace health guide for managing work-related back problems.	Back injury	Working-age adults Sick leave duration: N/C	Acute: < 4 wk. Sub-acute: 4-12 wk. Chronic: ≥ 12 wk.
Williams <i>et al.</i> , 2007	Systematic review N = 15 articles, 10 studies 1991-2004	Evaluate the effectiveness of rehabilitation interventions in the WP.	Back injury, work-related MSDs	Workers Sick leave duration: N/C	N/C
Williams <i>et al.</i> , 2004	Systematic review N = 8 studies 1991-2003	Evaluate the effectiveness of rehabilitation interventions.	Upper extremities (simultaneous disorders involving neck and upper extremities)	Patients, users of computer monitors and mouses. Sick leave duration: N/C	N/C
Williams and Westmorland, 2002	Descriptive review of workplace practices	Describe the main components of disability management programs in	MSDs	Workers Sick leave duration:	N/C

Author(s) Year	Type of publication/ Number of articles	Objective	Injury site/type	Study population Sick leave duration	Injury phase/stage Health problem
	N = 31 1990-2002	the WP.		N/C	
Campbell <i>et al.</i> , 2007	Report on reviews (communications, systematic reviews, meta-analyses, and reports) 1999-2007	Evaluate the effectiveness of RTW interventions and determine the components of these interventions.	Common health problems: back-related and other MSDs.	Working-age adults currently involved in rehabilitation or a RTW Sick leave duration: N/C	Acute: < 6 wk. Sub-acute: 6-12 wk. Chronic: ≥ 12 wk.
Gensby <i>et al.</i> , 2012	Report on systematic reviews (Campbell-type) N = 13 studies 1987-2006	Evaluate the effectiveness and examine the components of work disability management programs that promote the RTW.	MSDs	Workers on disability leave Sick leave duration: long-term	N/C
Podniece <i>et al.</i> , 2007	Report No. ref. =117 1996-2007	Evaluate the effectiveness of injured-worker retention, reintegration, and rehabilitation interventions and policies.	MSDs (back injury + upper and lower extremities)	Workers Sick leave duration: N/C	Acute: 4-6 wk. Sub-acute: 4-12 wk. Chronic: > 12 wk.
Waddell <i>et al.</i> , 2008	Report Systematic review 2000-2008	Provide a database for developing occupational rehabilitation policies.	Common health problems: MSDs	Working-age adults Sick leave duration: long-term	N/C
NICE 2009 ⁶	NICE Guideline N = 13 documents 2007-2008	Provide recommendations for the management of sick leaves caused by long-term illnesses and disability.	MSDs	Workers Sick leave duration: ≥ 4 wk. (long)	N/C

⁶ <http://www.nice.org.uk/guidance/ph19>

Author(s) Year	Type of publication/ Number of articles	Objective	Injury site/type	Study population Sick leave duration	Injury phase/stage Health problem
Kendall <i>et al.</i> , 2009 ⁷	Intervention guide based on identification of obstacles to RTW	Identify the obstacles to the RTW by using the psychosocial flags reference framework.	MSDs	Workers Sick leave duration: N/C	Acute: < 2 wk. Sub-acute: 2-12 wk. Chronic: > 12 wk.
Stock <i>et al.</i> , 2005 ⁸	Guide and tools for employment retention and RTW (in-house guide)	Propose an approach for implementing an employment retention and RTW program.	MSDs (work- related or not)	Workers Sick leave duration: < 90 days	N/C

*No. ref.: We counted the references in the Results section because there were no summary tables of all the studies or papers reviewed.

WP: workplace

RCT: randomized controlled trial

N/C: not covered

wk.: week

mo.: month

yr.: year

⁷ www.tsoshop.co.uk/flags

⁸ <http://www.irsst.qc.ca/media/documents/PubIRSST/OMRT-FR.pdf>

4.1.2 Effectiveness of interventions in the workplace

Generally speaking, as can be seen from Table 3 as a whole, a number of studies concur that policies, programs, interventions, and strategies with workplace components are effective in terms of RTW. More specifically, several authors have observed the effectiveness of combinations of clinical components and interventions in the workplace. However, few studies establish an effectiveness link between any particular component in the workplace and RTW. Moreover, the level of evidence of effectiveness varies considerably, depending on the quality of the studies.

The different components evaluated in the workplace varied in nature: ergonomic interventions (Aas *et al.*, 2011, Burton *et al.*, 2009, Elders *et al.*, 2000, Franche *et al.*, 2005, Williams *et al.*, 2007, Williams *et al.*, 2004), behavioural or cognitive behavioural interventions (Campbell *et al.*, 2007, Ozguler *et al.*, 2004), physical activity, exercises, and back school (Boocock *et al.*, 2007, Elders *et al.*, 2000, Ozguler *et al.*, 2004, Waddell and Burton, 2001), education and information (Aas *et al.*, 2011, Burton *et al.*, 2009, Campbell *et al.*, 2007, Williams *et al.*, 2004), relaxation and breaks (Williams *et al.*, 2004), and adjustment and modification of tasks, work stations, and work environment (Boocock *et al.*, 2007, Burton *et al.*, 2009, Franche *et al.*, 2005, Hoefsmit *et al.*, 2012, Palmer *et al.*, 2012).

The effectiveness of these combinations depends on numerous factors related to the implementation context in the workplace, including disability management policies and programs that encourage workers to remain active by means of a gradual return to work (Hoefsmit *et al.*, 2012, Palmer *et al.*, 2012), work modifications (Williams and Westmorland, 2002, Williams *et al.*, 2004), a proactive and participatory – active involvement of the players – approach (Waddell *et al.*, 2008) (Carroll *et al.*, 2010), early contact with the worker (Franche *et al.*, 2005), and early intervention (at around six weeks following the onset of pain) (Burton *et al.*, 2009, Campbell *et al.*, 2007, Carroll *et al.*, 2010, Williams *et al.*, 2007), RTW coordination (Franche *et al.*, 2005, Schandemaier *et al.*, 2012, Williams *et al.*, 2004).

Most of the evaluated interventions in the workplace were carried out by a multidisciplinary research team in collaboration with the workplaces. They were specific or non-specific with respect to type of MSD (back, neck, etc.), stage (acute/sub-acute/chronic) (Elders *et al.*, 2000, Waddell *et al.*, 2001, Palmer *et al.*, 2012), and activity sector (manufacturing, office automation, hospital, call centre, and construction).

The measures most commonly used to evaluate the effectiveness and impact of the interventions on RTW were the duration of the sick leave before the RTW or the percentage of workers effectively back at work. Only a few reviews mentioned maintenance of the effects of these interventions over time, in the workplace (Aas *et al.*, 2011, Elders *et al.*, 2000, Franche *et al.*, 2005, Hlobil *et al.*, 2005, Hoefsmit *et al.*, 2012, Palmer *et al.*, 2012, Schandemaier *et al.*, 2012, van Oostrom *et al.*, 2009, Waddell and Burton 2001, Williams *et al.*, 2004, 2007, Williams and Westmorland, 2002, Gensby *et al.*, 2012).

Table 3. Findings regarding the effectiveness⁹ of interventions in the workplace

Author(s) Year	Type of program and injury site/type	Variable of measured RTW outcomes	Finding regarding the effectiveness of the programs in the workplace and their components
Aas <i>et al.</i> , 2011** ^{Q10}	RTW programs Neck	Sick leave duration Maintenance of effects: 3, 6, 12 mo.	Intervention in the WP (education, ergonomic principles, physical activity) reduces absenteeism among workers after 6 months of sick leave.
Boocock <i>et al.</i> , 2007** ^Q	Primary/secondary or tertiary prevention programs Neck and upper extremities	Health condition and pain	Effectiveness of <i>mechanical adjustments, exercise, and modifications to the work environment, work station, and equipment</i> in improving the health condition and pain.
Burton <i>et al.</i> , 2009** ^Q	RTW interventions MSDs, upper extremities Contexts: work on computer screens, manual work	Sick leave duration	Physical and organizational adjustments (temporary and transitional) facilitate the RTW. <i>Early RTW</i> is facilitated by multi-modal intervention, including the fact of providing specific information and encouraging activity at work. <i>Integrative approaches</i> are effective for MSDs in general and for disorders involving the upper extremities, e.g., <i>case-management</i> type of intervention.
Carroll <i>et al.</i> , 2010* ^Q	RTW strategies Back: sub-acute	RTW rates	Interventions with a <i>WP component</i> are more effective than those without. Involving workers, health professionals, and employers in making work modifications is associated with more effective improvement than other interventions. <i>Early RTW</i> in the WP is effective.
Elders <i>et al.</i> ,	Ergonomic	RTW rates	<i>Ergonomic intervention combined with "back school"</i> is effective

⁹ To report on the effectiveness of the intervention, the authors referred to studies conducted using various methodologies: meta-analysis, randomized controlled trial, and comparisons with usual-care programs or interventions.

¹⁰ To report on the effectiveness of the intervention, the authors referred to the quality of evidence reported in randomized controlled trials.

Author(s) Year	Type of program and injury site/type	Variable of measured RTW outcomes	Finding regarding the effectiveness of the programs in the workplace and their components
2000* ^Q	interventions in secondary prevention Back: acute, sub- acute, and chronic	Maintenance of effects: 0-360 days	after 60 days from the beginning of the sick leave (sub-acute phase) compared with the “back school” intervention alone. Components of the ergonomic intervention: exercise, physical fitness, training in work methods and lifting techniques.
Franche <i>et al.</i> , 2005** ^Q	RTW strategies MSDs and other pain- related conditions	Sick leave duration Maintenance of effects: > 1 yr.	<i>The fact of offering adjustments, contact between the health professional and the WP, early contact with the worker by the WP, ergonomic visits to the work station, and the presence of a disability and RTW administrator/counsellor reduce disability duration and the related costs.</i>
Hlobil <i>et al.</i> , 2005** ^Q	Functional capacity restoration program with component in the workplace (sub-acute pain) Back	RTW rate and no. of days of sick leave Maintenance of effects: 6 mo., ≥ 12 mo.	<i>Early functional capacity restoration in a multi-disciplinary team and in the WP is effective in terms of increasing the RTW rate after 6 months of sick leave and of reducing the number of sick days after 12 months.</i>
Hoefsmit <i>et al.</i> , 2012* ^Q	Multi-disciplinary, early RTW interventions with components in the WP Physical problems: MSDs	RTW rate Maintenance of effects: ≤ 6 wk., 12 mo.	<i>Multi-disciplinary intervention appears effective for various target groups (e.g., those with back pain or adjustment disorders). Activities planned according to a pre-defined calendar are effective. The combination of encouraging the W to remain active and a GRTW is effective. Contact with the employer and with the WP improves the RTW rate at 12-month follow-up compared to usual treatment.</i>
Ozguler <i>et al.</i> , 2004* ^Q	RTW interventions involving patients with low back pain	Sick leave duration	<i>Effective interventions include a cognitive behavioural component aimed at fear reduction. One of the essential content points of interventions in the WP is to help the subject be active despite low back pain (“back school,” encouragement to do activities).</i>
Palmer <i>et al.</i> , 2012* ^Q	Interventions in the WP for managing sick leaves and loss of	RTW rate Average number of days of sick leave	<i>None of the interventions tested appeared superior. More complex and more intense interventions are less effective than simple and less intense ones.</i>

Author(s) Year	Type of program and injury site/type	Variable of measured RTW outcomes	Finding regarding the effectiveness of the programs in the workplace and their components
	employment MSDs	Loss of employment for health reasons during the reference follow-up period Maintenance of effects: 3, 6, 12 mo.	<i>Short</i> interventions (< 12 hr.) are more effective than those taking more time (32 hr., very few benefits). Interventions that require <i>adjustments</i> are more beneficial in reducing the number of lost work days. Interventions requiring <i>graded tasks</i> are positive. Benefits are greater for workers absent for < 12 wk. compared with those absent for > 3, 6, or 12 mo.
Schandelmaier <i>et al.</i> , 2012** Q	RTW programs for workers on disability MSDs	Long-term sick leave: number of days of sick leave RTW rate Maintenance of effects: 6, 12, 16, 60 mo.	<i>RTW coordination</i> has a small effect, but probably important in terms of absolute benefits (probability that patients with a disability return to work), even if it has few benefits in terms of health and stability. The time it takes for a RTW to stabilize is assessed at one yr.
van Oostrom <i>et al.</i> , 2009** Q (RCT)	RTW interventions in the WP Disability due to a health problem: MSDs	Number of days of sick leave Maintenance of effects: 12 mo.	<i>Intervention in the WP</i> reduces sick leave compared with usual care (different result in terms of the workers' health condition). Components of the intervention in the WP: <i>modifications to the work environment and work station, layout, equipment; changes to working conditions; method of sick-leave management.</i>
Waddell and Burton, 2001** Q	Program combining clinical, rehabilitation, and sick-leave management interventions in the WP Back	Number of days of sick leave Maintenance of effects: 4 wk., 12 wk., 1 yr.	<i>Organizational and sick-leave management strategies in the WP</i> reduce absenteeism and the associated losses (acute phase). Offering <i>light work</i> and <i>modified tasks</i> on a temporary basis facilitates the RTW and reduces sick-leave duration (<i>sub-acute phase</i>): For patients having difficulty returning to normal activities at 4 and at 12 wk. of sick leave, changing the treatment of symptoms for a " <i>back school</i> "-type of treatment can reduce chronic disability and sick leave. However, the content or optimal intensity of such combinations is not known. <i>An optimal combination</i> of clinical management, a rehabilitation program, and organizational interventions is more effective than each of these components used on their own.

Author(s) Year	Type of program and injury site/type	Variable of measured RTW outcomes	Finding regarding the effectiveness of the programs in the workplace and their components
Williams <i>et al.</i> , 2007** ^Q	Rehabilitation interventions in the WP Back	Rate of sick leave: number of days before RTW Maintenance of effects: 7 wk., 6 wk., 24 mo.	<i>Early rehabilitation interventions in the WP</i> are effective in returning workers to work faster and reducing sick leave duration. <i>Ergonomic</i> interventions, such as participatory ergonomics, adaptation of the WP, adaptation of the tasks and work schedule, and the role played by the supervisor, are effective in terms of the RTW.
Williams <i>et al.</i> , 2004 ** ^Q	Rehabilitation interventions in the WP, Upper extremities and neck	Absenteeism, functional status, pain intensity, medical costs Maintenance of effects: 6 mo., 1 yr.	<i>Modifications</i> (keyboard design, relaxation breaks), training managers to make accommodations, and exercise programs have a positive impact on the RTW. Offering <i>physiotherapy in the WP</i> may be effective in reducing lost work time and medical costs. More work modifications and less absenteeism were observed for individuals whose work station was analyzed. <i>Ergonomics training for disability and RTW administrators/counsellors</i> is associated with a change in practices in terms of more appropriate accommodations. Disability management policies and programs with a <i>work modification</i> component double the RTW success rate and are efficient.
Williams and Westmorland, 2002* ^Q	Disability management programs in the WP MSDs, acute, sub- acute, chronic	Sick leave duration, functional status, satisfaction Maintenance of effects: 2, 6, 12, 24 mo.	Disability management policies and programs with a <i>work modification</i> component double the RTW success rate and are efficient.
Campbell <i>et al.</i> , 2007** ^Q	Early multi-disciplinary intervention Common health problems: back	RTW rate Sick leave duration Employment and RTW status	<i>Early multidisciplinary intervention</i> (after the 6th week of pain onset) is more effective than usual or single-discipline interventions. Optimal multidisciplinary interventions should focus on RTW and include exercises, cognitive behavioural therapy, organizational elements, and education. <i>Effective communication</i> and active <i>collaboration</i> among health professionals, WP professionals, and the W determine the success of the RTW.

Author(s) Year	Type of program and injury site/type	Variable of measured RTW outcomes	Finding regarding the effectiveness of the programs in the workplace and their components
Gensby <i>et al.</i> , 2012* ^Q	Disability management programs used by employers to prevent long-term disability and facilitate the RTW MSDs and other physical injuries	RTW duration and rate: cumulative number of sick leave days, functional status Maintenance of effects: 4, 8, 12 mo.	Lack of evidence on the effectiveness of disability and RTW management programs provided by employers. Unable to determine whether certain specific components of these programs are effective in terms of RTW.
Podniece <i>et al.</i> , 2007* ^Q	Interventions and retention, reintegration, and rehabilitation policies Back, upper extremities	RTW rate	An <i>optimal combination</i> of clinical intervention and a rehabilitation program in the WP (lumbar belts, corsets, exercises, and modified work) is more effective than each of these components used on its own.
Waddell <i>et al.</i> , 2008** ^Q Report	Occupational rehabilitation and RTW policies MSDs, common health problem	RTW rate, sick leave duration	<i>Proactive approaches</i> to sick leave management in the WP and <i>offering temporary modified work and accommodations</i> reduce sick leave duration and increase RTW rates. The RTW is more effective if the intervention takes place in the WP. Absenteeism and disability management is efficient and may have reduced absenteeism by 20-60% in Great Britain.

Legend:

Q The review assesses the quality of the evidence from the different studies.

* The review makes recommendations regarding the effectiveness, without establishing the quality of the evidence.

** The review makes recommendations regarding the effectiveness according to the quality of evidence. The review includes randomized controlled trials (RCTs), some of which are meta-analyses.

W worker

WP workplace

RTW return to work

GRTW gradual return to work

mo. month

yr. year

wk. week

4.1.3 Intervention strategies for sustainable RTW

Table 4 details the strategies for sustainable RTW (process, actions, and players) described in narrative, integrative, realist, descriptive, and qualitative reviews and in reviews concerning issues other than effectiveness. Table 5 covers those described in the best RTW practice guidelines designed for organizations.

For the most part, the authors detail the principles and guidelines that employers should take into account when formulating organizational policies and procedures (Durand *et al.*, 2007, Higgins *et al.*, 2012, NICE 2009, Stock *et al.*, 2005). The main elements mentioned concern instilling a disability prevention culture (Higgins *et al.*, 2012, MacEachen *et al.*, 2006), providing players with information and adequate training (Durand *et al.*, 2007, Higgins *et al.*, 2012), and using specialized external resources (multidisciplinary rehabilitation program, ergonomist) to evaluate the fit between the worker's capacities and the work demands and to intervene when complex physical or mental conditions are involved (Briand *et al.*, 2008, Durand *et al.*, 2007, Higgins *et al.*, 2012). However, the roles and responsibilities of the various categories of players involved in the RTW process in the workplace (e.g., supervisor, disability and RTW administrator/counsellor), as well as the educational and informational content related to their application are rarely specified by the authors (Durand *et al.*, 2014, Lysaght *et al.*, 2010).

Some authors go further in describing intervention strategies for a sustainable RTW, describing essential activities to be carried out in the workplace. These activities are specific to a stage or moment in the RTW (Durand *et al.*, 2014, Kendall *et al.*, 2009, NICE 2009, Stock *et al.*, 2005), or to a category of players (e.g., the supervisor's first contact with the worker as soon as possible after the accident) (Durand *et al.*, 2014). Evaluating the worker, his tasks, and the work environment appears to be one of the activities essential to planning the RTW solution, itself a collaborative activity consisting of several actions that must be taken by the various players (Durand *et al.*, 2014, Higgins *et al.*, 2012, Durand *et al.*, 2007). Similarly, work adjustments and accommodations are essential to the worker's smooth resumption of work after a long-term absence or not, and to his ability to stay at work without a relapse, recurrence, or aggravation of the injury. The most frequently mentioned RTW solution is that of offering temporary, transitional, or permanent modified work (Durand *et al.*, 2014, Higgins *et al.*, 2012, Lysaght *et al.*, 2010, Durand *et al.*, 2007, MacEachen *et al.*, 2006, NICE 2009, Stock *et al.*, 2005). Modified work includes lighter tasks, accommodations (e.g., allowing the worker to receive care during working hours, change work shifts, use a chair, alternate between jobs with fewer cumulative demands, hold a supernumerary job), adjustments (e.g., adjusting the height of the work table), and adaptations (e.g., implementing job rotation, reassigning the worker, modifying the work station). It appears essential to maintain high worker motivation by assigning workers to light tasks that are part of their job within the same department, and when this is impossible, to another job or department where the work remains meaningful and productive (MacEachen *et al.*, 2006, Stock *et al.*, 2005). A gradual return to work (transitional modification) consists of the gradual resumption of regular working hours or regular work tasks. It provides an alternative that allows workers to resume their regular tasks over time as they regain their functional capacities after a long-term absence (Durand *et al.*, 2014, NICE 2009, Kendall *et al.*, 2009, Durand *et al.*, 2007, MacEachen *et al.*, 2006). Permanent modifications consist of redesigning the work station, redistributing tasks, acquiring new equipment, and reconfiguring the work premises (Stock *et al.*, 2005). In addition to accommodating workers faced with permanent limitations, these solutions may have a major positive impact on preventing MSDs in other workers within the organization.

Together or separately, a number of key players are responsible for these actions. The case manager, worker, supervisor, union representative, disability and RTW administrator/counsellor, and preventionist are among those most frequently mentioned. The different players' roles are specified according to the intervention context: programs essentially carried out in the workplace (Durand *et al.*, 2014, Higgins *et al.*, 2012, Kendall *et al.*, 2009, MacEachen *et al.*, 2006, Stock *et al.*, 2005) or rehabilitation programs with one or more components carried out in the workplace (Briand *et al.*, 2008, Durand *et al.*, 2007, Lysaght *et al.*, 2010, NICE 2009).

Generally speaking, the player responsible for contact with the health care system and the insurer is the person in charge of managing sick leaves, or the disability and RTW administrator/counsellor if the organization has one (Briand *et al.*, 2008, Durand *et al.*, 2014, Higgins *et al.*, 2012, NICE 2009). This individual plans and coordinates the implementation of the actions (timing, sequencing, and communication) during the gradual or definitive return to regular work. He is also responsible for communicating with the players representing the health care system (physician), insurer (counsellor, agent), and representatives of the organization, and seeks to mobilize these various parties around a common goal: a healthy and sustainable RTW. By maintaining regular contact with the worker, the disability and RTW administrator/counsellor can provide information on the process and reassurance about the employer's intentions. The coordinator ensures the supervisor's and worker's active involvement in everything related to the work arrangements, and communicates with the union in this regard to ensure, among other things, that there are no adverse effects on the organization's other workers (Durand *et al.*, 2014).

Supervisors are another important player in the RTW process due to their knowledge of the work demands. They take part in planning the RTW and in adjusting the work tasks to ensure that they are adequate and appropriate (light or regular, resumed gradually) and that they comply with the physician-prescribed restrictions. They prepare the work group for implementation of the RTW plan and to welcome the worker back. They are also responsible for encouraging the worker and his co-workers to help develop and implement the solutions included in the RTW plan, performing follow-up, and adjusting the solutions as needed to the worker's progress (Durand *et al.*, 2014). The injured worker's co-workers play an important role too in assisting and supporting the worker during the RTW process (Durand *et al.*, 2014, Kendall *et al.*, 2009).

Other players may also be involved in the RTW process. For example, health professionals may be invited, as needed, to come to the workplace to assess the fit between the restrictions (capacities) prescribed by the attending physician and the demands of the work tasks, and then to suggest modifications. However, several authors concur that, in order to shorten the sick leave and promote the RTW, the opportune time for management by a professional or team of health professionals is between the 4th and 12th weeks following onset of the pain, i.e., during the subacute phase (Higgins *et al.*, 2012, Kendall *et al.*, 2009, NICE 2009, Lysaght *et al.*, 2009).

Lastly, several organizational strategies concerning all stages in the RTW process and all players concerned by OHS issues, are put forward by the authors as facilitating a sustainable RTW process: information (Durand *et al.*, 2014, Briand *et al.*, 2008), coordination (Briand *et al.*, 2008, Higgins *et al.*, 2012, NICE 2009), communication (Higgins *et al.*, 2012, Briand *et al.*, 2008, Durand *et al.*, 2007), collaboration (Durand *et al.*, 2014, NICE 2009), and education and support for the workers and other players in the workplace (Higgins *et al.*, 2012, Lysaght *et al.*, 2010, Durand *et al.*, 2007, Stock *et al.*, 2005).

Table 4. Intervention strategies in the workplace

Author/ Year	Type of program/injury site	Process	Action in the WP	Player
Briand <i>et al.</i> , 2008	RTW intervention programs MSDs causing work disability	Contact between the health care system, insurer's representative, and the WP (employer, union) Information sessions Visiting the workplace Evaluating Developing a RTW plan	Coordinate Inform the WP players Communicate	Practitioner in the WP (occupational therapist, physiotherapist, ergonomist) Disability case manager Multidisciplinary team (physiotherapist + psychologist + ergonomist + occupational therapist, etc.)
Durand <i>et al.</i> , 2014	Best RTW and sick- leave management practices MSDs or common mental disorders (CMDs)	Sick leave and recovery period Initial contact with the <i>W</i> Evaluating the <i>W</i> and his tasks, the flexibility for accommodations: feasibility, task availability, in light of the collective agreement Developing a RTW plan Resuming work Doing follow-up	Receive the medical certificate Inform the disability and RTW administrator/counsellor Provide the <i>W</i> with information Identify obstacles to the RTW Adjust the work Support the <i>W</i> and <i>S</i> Welcome the <i>W</i> back Reassure and encourage the <i>W</i> Give the <i>W</i> feedback Take concerted action	Employer Sick leave manager <i>S</i> Co-workers Coordinator <i>W</i>
Durand <i>et al.</i> , 2007	Interventions conducted in the workplace in the context of an occupational rehabilitation program	Observations (e.g., postures, efforts, sequencing of tasks, pace) Discussions, meetings, interviews in the WP Consulting the organization's documents	Collect information in the WP Provide adapted training Modify the work: develop, prioritize, obtain consensus, implement, and follow up on modifications GRTW	Health professional (e.g., occupational therapist) Work-related professional (e.g., ergonomist, industrial hygienist)

Author/ Year	Type of program/injury site	Process	Action in the WP	Player
	MSDs	(e.g., accident reports) Communicating results to the players		Multidisciplinary team
Higgins <i>et al.</i> , 2012 ^Q	Best practices for managing long-term sick leave (≥ 4 wk.) in the WP	Evaluating the work demands (ergonomic evaluation) Regular contact with the <i>W</i>	Apply robust and proactive procedures and policies Communicate Coordinate Support the <i>W</i> and <i>S</i> Support well-appreciated personnel Identify obstacles <i>early on</i> Adjust the work temporarily (e.g., reduce working hours, change task assignments, redeploy) Offer adequate training Combine preventive and incentive measures	Rehabilitation professional Employer Sick leave manager <i>S</i> <i>W</i>
Lysaght <i>et al.</i> , 2010	Best rehabilitation and reintegration practices	Meetings Analyses on the work site	Intervene <i>early</i> Adjust the work Have the <i>W</i> resume work gradually Offer adequate training	<i>W</i> <i>S</i> Health professional in the WP
MacEachen <i>et al.</i> , 2006 ^Q	MSDs, acute phase: \leq 12 wk. RTW practices following the occurrence of a work- related injury	Choosing modified tasks Doing follow-up	Establish early contact with the <i>W</i> Provide information on the RTW process Adjust the work Make adjustments to the work station (ergonomic) Take concerted action	<i>S</i> Co-workers Employer <i>W</i> Union
	MSDs			

W: worker, *S*: supervisor; *WP*: workplace; *MSD*: musculoskeletal disorders.

Table 5. Guidelines and recommendations for workplaces

Author Year	Process	Action in WP	Player
National Institute for Health and Care Excellence (NICE) 2009	<p>Evaluating the <i>W</i>'s situation in terms of health and social environment at work, with regard to RTW obstacles (e.g., work relations) and perception of the <i>W</i>'s confidence in his capacity to overcome these obstacles (< 12 wk.)</p> <p>Evaluating the demands of the work tasks</p> <p>Planning the RTW: level, type, and frequency of interventions and services, including psychological support</p> <p>Prognostic tool for RTW</p> <p>Interview combining evaluation and planning of the RTW and involving the <i>S</i></p> <p>Implementing and following up on the RTW solution</p>	<p>Turn to specialists for specific interventions and services and encourage the <i>W</i> to contact his physician for advice and support.</p> <p>Offer individuals with a poor RTW prognosis the opportunity to participate in an intervention program.</p> <p>Make ergonomic modifications to the work station and equipment.</p> <p>Return the <i>W</i> gradually to his regular work, with progressive increase in working hours and days worked.</p> <p>Return the <i>W</i> partially to his regular work tasks or temporarily redeploy to another job or other tasks.</p> <p>Coordinate the RTW.</p> <p>Support managers (<i>S</i> and employer).</p> <p>Promote concerted action by all players in the RTW process.</p>	<p>Case manager (coordinator): coordinates evaluation, planning, and deployment of interventions and services.</p> <p><i>W</i></p> <p>OHS specialist</p>
Kendall <i>et al.</i> , 2009	<p>Injury stage/phase:</p> <p>Acute, < 2 wk., no intensive resources: support, advice, dispelling myths and negative beliefs, controlling symptoms.</p> <p>Sub-acute, 2-12 wk., optimal moment for preventing long-term disability</p> <p>Chronic, >12 wk., intensive resources, objectives harder to reach</p> <p>Setting specific objectives (measurable, attainable, with indication of duration)</p>	<p>Carry out a control procedure (audit).</p> <p>Identify obstacles:</p> <ul style="list-style-type: none"> - personal: attitudes and beliefs regarding health and work; (uncertainty, anxiety, depression, loss of routine and of lifestyle habits); - health-related (conflicting advice from professionals, long waiting 	<p>Health care system (physicians, health professionals, rehabilitation service providers): negotiates modifications and accommodations in the WP (<i>S</i>, manager, HR, OHS specialist, <i>W</i>).</p> <p>Manager: solves problems.</p> <p>Other: spouse, family member, insurer, complaints/case</p>

Author Year	Process	Action in WP	Player
	<p>and reviewing and adjusting them as needed</p> <p>Planning activities in terms of graded objectives</p> <p>Naming people responsible and establishing deadlines</p>	<p>lists for treatments, long-term sick leave, treatment not effective);</p> <p>- WP-related (loss of contact with work, negative attitude, refusal of accommodations or modified work, insufficient understanding, disagreement between the <i>W</i> and the employer and physician).</p> <p>Modify the work: temporary, transitional arrangements.</p>	<p>manager, co-worker, work consultant, lawyer.</p> <p>Role of all the players:</p> <ul style="list-style-type: none"> - Provide the <i>W</i> with information, advice, and reassurance. - Promote activity and its benefits. - Dispel myths and negative beliefs. - Share their expectations with other players.
Stock <i>et al.</i> , 2005.	<p>Proposing tasks to the attending physician.</p> <p>Asking the attending physician to specify work restrictions</p> <p>Performing follow-up with the <i>W</i> immediately after the RTW (2-3 days) and then periodically (every 2 wk.)</p> <p>Program implementation process:</p> <ul style="list-style-type: none"> - Form a program implementation committee - Draw up a profile of the situation in the organization - Analyze the organization's needs and set the program objectives - Determine the content of the program - Implement and evaluate the program 	<p>Encourage the <i>W</i> to remain active. Provide <i>early</i> management.</p> <p>Ensure a proper fit between the tasks assigned to the <i>W</i> and his physical capacities; adjust according to the progression in his capacities.</p> <p>Adjust the work (tasks, schedule, equipment, provide training if necessary, etc.).</p> <p>Assign light tasks in the same department or a different one.</p> <p>Opt for a supernumerary job.</p> <p>Communicate.</p> <p>Consult the players in the process.</p>	<p>Professionals that help organizations implement programs facilitating workers' RTW and stay-at-work programs</p> <p>Employer</p> <p>Working groups (OHS representative, S, HR) whose role is to implement structured RTW and stay-at-work measures.</p> <p><i>W</i></p>

W: worker; *S*: supervisor; *FC*: facilitating condition; *HC*: hindering condition; *WP*: workplace; *HR*: Human Resources Department.

4.1.4 Synthesis of best practices

In the context of this study, the best RTW practices in the workplace were defined as any components of a policy, program, or intervention in place in the workplace, or as any organizational strategy(-ies) assessed or described as effective by the authors of various publications. They are summarized in Table 6 by author and underlying mechanisms.

Overall, three types of components can be distinguished in the context of best practices: (1) general characteristics, (2) strategic elements, and (3) activities specific to a phase/stage or a category of players. General characteristics include action principles for developing policies and formalizing procedures, the adoption of an organizational culture favouring reintegration after an accident, and the development of the competencies of the players responsible for the different aspects, etc. Strategic elements concern organizational approaches aimed at attaining a sub-objective related to sustainable RTW (e.g., communication, collaboration, and coordination). Lastly, specific activities comprise those carried out in the workplace with a view to sustainable RTW, by category of players and during a particular phase/stage of RTW (e.g., the supervisor's initial contact with the worker as soon as possible after the accident).

Of the general characteristics, robust and formal RTW policies and procedures – when they are known and followed by all managers and departments in an organization (Human Resources, Production, Maintenance, OHS, etc.) and by all categories of players (manager, supervisor, worker, disability and RTW administrator/counsellor, union representative) – constitute essential components for a healthy and sustainable RTW. They should also include systematic procedures for ensuring the necessary links with the health professionals and the insurer's representatives. The integration of preventive and RTW incentive measures is another basic principle of organizational procedures to ensure better prevention of disability among all workers, with or without symptoms. Similarly, providing workers and other players with information, education, and training, and encouraging workers to remain active through education, reconditioning, retraining, and RTW-centred “back schools,” are all procedural elements designed to help workers regain confidence in their capacities. Early intervention is key, because the longer a person is off work, the more insurmountable the obstacles to RTW become and the harder the occupational reintegration (Waddell *et al.*, 2008).

The strategic elements identified by the authors as facilitating RTW are concerted action, the existence of effective mechanisms for communication among the players, collaboration among external (clinicians, insurers, health and work-related professionals, etc.) and internal players, and RTW coordination. In fact, according to several authors, the coordination of actions and involvement/consultation of workers and supervisors during the development of solutions and modifications to the RTW process constitute essential organizational strategies for developing, prioritizing, implementing, and following up on health and sustainable RTW solutions.

A number of essential activities are specific to one or another of the phases/stages in the RTW process: sick leave and recovery period, making contact with the worker soon after the accident, evaluating his tasks, planning the work and the RTW solution, welcoming the worker back when he resumes work, and following up on the RTW. Concrete and specific actions taken by a particular player or category of players during a phase/stage of the RTW, or to be taken throughout the process (adjusting and continually following up on the modifications according to how the capacities are evolving) are described by the authors as elements of a workplace-based process that assures healthy and sustainable RTW. For example, the fact of contacting

the worker soon after the accident and during the sick leave to offer assistance in the RTW process appears to be an essential element potentially fostering his active participation. In addition, the evaluation of his tasks by the supervisor and, as the case may be, by a specialist, and the identification of obstacles to the RTW by the disability and RTW administrator/counsellor are essential elements in the planning of the RTW solution and during the return to work.

Various solutions in the form of work modifications are described by the authors. Generally speaking, the content of these modifications varies slightly from one author to the other: light tasks, adjustments, accommodations, adaptations, and physical rearrangement of the work station. However, they appear to be governed by three types of mechanisms. First, the fact of offering meaningful light tasks (temporary and transitional) and, if possible, within the same department, should enable workers to maintain their relationship with their work team and workplace even if they are not completely recovered and productive. Next, offering modifications (temporary or transitional) to the activities involved in the workers' pre-accident jobs allows them to resume their productive activities. The gradual return to work through graded exposure (to duties and working hours) constitutes another such means. Lastly, reassignment solutions (permanent) may be contemplated for workers left with permanent functional limitations.

Finally, follow-up activities are essential throughout the development and implementation of the RTW solution, both to reassure workers that their condition will be respected and to encourage them to work toward a sustainable RTW, and to make adjustments as needed to prevent relapses and other injuries.

However, few contextual elements are mentioned in the scientific literature. In fact, while several studies examine the best RTW practices in the Canadian context (Franche *et al.*, 2005, Lysaght *et al.*, 2010, MacEachen *et al.*, 2006, Williams and Westmorland, 2002, Williams *et al.*, 2004, Williams *et al.*, 2007) or the Québec context (Durand *et al.*, 2007, Briand *et al.*, 2008, Durand *et al.*, 2014, Stock *et al.*, 2005), the studies documented come from many countries whose legislative contexts differ with respect to the RTW of employees who have sustained work-related musculoskeletal injuries.

Table 6. Best practices in the workplace: characteristics, strategic elements, and activities specific to a phase/stage or category of player

Characteristic, strategic element, and specific action	Concept or mechanism underlying the intervention in the workplace	Authors
<i>General characteristics</i>		
RTW policies and procedures (formalization, robustness, clarity, details on roles and responsibilities)	Same understanding of the RTW process and procedures applied in the players' practices.	Gensby <i>et al.</i> , 2012, Higgins <i>et al.</i> , 2012, Podniece <i>et al.</i> , 2007, Waddel <i>et al.</i> , 2012, Williams and Westmorland, 2002.
Information, training, and education for players on the RTW process	Understanding the advantages cultivates the willingness of the <i>W</i> and other players to become involved and reinforces confidence.	Aas <i>et al.</i> , 2011, Campbell <i>et al.</i> , 2007, NICE 2009, Hoefsmit <i>et al.</i> , 2012, Higgins <i>et al.</i> , 2012, MacEachen <i>et al.</i> , 2006, Palmer <i>et al.</i> , 2012
Integrative approach (structures and resources for preventing and managing sick leaves through joint effort)	Combining the actions of prevention departments and sick leave/RTW management departments helps prevent long-term disability more effectively.	Boocock <i>et al.</i> , 2007
Proactive approach (prevention culture: structures and resources in the WP for returning the <i>W</i> to work early)	Early intervention helps prevent aggravation and the greater complexity associated with psychosocial factors. After three months, the more time that elapses, the greater the risk of long-term disability. The ideal time for intervening is between two weeks and three following the injury.	Burton <i>et al.</i> , 2009, Carroll <i>et al.</i> , 2010, Campbell <i>et al.</i> , 2007, Hoefsmit <i>et al.</i> , 2012, Kendall <i>et al.</i> , 2009, MacEachen <i>et al.</i> , 2006, Palmer <i>et al.</i> , 2012, Podniece <i>et al.</i> , 2007, Waddel and Burton, 2001, Waddel <i>et al.</i> , 2008, Williams and Westmorland, 2002, Williams <i>et al.</i> , 2007
The <i>W</i> encouraged to stay active	Re-education, reconditioning, and retraining (combined or not with "back schools") restore workers' confidence in their abilities to perform their work.	Elders <i>et al.</i> , 2000, Hlobil <i>et al.</i> , 2005, Hoefsmit <i>et al.</i> , 2012, Ozguler <i>et al.</i> , 2004, Stock <i>et al.</i> , 2005, Campbell <i>et al.</i> , 2007, Podniece <i>et al.</i> , 2007
<i>Strategic elements</i>		
Concerted action, based on consensus-seeking process among players	Consensus among the players reduces conflict.	Durand <i>et al.</i> , 2014, MacEachen <i>et al.</i> , 2006, NICE 2009
Communication, based on the	Expressing their fears and expectations and	Campbell <i>et al.</i> , 2007, Franche <i>et al.</i> ,

Characteristic, strategic element, and specific action	Concept or mechanism underlying the intervention in the workplace	Authors
presence of structures and discussion forums (e.g., meetings, committees)	listening to those of other players facilitates cooperation among the different players and workers.	2005, Hoefsmit <i>et al.</i> , 2012, NICE 2009, Palmer <i>et al.</i> , 2012, Waddell <i>et al.</i> , 2008, Williams and Westmorland, 2002
Collaboration among the external (clinicians, insurers, health- and work-related professionals, etc.) and internal players (sick leave manager, coordinator, S, etc.) in the RTW	Mobilizing players around a common objective despite differing interests, and seeking a satisfactory solution for all.	Campbell <i>et al.</i> , 2007, Ozguler <i>et al.</i> , 2004
Coordination of the RTW	Organizing actions to facilitate collaboration and mobilization around a common objective.	Schandelmaier <i>et al.</i> , 2012, Waddell <i>et al.</i> , 2008, Williams and Westmorland, 2002
W's involvement/participation in developing and implementing the solution	Facilitating consensus on the modifications, accommodations, and conditions for resuming work.	Carroll <i>et al.</i> , 2010, Higgins <i>et al.</i> , 2012, NICE 2009, Williams and Westmorland, 2002, Williams <i>et al.</i> , 2007
S's involvement/participation in developing and implementing the solution	Using the S's knowledge and experience to advantage with regard to the job demands and the team responsible for production demands.	Durand <i>et al.</i> , 2014, MacEachen <i>et al.</i> , 2006
<u>Activities specific to a phase/stage or to a category of players</u>		
<i>Sick leave and recovery period</i>	Respecting the balance between the W's functional limitations and the tasks he is assigned.	Durand <i>et al.</i> , 2007, Stock <i>et al.</i> , 2005
Receipt of the medical certificate (<i>manager</i>)	Taking note of the W's functional limitations, status, and time required to recover his capacities.	
Use of a RTW coordinator (manager, person responsible for managing the RTW)	Verifying the availability of tasks in the department, and, if need be, in the organization, in order to assess the possibilities of resuming modified or regular work.	

Characteristic, strategic element, and specific action	Concept or mechanism underlying the intervention in the workplace	Authors
Proposing tasks that the treating physician could prescribe for the <i>W</i> (<i>coordinator, S</i>)	Reassuring the <i>W</i> and helping him to see his role in the process.	Durand <i>et al.</i> , 2014, Durand <i>et al.</i> , 2007, Franche <i>et al.</i> , 2005
<i>Initial contact with the W</i> soon after the accident: inquiring about his recovery (<i>S</i>)	Maintaining the <i>W</i> 's contact with the <i>S</i> and co-workers.	
<i>Evaluating the W's tasks (S, specialist)</i>	Correcting the risk factors associated with the work helps prevent MSDs in other workers.	Briand <i>et al.</i> , 2008, Durand <i>et al.</i> , 2014, Higgins <i>et al.</i> , 2012, Kendall <i>et al.</i> , 2009, NICE 2009, Palmer <i>et al.</i> , 2012, Stock <i>et al.</i> , 2005
Identifying the obstacles to the RTW, discussion with the <i>W</i> (<i>coordinator</i>)	Identifying barriers to the RTW.	Durand <i>et al.</i> , 2014, Kendall <i>et al.</i> , 2009, Higgins <i>et al.</i> , 2012, NICE 2009
<i>Planning the resumption of work and the RTW solution</i> (individualized and coordinated) and <i>offering modified work</i>	Planning the resources according to the progression in the <i>W</i> 's capacities.	Briand <i>et al.</i> , 2008, Durand <i>et al.</i> , 2014, Hoefsmit <i>et al.</i> , 2012, Kendall <i>et al.</i> , 2009, NICE 2009, Schandelmaier <i>et al.</i> , 2012
Offering light tasks (temporary or transitional), meaningful, and if possible, within the same department (e.g., reassignment)	Reducing the demands of the work situation on a transitional and temporary basis. Offering meaningful, rewarding, and productive work can have a positive impact on complete recovery.	Palmer <i>et al.</i> , 2012, Waddell and Burton, 2001, Williams and Westmorland, 2002
Offering modifications (temporary, transitional, or permanent) to the <i>W</i> 's pre-accident job: adaptations, adjustments, physical or organizational modifications to the work station and work tasks	Adjusting the physical and organizational demands of the work according to the progression in the <i>W</i> 's capacities. Gradually exposing the <i>W</i> to the work demands constitutes a therapeutic approach that promotes faster recovery.	Boocock <i>et al.</i> , 2007, Carroll <i>et al.</i> , 2010, Franche <i>et al.</i> , 2005, Kendall <i>et al.</i> , 2009, MacEachen <i>et al.</i> , 2006, NICE 2009, Palmer <i>et al.</i> , 2012, Waddell and Burton, 2001, Stock <i>et al.</i> , 2005, Waddell <i>et al.</i> , 2008, Williams <i>et al.</i> , 2004, Williams <i>et al.</i> , 2007
Offering a GRTW through graded exposure (tasks, working hours)	Increasing the work demands on a transitional	Durand <i>et al.</i> , 2007, Kendall <i>et al.</i> , 2009, NICE 2009, Palmer <i>et al.</i> , 2012, Williams

Characteristic, strategic element, and specific action	Concept or mechanism underlying the intervention in the workplace	Authors
<p><i>RTW, welcoming the W back (S, co-workers)</i></p> <p>Welcoming the <i>W</i> back: distributing and assigning tasks (<i>S</i>)</p> <p>Making daily adjustments (<i>S, W</i>)</p>	<p>and gradual basis.</p> <p>Reassuring the <i>W</i> (resuming contact, sense of belonging to the team and the organization).</p> <p>Ensuring the <i>W</i> that these restrictions will be respected in the tasks to be performed.</p>	<p>and Westmorland, 2002</p> <p>Durand <i>et al.</i>, 2014, MacEachen <i>et al.</i>, 2006</p>
<p>Implementing the modified work solution and <i>W</i> follow-up immediately after the RTW (2-3 days) and then periodically every 2 weeks</p> <p><i>Following up with the W</i></p>	<p>Adjusting the work demands according to the progression in the <i>W</i>'s capacities.</p>	<p>Durand <i>et al.</i>, 2014, Stock <i>et al.</i>, 2005, NICE 2009, MacEachen <i>et al.</i>, 2006</p>
<p>Offering feedback about the progression in the RTW (<i>S</i>)</p> <p>Making adjustments to the RTW plan as needed (<i>coordinator</i>)</p>	<p>Facilitating maintenance of the RTW under conditions that are healthy for the <i>W</i>.</p>	

W: worker; *S*: supervisor; GRTW: gradual return to work.

4.2 Multiple Case Study

Each “organization case” is presented first through a description of the organization’s main characteristics, the documents provided by the employer’s representative, the characteristics of the workers and various key players interviewed, as well as the main findings regarding the organization’s procedures and practices and the conditions facilitating or hindering RTW. This is followed by a synthesis table detailing the procedures, practices, and facilitating or hindering conditions, by organization.

4.2.1 Organization A

Context

Employer A is a public organization operating in the “health care and social assistance” sector. It is located in Montreal and has over 1,500 employees represented by different unions. Sick leaves are managed by the employer. Four disability and RTW administrators/counsellors divide up the work, and each of them is responsible for the sick leave files of several departments.

Data sources

The organization’s management staff provided the research team with two documents. The first concerned the organization’s sick leave management policy. This policy essentially concerned the sick leave duration (short/long absence) and the type of system (public/private, federal/provincial), or program responsible for compensation of the workers injured (CNESST; Société de l’assurance automobile du Québec [SAAQ]; compensation for victims of crime [IVAC]; the employer’s salary insurance program; and the Régie de l’assurance maladie du Québec [RAMQ]). The second document concerned the procedure for reintegrating employees with temporary functional limitations.

Five workers from Organization A participated in the study, specifically, two men and three women between 30 and 56 years of age. They worked in health care or related services and were all unionized. Their job tenure ranged from a few years to over 25 years. They had all sustained a back injury, and had been absent from 0 to 7 weeks, on sick leave for 6 to 30 weeks, and involved in a gradual return to work for 0 to 4 weeks. In total, between 12 and 36 weeks had elapsed between the time of their accidents and their definitive return to work.

Nine key players – six women and three men – connected to at least one of the workers met were interviewed to complete the study of the RTW situations. They had all played a role in the RTW process of this (or these) worker(s). The three supervisors interviewed had training in the health field; three had training in management or OHS; their job tenure varied from a few months to several decades, at the time of the interview. The three disability and RTW administrators/counsellors had varied backgrounds – one in OHS – and several years of experience. The preventionist was a nurse. The union representative had been a patient service associate prior to working full-time for the union, which he had done for over 10 years. The only co-worker met was a patient service associate.

Four other key players – two women and two men – regularly engaged in the process in a general way or in the RTW situations of workers other than those interviewed were also interviewed to complete our study of RTW procedures and practices. The two heads of the OHS

department and the two supervisors had varied university training (one had training in both industrial relations and OHS) and many years of experience.

Procedures

The results of the analysis of the documents obtained showed that their “Reintegration of employees with temporary functional limitations” procedure provided a framework for the work reintegration methods to follow (regarding management of temporary assignments) in accordance with temporary functional limitations established by the physician. The OHS department of the Human Resources Division (HR) is responsible for overseeing application of this policy. Within this procedure, roles and responsibilities are designated for each category of player (employer, OHS department, supervisor, employee, and union) according to the type of accident and the government program responsible for compensation (CNESST, SAAQ, IVAC, the employer’s salary insurance program, Régie de l’assurance maladie du Québec, or RAMQ). With regard to sick-leave or RTW management in the context of employment injuries, the managers specified that they applied the law. They also provided a few examples of temporary assignment forms adapted to different occupations, as well as a letter addressed to the treating physician inviting him to present the temporary assignment to the organization. For complex cases (very long sick leaves, contested diagnoses, etc.), the organization uses the services of a medical consultant who, in some instances, sees the worker. The union representative interviewed also provided the research team with some documents, including a guide for workers involved in industrial accidents and a flow chart showing the procedure they must follow.

Several informal procedural elements were identified in the key players’ discourse. The players detailed their roles and responsibilities according to the different phases/stages in the RTW process. They placed particular emphasis on the investigation procedures following an accident and during a worker’s sick leave, as well as on a major concern about respecting the functional limitations during the RTW.

Actual practices

The concrete actions taken by the key players in the RTW are detailed in Table 7 by procedural element, phase/stage of the RTW process, and category of player. Overall, what is prescribed (formal and informal procedures) corresponds to the actions actually taken in the RTW process. In fact, the actions taken after the accidents and during the sick leaves of the workers studied were similar to those identified in the aforementioned procedure. However, the ways of applying the various procedural elements, i.e., the practices implemented by a given category of player (e.g., supervisor, worker) varied.

The workers on temporary assignments are paid by the employer out of a special budget separate from each department’s or division’s budget. Some workers are assigned to light tasks that are seen as meaningless and even humiliating, while others are assigned to tasks within their department or division that allow them to remain in contact with their co-workers and supervisors. Thus, even if they do not participate directly or as much in their team’s production activities, these workers can still help their co-workers attain their productivity objectives. The procedure for following up on workers on temporary assignments or involved in gradual returns to work is followed meticulously by some supervisors. However, they reported two types of behaviour. Some offer close supervision, while others mentioned not having enough time (heavy supervision workload), means (information about the worker’s limitations), or light tasks

within their department. Yet all these elements have to be taken into consideration when making accommodations or adjustments during the RTW. In theory, the preventionist assesses the job if the worker is left with permanent limitations, which was not the case for any of the workers we met.

More specifically, in complex or litigious situations (relapse, physician's systematic refusal to approve the temporary assignment), the employer's physician may, if requested by the disability and RTW administrator/counsellor or employer's representative, evaluate the worker by meeting with him or analyzing his case in order to determine whether there are grounds for contesting the medical case. After seeing the worker or analyzing the case, the employer's physician may then advise management to contest the diagnosis, treatment, or part of its responsibility as the employer. In addition, he may suggest a temporary assignment or gradual return to work to the treating physician. If the employer's physician has seen the worker to evaluate his condition, he will either have recommended training or determined that the worker was fit to return to work, and may also exert pressure (as may the disability and RTW administrator/counsellor) on the worker to return to work.

In addition, following the accident investigation, different types of temporary or permanent solutions may be proposed: modifications to the work station, equipment, parts, or work methods; and training. The OHS department handles this aspect, offering technical aid if needed. The Physical Resources Department is responsible for the physical rearrangement of work stations. The supervisor may request technical material or equipment verification, as needed, and may also enlist the preventionist's help to pressure the Physical Resources Department into accelerating the process. In most of the cases studied, no rearrangement of the work station took place after the accident either due to the organization's lack of financial resources or because the accident was attributed to non-compliance with work methods. However, after one accident, the OHS department undertook a complete and major rearrangement of the work station and sent instructions to other departments in order to prevent the recurrence of such an accident. In fact, the supervisor, preventionist, or the disability and RTW administrator/counsellor may propose refresher courses to workers in the context of the temporary assignment, gradual return to work, or the return to the regular job with a view to preventing re-injury. In concrete terms, the trainer proposed refresher courses that were taken or not, depending on the importance that the supervisor placed on this means of preventing relapses or other accidents.

Conditions facilitating or hindering RTW

Table 7 also describes several conditions that were seen as facilitating or hindering a healthy and sustainable RTW process and as specific to a particular phase/stage, system, or category of player. The facilitating conditions mentioned by several categories of players included the worker's collaboration (during the sick leave or temporary assignment), a temporary assignment within the worker's department and involving meaningful tasks, a gradual increase in task demands (resumption of regular work), and continuous follow-up by the supervisor to ensure that the worker did not exceed his prescribed limitations and that he received help from co-workers with tasks that were still too hard to perform (follow-up).

Other, more general conditions such as the presence of clear and precise procedures, early case management, collaboration among the players concerned (collaboration of the treating physician), and the involvement, in good faith, of all players and the worker in his RTW appeared essential to several of the players interviewed in this organization. The conditions

mentioned, whether facilitating or hindering, corresponded to the presence or absence of certain practices within this organization. For example, the temporary assignment and the gradual return to work were themselves seen as facilitating the RTW because they allow injured workers to maintain contact with the workplace and to make themselves useful to their work team and organization. Similarly, the absence of a medical counter-expertise and contestation was another condition reported by the workers as facilitating the RTW.

Table 7. Organization A – Procedures and practices, and conditions facilitating or hindering RTW

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
Accident			
<p>The <i>worker (W)</i> informs the <i>supervisor (S)</i> of the accident, completes an accident declaration form, and consults a <i>physician</i>.</p> <p>The <i>S</i> makes sure that the <i>W</i> has completed the accident declaration form correctly, assisting as needed. The <i>S</i> then notifies the disability and RTW administrator/counsellor (<i>C</i>) of the accident.</p> <p>The <i>S</i> conducts an accident investigation.</p> <p>As needed, the <i>S</i> implements immediate corrective measures and communicates with the <i>preventionist</i> or the <i>OHS department</i>.</p>	<p>The <i>W</i> follows the procedure:</p> <ul style="list-style-type: none"> - takes the accident declaration form, medical papers, and claim form to <i>Human Resources (H)</i>; - takes a TA form to his <i>physician</i>; - contacts the <i>C</i> – by phone or in person – after each medical appointment. <p>The <i>S</i> follows the procedure:</p> <ul style="list-style-type: none"> - sends the <i>W</i> immediately to consult a <i>physician</i>. 	<p>Sometimes the <i>W</i> contacts the <i>union</i>, which may recommend that he go see a particular <i>physician</i>.</p> <p>Sometimes the <i>S</i> sends the <i>W</i> to see the <i>C</i>.</p> <p>The <i>OHS department</i> may give instructions to other departments with a view to prevention.</p>	
Sick leave			
<p>The <i>W</i> consults the <i>treating physician</i>, with a TA form in hand, and sends the accident declaration form, medical papers, and claim form to the <i>C</i>.</p> <p>The <i>C</i> sends the required documents to the CNEST.</p>	<p>The <i>W</i> follows the procedure.</p> <p>The <i>C</i> follows the procedure.</p> <p>The <i>treating physician</i> prescribes a sick leave or not) and the resumption of work on a TA, GRTW, or regular RTW basis.</p>	<p>Sometimes the <i>W</i> does not have the TA form in hand at his first appointment with the <i>treating physician</i>.</p>	<p>FC: Collaboration of the <i>treating physician</i>. Collaboration of the <i>W</i>.</p> <p>HC: Long-term sick leave.</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
<p>At the <i>C's</i> request, the <i>employer's physician</i> assesses whether the employer should take steps to involve the Bureau d'évaluation médicale (BEM).</p> <p>The Claims and Disability Management Department files contestations regarding administrative or financial matters if need be.</p> <p>The <i>union</i> receives a list of workers on sick leave.</p>		<p>Sometimes the <i>W</i> is evaluated by the <i>employer's physician</i>. He may then be pressured by the <i>C</i> or the <i>employer's physician</i>.</p> <p>Sometimes the <i>W</i> does not inform the <i>union</i> that he is having difficulties.</p>	<p>HC:</p> <p>Any form of contestation or consultation with the <i>employer's physician</i>.</p> <p>The <i>C</i> and the <i>employer's physician</i> apply pressure on the <i>W</i> to return to work (TA, GRTW, or regular RTW).</p>
<p>The <i>preventionist</i> evaluates the job when the <i>W</i> is left with permanent limitations.</p>		<p>The <i>preventionist</i> may propose refresher training. However, the <i>W</i> does not always do the training and his <i>S</i> does not impose it.</p>	
Temporary assignment			
<p>The <i>W</i> has the <i>treating physician</i> sign a TA form, which contains a list of tasks for each type of job, and takes it back to the <i>employer</i>.</p> <p>The <i>S</i> assigns the <i>W</i> light tasks in his department or elsewhere, while complying with the limitations prescribed by the <i>treating physician</i>.</p> <p>The <i>W</i> performs the tasks assigned by the <i>S</i> and does not exceed the limitations prescribed by the <i>treating physician</i>.</p>	<p>The <i>W</i> follows the procedure:</p> <ul style="list-style-type: none"> - works a few days a week, a few hours a day, performing light tasks in his department or elsewhere in the company. <p>The <i>S</i> follows the procedure:</p> <ul style="list-style-type: none"> - prepares the team for the <i>W's</i> return on a TA; - checks with the <i>W</i> which tasks he is able to perform; 	<p>The <i>W</i> does his treatments during working hours.</p> <p>Sometimes the <i>W</i> goes back on sick leave after a few days on the TA.</p> <p>Sometimes the <i>S</i> consults the <i>W</i> about the choice of tasks, and gives him some leeway in performing his work: tasks, pace,</p>	<p>FC:</p> <p>TA performed in the <i>W's</i> department; involves meaningful tasks that allow him to contribute to the production objectives by helping <i>co-workers</i>.</p> <p>Allowing the worker to self-pace when performing the tasks.</p> <p><i>Collaboration</i> of the <i>treating physician</i>.</p> <p>A <i>W</i> who wants to return to work.</p> <p>The <i>W</i> is paid from a specific</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
The <i>S</i> ensures that the TA is performed in accordance with the limitations prescribed by the <i>treating physician</i> regarding time, activities, and capacities, etc.	<ul style="list-style-type: none"> - assesses the first day of the TA with the <i>W</i>; - checks how the <i>W</i> is doing on the TA every 2 or 3 days and makes adjustments as needed; - ensures that when he is absent, someone else in authority carries out his responsibilities. 	<p>etc.</p> <p>The <i>W</i> sometimes exceeds the limitations prescribed by the <i>treating physician</i>.</p> <p>The <i>preventionist</i> may find meaningful light tasks for the <i>W</i> that are useful for the OHS department.</p>	<p>budget.</p> <p>The <i>W</i> helps his <i>co-workers</i> in a supernumerary capacity.</p> <p>A <i>W</i> who respects the limitations prescribed by the <i>treating physician</i>.</p> <p>HC:</p> <p>Light tasks to be performed on a TA are hard for the <i>S</i> to find.</p> <p>Tasks that are not meaningful and that stigmatize the <i>W</i>.</p>
Gradual return to work			
The <i>W</i> performs his regular tasks, but on a reduced work schedule and sometimes at a reduced work pace.	<p>The <i>W</i> follows the procedure:</p> <ul style="list-style-type: none"> - does the GRTW within his department; - may not perform overly demanding tasks. <p>The <i>S</i> follows the procedure:</p> <ul style="list-style-type: none"> - checks the <i>W</i>'s morale to ensure that his health and the team operations are not harmed; - prepares the team for the <i>W</i>'s RTW; - checks on the <i>W</i>'s progress regularly and 	<p>Sometimes <i>co-workers</i> have to take over more demanding tasks that the <i>W</i> is unable to perform.</p> <p>The <i>W</i> may do his treatments during working hours.</p>	<p>FC:</p> <p>Gradually increasing the task demands, not just the work schedule demands.</p> <p>Allowing the worker to self-pace when performing the tasks; not putting pressure on him.</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
	makes adjustments as needed.		
Resumption of regular work			
When the <i>treating physician</i> allows it, the <i>W</i> returns to his regular job and performs the same tasks as before the accident, given the possibly new arrangements (physical and organizational).	The <i>W</i> follows the procedure: - returns to his regular tasks - may not perform overly demanding tasks if he feels unable to do so.	The <i>W</i> may change jobs following a promotion or a transfer.	FC: Giving the <i>W</i> leeway in the <i>RTW</i> to perform the tasks he feels able to perform and to ask for help from <i>co-workers</i> . Allowing the worker to self-pace when doing the tasks; not putting pressure on him. HC: Persistent pain.
Follow-up			
The <i>S</i> does regular follow-up with the <i>workers</i> in his department. The <i>C</i> does follow-up of the <i>W</i> 's <i>RTW</i> case.	The <i>S</i> follows the procedure: - makes daily rounds of his team. The <i>S</i> follows the procedure.	At the <i>S</i> 's request, the <i>co-workers</i> divide up the physically more demanding tasks to help the <i>W</i> .	FC: Continuous follow-up by the <i>S</i> .

W: worker; *S*: supervisor; *C*: disability and *RTW* administrator/counsellor; FC: facilitating condition; HC: hindering condition; TA: temporary assignment; GRTW: gradual return to work.

4.2.2 Organization B

Context

Employer B is a private organization operating in the manufacturing sector. It is located in Montréal and has over 1,500 employees. None of its workers is unionized. Sick leaves are managed by an external firm. Three preventionists assist the supervisors in their prevention- and RTW-related activities. The three preventionists divide up the RTW cases by territory, as the organization has points of service throughout Québec.

Data sources

Four documents were given to the research team by this organization's prevention counsellor: a one-page flow chart of the accident process, a temporary assignment form, and two PowerPoint presentations on temporary assignments (one for managers and the other for workers). This organization provides its staff with regular training on various subjects, and the two PowerPoint presentations are used for temporary assignment training.

Two workers participated in documenting the RTW situations. They consisted of one man and one woman, both in their forties, who perform office or factory work. They had been in their jobs from one to six years. They had injured their backs or a lower extremity, and had been on sick leave for at most one week. The temporary assignment and gradual return to work had lasted between 6 and 17 weeks.

Two key players, both men, participated in the examination of the RTW situations. Both were supervisors with six years of job tenure. They had played a role in the RTW process of one of the workers met.

The OHS counsellor, a woman with six years of job tenure, had participated in developing the procedure and is involved in the RTW process, mainly in preparations for the RTW and following up on workers once they are back.

Procedures

The documents provided by the organization attest to the existence of formal RTW procedures. They offer (a) information to employees about the temporary assignment, (b) training sessions to managers on the actions to be taken to promote a prompt return to a temporary assignment, (c) a temporary assignment form for workers to give to their physician at each appointment and involving four general tasks, with the possibility of additions and modifications, depending on the specific work context, and (d) a procedure that the supervisor has to follow in the event of an industrial accident. The procedure spells out the actions expected of each of the key players as soon as an accident occurs, until the RTW or a temporary assignment occurs, or, as the case may be, until case management is taken over by the firm responsible for managing sick leaves for the organization. For example, to be prepared for an accident, the supervisor must (1) identify the clinics and hospitals closest to the workplace; (2) always have pre-paid taxi vouchers on hand to cover a worker's transportation to a clinic; and (3) keep on hand an envelope containing the procedure for the worker to follow and the documents to be completed if an accident occurs. The supervisor takes advantage of his weekly meetings with the workers to explain again, every two or three months, the process to follow in such an event.

As soon as an accident occurs that involves a sick leave, the external firm is notified online. Within the next 24 to 48 hours, the firm takes over management of the case and contacts both the CNESST and the worker. When sick leave is involved, the OHS counsellor likes to be informed within a few hours (in actual fact, it can take up to two days) to allow for effective preventive action so that no similar accident occurs. At the time of our interviews, the OHS counsellor saw the organization as questioning its use of an external firm to manage sick leave cases, because the firm does not have the same values or capacities as the employer in the sense of relational proximity to the workers and promptness of reaction time (geographic proximity).

Actual practices

Table 8 details the actions taken by the key players interviewed, by procedural element, phase/stage, and player. A close correspondence can be seen between what the organization requires of the players and what the players revealed they had actually done in concrete cases involving the interviewed workers. In addition, we noted innovative and flexible methods of application in this organization (e.g., the worker performed his tasks at home during the temporary assignment; the worker had modified working hours to avoid rush hour traffic that could be harmful to his recovery during the gradual return to work; and one of the W's co-workers performed tasks that the W was unable to do). All these methods, agreed to by the supervisor, show that the organization gives a degree of leeway to the players regarding adjustments to the work demands and accommodations.

While no systematic evaluation was done of one particular worker's capacities to perform his tasks after his accident, a supervisor discussed the worker's restrictions with him and the impact on his tasks prior to assigning the tasks to be performed. Regarding the work adjustments to be made to improve prevention as soon as possible after an accident, the disability and RTW administrator/counsellor, supervisor, and worker were able to propose and implement various solutions, both temporary and permanent. Following the accident involving one of the workers participating in this study, the employer had the site reconfigured to make it safer.

Conditions facilitating or hindering RTW

Several facilitating and hindering conditions specific to a phase/stage, system, or category of player are described in Table 8. The predominant ones appear to concern the information provided to all players on the RTW procedures and collaboration among all the organization's internal and external players (worker, treating physician, supervisor, preventionist). Other, more general conditions such as the information given to the worker, a facilitating supervisor, and the fact of adapting to the worker's pace, are considered by the key players to be conditions that facilitate a sustainable RTW. Based on their comments, the fact of helping the worker and other players develop a thorough understanding of the process to be implemented results in their real engagement and participation in the RTW process.

Table 8. Organization B – Procedures and practices, and conditions facilitating or hindering RTW

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
Accident			
<p>The <i>first aider</i> administers first aid, secures the site, and records the accident in the first-aid register. Immediately after the event, the <i>W</i> informs his <i>S</i> and explains the facts. The <i>W</i> fills out an accident declaration form with the <i>S</i>'s assistance.</p> <p>Depending on the injury severity, the <i>S</i> ensures that the <i>W</i> is driven to a clinic or hospital; he contacts a member of the <i>W</i>'s family to accompany him; the <i>S</i> stays with the <i>W</i> until someone comes to take over, if need be.</p>	<p>The <i>first aider</i> follows the procedure.</p> <p>The <i>W</i> follows the procedure.</p> <p>The <i>S</i> follows the procedure: - sends the <i>W</i> to see a <i>physician</i> with a TA form in hand that indicates specific tasks the <i>W</i> could perform.</p>	<p>Sometimes the <i>W</i> continues working despite the pain.</p> <p>Sometimes the <i>W</i> notifies his <i>S</i> the day after the accident.</p>	
Sick leave			
<p>The <i>S</i> informs the <i>preventionist</i> of the accident, sick leave, and progression in the file. He also notifies the <i>external sick leave management firm</i> online.</p> <p>The <i>external firm</i> communicates with the <i>W</i> on sick leave – or on a home-based TA – two or three times a week.</p> <p>The <i>S</i> communicates regularly with the <i>W</i> on sick leave to promote his RTW.</p>	<p>The <i>external firm</i> follows the procedure.</p>	<p>The <i>firm</i> may call the <i>W</i> at home to see how he is doing.</p>	<p>FC: Communicating with the <i>W</i> and keeping him informed.</p> <p>HC: An <i>external firm</i> that spends time communicating with the <i>W</i> right at the start of the sick leave.</p>
<p>The <i>S</i> conducts an accident investigation. If need be, he seeks help from the <i>preventionist</i>, who assists</p>			

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
<p>throughout the process and provides the necessary support. The <i>S</i> sends the results of the investigation to the <i>preventionist</i>, who analyzes them with a view to prevention.</p> <p>The <i>preventionist</i>, <i>S</i>, and <i>W</i> collaborate to propose and implement various solutions, both temporary and permanent.</p>			
Temporary assignment			
<p>The <i>S</i> discusses with the <i>W</i> tasks that he could perform on a TA (the form contains four basic tasks) and adds some that may be useful in the <i>W</i>'s department.</p> <p>The <i>W</i> has the <i>physician</i> sign a TA form at each medical appointment, and brings it back to the <i>employer</i>.</p> <p>If the TA is refused by the <i>physician</i>, the <i>S</i> discusses with the worker other tasks that might be accepted by the <i>physician</i>, and sends the <i>W</i> back to the <i>physician</i> with a new TA form.</p> <p>The <i>S</i> assigns the <i>W</i> a productive activity respecting the limitations prescribed by the <i>treating physician</i>: tasks that are often sidelined, training sessions, etc.</p>	<p>The <i>W</i> follows the procedure:</p> <ul style="list-style-type: none"> - starts physiotherapy treatments during the TA; - works in his own department, at his own pace, at various tasks that are lightened in terms of load handling and duration, and in accordance with the limitations prescribed by the <i>treating physician</i> and the tasks assigned by the <i>S</i>. <p>The <i>S</i>. follows the procedure:</p> <ul style="list-style-type: none"> - discusses the restrictions of the TA with the <i>W</i> and their impact on his tasks; - redistributes tasks among the <i>W</i>'s <i>co-workers</i> during the TA. 	<p>The <i>W</i> may return to the clinic several times during the week before being able to have his TA form signed because he sees a different <i>physician</i> every time.</p> <p>The <i>S</i> allows, if need be, the <i>W</i> to do his TA at home if the <i>W</i> has difficulty getting around; the <i>W</i> works on a computer at his own pace for as long as he is able to. He has regular contact with his <i>S</i> and <i>co-workers</i> during the home-based TA.</p>	<p>FC:</p> <p>Collaboration of all the <i>players</i>. <i>W</i> goes at his own pace, has the right to make decisions, and can choose his own tasks.</p> <p>HC:</p> <p>Difficulty finding a meaningful TA.</p> <p>Non-collaboration of the <i>treating physician</i>.</p> <p>Interpersonal difficulties with other members of the work team or the <i>S</i>.</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
		<i>Co-workers work overtime to make up the hours lost due to the W's TA.</i>	
Gradual return to work			
No specific GRTW procedure. There is no GRTW per se; rather, it is the TA that continues.	The <i>W</i> follows the procedure. The <i>W</i> essentially performs his tasks a few days a week, alternating with treatments. The <i>S</i> allows the <i>W</i> to shorten his work days. The <i>S</i> does informal follow-up every morning.	One of the <i>W</i> 's <i>co-workers</i> performs the tasks that the <i>W</i> is unable to do.	HC: Interpersonal difficulties with other members of the work team or the <i>S</i> .
Resumption of regular work			
When the <i>treating physician</i> allows it, the <i>W</i> returns to his regular work, given the possibly new arrangements (physical and organizational).	The <i>W</i> follows the procedure.	Sometimes the <i>S</i> discusses, with the <i>W</i> , the <i>W</i> 's emotional state at the time of the accident and after the accident.	FC: A <i>W</i> who wants to return to work. HC: Interpersonal difficulties with other members of the work team or the <i>S</i> .
Follow-up			
The <i>S</i> does regular follow-up (weekly or daily) with the workers in his department.	The <i>S</i> follows the procedure.		

W: worker; *S*: supervisor; FC: facilitating condition; HC: hindering condition; TA: temporary assignment; GRTW: gradual return to work.

4.2.3 Organization C

Context

Employer C is a public organization operating in the “health care and social assistance” sector. It is located in a remote region and has between 300 and 500 employees, all of whom are unionized. Sick leave is managed by the employer. However, whenever a worker’s sick leave appears unduly long, the employer enlists external experts to institute an individualized, supported RTW program. It involves a personalized support process adapted to the condition of the worker on sick leave who presents risk factors for chronicity. Designed by external experts (occupational therapists and prevention and occupational rehabilitation counsellors with industrial relations training), this program presents structures and support tools for evaluating the job, as well as the work adjustments and accommodations needed during the RTW. Meetings are held to evaluate the context and working conditions in order to identify the best solutions for returning the worker to work on a sustainable basis. Working committees bring the various players together (worker, supervisor, union representative, professional from the OHS department, and external expert), who discuss their concerns and develop a joint RTW plan. The expert’s role is to coordinate the RTW process, evaluate the solution development and implementation process, and write the minutes of the meetings.

Data sources

This organization did not provide any written policy or procedures. However, the research team obtained several documents explaining the individualized, supported RTW program, including the program details, a plain-language article on the program, and a pamphlet presenting the program to participants.

Four workers participated in the process of describing concrete RTW situations. They work in health care or related services. All in their forties or fifties, they had been with the organization for more than ten years and in their current jobs for at least three years. They had injured their backs or a lower extremity.

Six key players – one man and five women – participated in the component involving the description of concrete RTW situations. The two supervisors had training in health, and between two and seven years of job tenure. The disability and RTW administrator/counsellor, who was also a nurse, had around 15 years of job tenure. The two union representatives worked in a health care department and had held their part-time union positions for one or two years. One of the preventionists had a university education in the health field and worked with several organizations.

Four key players – three men and one woman – participated in the component on procedures and the general conditions for their application in the organization. The senior management member had a master’s degree in management and seven years of job tenure. The two supervisors had training in health. The preventionist divided his work time among various organizations, had a university education in the health and management field, and had held his job for at least three years.

Procedures

According to the RTW manager, there was a need to develop written procedures, notably regarding the replacement of staff members responsible for sick leave and RTW management, as the current sick-leave management procedure consisted simply of a pamphlet explaining to employees what they had to do in the case of sick leave. (This pamphlet was not given to the research team.) In fact, when we conducted our interviews, only one disability and RTW administrator/counsellor was responsible for sick leave and RTW cases, and he was planning his upcoming retirement. Based on the manager's and disability and RTW administrator/counsellor's input, we noted that in complex cases involving litigation or long-term sick leave, the organization uses the services of a medical consultant or other specialists who help it prepare cases for the Bureau d'évaluation médicale (BEM, or medical evaluation office) or for the Tribunal administratif du travail (TAT, or administrative tribunal of labour)¹¹.

Actual practices

Table 9 summarizes the actions taken by the key players in the context of the documented RTW situations, by procedural element, phase/stage in the RTW process, and category of player. We noted a relatively close correspondence between what the organization required of the players and what the players themselves reported having done in concrete RTW cases. However, we also noted significant differences within a given player category (supervisor), particularly regarding the actions taken to accommodate workers on temporary assignments. Some prioritized a controlling attitude to ensure that the workers respected their limitations and work schedules, while others adopted an appreciative attitude toward the help that the workers gave to the team. As for the workers themselves, some had stopped working when their accident occurred, while others had continued working for a day or two before consulting a physician. They had returned to work after a sick leave ranging from 4 to 14 weeks, a temporary assignment period of between 4 and 14 weeks, and a gradual-return-to-work period of between 4 and 22 weeks. During all these periods, they received many and varied treatments. In total, during the documented RTW situations, the workers had taken between 12 and 36 weeks from the time of the accident to the time of their definitive return to work. They had received as many as several dozen physiotherapy treatments during these weeks. In addition, the RTW of some workers who had requested other jobs prior to the work accident was carried out in other jobs. The gradual-return-to-work concept appeared to be poorly understood by all the players, except for the disability and RTW administrator/counsellor. Follow-up, even if carried out systematically by the supervisors, was (based on their own comments) difficult to do when the worker had taken a new job right after the sick leave.

As mentioned earlier, this organization has an individualized, supported RTW program, which is generally launched when the sick leave is long or risks becoming long, i.e., beyond the usually expected durations. This program is voluntary, meaning that the worker has to agree to it and is free to refuse it with impunity. Implemented by the disability and RTW administrator/counsellor, sometimes at the supervisor's request, this program is coordinated by an external expert. It requires the participation of the disability and RTW administrator/counsellor, the worker concerned, his supervisor and union representative, and the external expert, at all the meetings. Among other things, its purpose is to determine the worker's and supervisor's concerns

¹¹ The Tribunal administratif du travail (TAT, or administrative tribunal of labour) replaced the Commission des lésions professionnelles (occupational injuries board) on January 1, 2016.

regarding the RTW. These concerns become the focus of discussions aimed at identifying the anticipated difficulties and determining the courses of action to take to facilitate the RTW. In concrete terms, the external expert evaluates the job and the work station, and then discusses the evaluation with all the program participants. Next, the external expert drafts a report of each meeting and sends it to all those who attended and to the treating physician. Such a program usually involves from three to five meetings over a period of several months or even a year.

Following the job evaluation, the external expert proposes work modifications and a variety of solutions, including tips, work methods, movements, and the use of tools. These proposals are discussed with all the participants in the RTW program. The disability and RTW administrator/counsellor is then responsible for making the work adjustments and accommodations, purchasing tools, or implementing other solutions that allow the worker to return to work as soon as possible. The supervisor, with help from the Physical Resources Department, is responsible for implementing the solutions and work adjustments and accommodations recommended under this program. The workers interviewed had all begun their individualized, supported RTW program. Overall, the key players appreciated the program and the resulting physical and administrative solutions.

Some of the workers had positive opinions of the program, while others had neutral opinions. The latter saw nothing negative about it, but felt that it had no positive outcomes and led to no fundamental changes. For example, the external expert taught various work methods, but according to the workers, he proposed nothing new or only temporary solutions specific to the temporary assignment and did not evaluate the job per se. However, several key players mentioned that a tool designed in the context of the program and made by the Physical Resources Department was currently being used and applied to all workers in this department. Some of the workers met said that they had made requests to no avail, one for an ergonomic evaluation of his job and the other for specific training related to his job. In one case, according to the worker, the employer backtracked after having made an administrative modification that had complicated the tasks he had to perform. Moreover, when the work site is situated outside the establishment and does not fall under the employer's authority, the latter has no power to demand safe modifications. It is therefore the worker who has to adapt to the work site, without support from his manager.

Conditions facilitating or hindering RTW

Table 9 also describes the factors perceived by the key players as facilitating or hindering conditions specific to a phase/stage, system, or category of player involved in the RTW process.

According to the players interviewed, regarding general conditions, collaboration, communication, and the role played by a facilitating supervisor constitute strategies that promote healthy and sustainable RTW. These conditions correspond to the presence or absence of certain practices in this organization. Also seen as facilitating conditions are a sound understanding of the process by all players and a feeling of effectiveness that encourages engagement and real participation in the modifications implemented during the temporary assignment and RTW. The players were unanimous about the positive impact of the RTW program. The intervention of one neutral player (the external expert), the quality of his expertise, and certain structures and tools help create a forum for dialogue among the players where they can share their concerns and increase their awareness of the real work demands and of the possibilities available for modifying it and facilitating the RTW. On the other hand, several players considered that there were too many physiotherapy treatments and that the treatments were too intense; some workers in fact saw them as detrimental to their resumption of regular work and even to recovery of their capacities.

Lastly, the temporary assignment (a provision of the AIAOD to promote injured workers' prompt return to work) was seen by all the players as a procedure facilitating the RTW. While workers are waiting to regain their fitness to perform their regular jobs or suitable jobs, a temporary assignment enables them to stay in contact with or even to help their co-workers, without exceeding the physician-prescribed restrictions. Finally, it appears that, during the return to work, the fact of giving workers a margin of manoeuvre regarding their work pace and the order in which they perform their tasks helps them considerably. It allows them to adjust their work demands as they gradually recover their capacities. By contrast, interpersonal difficulties with co-workers or the supervisor were cited by several players as conditions that hinder the RTW process.

Table 9. Organization C – Procedures and practices, and conditions facilitating or hindering RTW

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
Accident			
The <i>W</i> completes an accident declaration form and sends it to his <i>S</i> , who checks it. The <i>S</i> analyzes the accidental event with the <i>W</i> .	The <i>W</i> follows the procedure. The <i>S</i> follows the procedure.	The <i>W</i> may continue working despite the pain, notify his <i>S</i> , and complete the declaration form a few days after the accident.	
Sick leave			
The <i>W</i> consults a <i>physician</i> and takes a completed medical certificate back to the <i>A</i> if the accident involves a time-loss injury. The <i>C</i> notifies the CNESST, <i>HR</i> , and the <i>S</i> . If the <i>A</i> has any doubts, he has the situation analyzed by a professional. With the <i>HR manager</i> , the <i>C</i> studies the litigious sick-leave cases, and prepares administrative or financial contestations (cost sharing) if need be. The <i>C</i> has the <i>W</i> evaluated by the <i>employer's physician</i> if the sick leave seems unreasonably long. The <i>employer's physician</i> phones the <i>treating physician</i> , or requests a medicolegal evaluation by a <i>specialist</i> , if need be. The <i>C</i> makes a decision to go before the BEM or not, depending on the evaluation done by the <i>employer's physician</i> .	The <i>W</i> follows the procedure: - starts the <i>physiotherapy</i> treatments prescribed by the <i>physician</i> , soon after the accident; - has contact – by phone or in person – with the <i>C</i> after each medical appointment; - has friendly contacts with <i>co-workers</i> . The <i>S</i> follows the procedure: - calls the <i>W</i> who is on sick leave, not to apply pressure, but rather to stay in touch and prevent too much disconnection from work. The <i>C</i> follows the procedure: - ensures that the <i>W</i> has	Sometimes the <i>W</i> only sees a <i>physician</i> the next day. Sometimes the <i>C</i> calls the <i>W</i> to ask him to start physiotherapy treatments as soon as the sick leave begins. Every day or nearly every day, the <i>W</i> receives physiotherapy treatments, which may reduce or increase his pain (perceived by the <i>W</i> as aggravating his condition) The <i>employer's physician</i> may evaluate the <i>W</i> .	FC: Rest. The <i>W</i> goes at his own pace and can choose the tasks he is able to perform. HC: Long-term sick leave. Physiotherapy: too many treatments can increase the pain. A <i>W</i> who does not collaborate. Any form of contestation or of consultation with an employer-designated medical expert. Interpersonal difficulties with other members of the work team or the <i>S</i> .

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
<p>If the sick leave looks like it will be long, the <i>C</i> decides to implement an individualized, supported RTW program, and invites the <i>W</i> to participate. The <i>C</i> uses the services of an <i>external expert</i> to coordinate the process.</p> <p><i>HR</i> sends the <i>union</i> information about personnel movements during sick leaves.</p>	<p>fully recovered before taking his retirement, as the case may be.</p>		
<p>Temporary assignment</p> <p>At each medical appointment, the <i>W</i> has the <i>physician</i> sign a TA form according to his evolving capacities, and takes it back to the <i>employer</i>. The <i>W</i> is paid from a specific budget (from <i>HR</i>) for this purpose.</p> <p>The <i>C</i> ensures that the acute phase of the <i>W</i>'s injury is over and that he is fit to return to work and do the TA in his department. He organizes the TA with the <i>S</i>.</p> <p>The <i>S</i> assigns the <i>W</i> to tasks that respect the limitations prescribed by the <i>treating physician</i>.</p>	<p>The <i>W</i> follows the procedure:</p> <ul style="list-style-type: none"> - sometimes decides on the tasks he is able to perform on the TA; - receives help from a <i>co-worker</i> for physically demanding tasks. <p>The <i>S</i> follows the procedure:</p> <ul style="list-style-type: none"> - discusses the TA, tasks, and work schedule with the <i>W</i>; - holds no expectations of the <i>W</i> in terms of productivity, as the important issue is that the <i>W</i> is back again with his <i>co-workers</i>. 	<p>Sometimes the <i>W</i> does the TA in a department to which he had asked to be reassigned prior to the accident.</p> <p>Sometimes the <i>W</i> exceeds his capacities.</p> <p>The <i>W</i> may continue to receive physiotherapy treatments up to five days a week. He may ask the <i>physician</i> to reduce the frequency because it is too demanding when combined with the TA and risks aggravating his pain.</p>	<p>FC: A <i>W</i> who goes at his own pace is able to make decisions regarding the choice of tasks. A <i>W</i> who wants to return to work.</p> <p>HC: Difficulty arranging the work schedules (condition specific to the organization's context). Premature return to work. The <i>W</i> does not respect the functional limitations prescribed by the <i>treating physician</i>. Non-collaboration of the <i>treating physician</i>. Interpersonal difficulties with other members of the work team or the <i>S</i>.</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
		The <i>co-workers</i> are receptive to having the <i>W</i> on a TA because he represents an additional human resource in a supernumerary capacity.	
Gradual return to work			
The <i>W</i> works at his regular tasks according to a reduced schedule and pace.	The <i>W</i> follows the procedure.		HC: Difficulty rearranging the work schedules (specific to the context of the organization). Interpersonal difficulties with other members of the work team or with the <i>S</i> .
Resumption of regular work			
When the <i>treating physician</i> allows it, the <i>W</i> returns to his regular job and performs his regular pre-accident tasks, given the possibly new arrangements (physical and organizational).	The <i>W</i> follows the procedure.		HC: The <i>W</i> does not apply the new work methods. Interpersonal difficulties with other members of the work team or the <i>S</i> .
Follow-up			
The <i>S</i> does regular follow-up with the workers in his department.	The <i>S</i> follows the procedure.		

W: worker; *S*: supervisor; *C*: disability and RTW administrator/counsellor; FC: facilitating condition; HC: hindering condition; TA: temporary assignment; GRTW: gradual return to work.

4.2.4 Organization D

Context

Employer D is a private organization operating in the manufacturing sector. It is located in a central region of Québec and has between 300 and 500 employees. It has three divisions, but the workers in only one division are unionized. Sick leaves are managed by the employer. Only one disability and RTW administrator/counsellor manages the sick leave cases. However, this person uses the services of an external expert for complex or litigious cases.

Data sources

Organization D did not provide the research team with any documents. The documents mentioned by the organization's key players were the accident investigation form, the incident register, and the CNESST's temporary assignment form. According to the managers, the latter form needs to be improved by adding tasks specific to the activities carried out in the organization. The key players interviewed were not able to provide a policy or formal procedures regarding sick-leave or RTW management.

Three workers – one man and two women, between 38 and 53 years of age – participated in the study. All three were plant workers, and two of them were unionized. Their job tenure ranged from 9 to 21 years. They had sustained an injury to their backs or an upper extremity. Complete sick leave and gradual returns to work are virtually non-existent in this organization. The workers met had been on a temporary assignment for a period ranging from 5 to 15 weeks.

Four key players – all men – had played a role in the RTW situations of at least one of the workers. The two supervisors and the manager had held their current jobs for 5 to 20 years. The union representative, who was also a worker, had held his union position for four years.

Two key players – a man and a woman – had participated in the component on the organization's general procedures and practices. The disability and RTW administrator/counsellor and the preventionist, both recent hires, had university training in industrial relations and OHS.

Procedures

Although no formal documents were given to the research team, several informal procedural elements, particularly concerning prevention and accident analysis (e.g., collective accident investigation), temporary assignments, and return to the pre-injury job were retained from the key players' discourse.

Actual practices

The practices gleaned from the discourse of the key players in the RTW situations under study are summarized in Table 10 by procedural element, phase/stage, and category of player. Little correspondence was found between what was reported by the organization as being required of the key players and what the players actually revealed regarding the concrete cases of the interviewed workers. For example, the disability and RTW administrator/counsellor, with the supervisor's mutual consent, apparently prepares a RTW plan in the context of a weekly meeting; but none of the players interviewed mentioned such a plan. However, it is important to

remember that two of the key players interviewed in this study were not employed by the organization at the time of the workers' accidents or during their RTW. It may be, therefore, that certain procedural elements were introduced in the context of the practice improvement process currently under way in this organization. Also in this organization, different methods of application were observed from one player to the other (supervisor), suggesting significant leeway for making the adjustments and accommodations required during an early RTW. While some supervisors found ways to assign workers returning to work to meaningful tasks, others had them perform uninteresting or tasks with no value added, leaving the workers even feeling stigmatized. Moreover, the physician's directives were followed to the letter in some cases, while in others, they appeared to be ignored by the employer, to the point that one worker felt the need to return to the physician. However, other supervisors acted differently, leaving the worker enough leeway to adjust the conditions of his return in keeping with the gradual recovery of his capacities and self-confidence.

In this organization, there is no systematic evaluation of a worker's capacities to perform his tasks after an accident. However, using the investigation form, the supervisor leads an investigation into the accident with a view to prevention. With a team comprising the worker (if he is able), production manager, disability and RTW administrator/counsellor, workers' representative on the health and safety committee, and preventionist, he collects the facts surrounding the accident, identifies the causes, and lastly, suggests short-, medium- and long-term solutions.

However, following the accident investigation, changes may be made to the work station, equipment, parts, operating method, etc., and temporary solutions may be introduced. Depending on the type of solutions, one or more members of the investigation group or a separate technical committee may be asked to contribute. Temporary solutions are implemented as quickly as possible after the accident, while permanent solutions may require more time, depending on their degree of complexity and difficulty. In concrete terms, at the production manager's request, a technical committee had a cargo handling support tool installed in some cases. The worker adopted a different operating method while waiting for the technical solution to be implemented. In another case, after studying the situation, the problem turned out to have been caused by poor quality parts. The manager contacted the supplier asking for new parts to ensure good quality, and this solved the problem.

Conditions facilitating or hindering RTW

Several facilitating and hindering conditions specific to a phase/stage of the RTW process, a system, or a category of player involved in the process were mentioned by the key players. For example, the facts that the temporary assignment is covered by a specific budget separate from the operating budget and that the worker is allowed sufficient time and opportunity to adjust his pace and the progression in his tasks are regarded by the key players as winning conditions for a successful RTW.

Regarding general conditions, a large majority of the key players mentioned that collaboration, communication, providing the worker with information, and a facilitating supervisor are strategies that contribute to a worker's healthy and sustainable RTW (see Table 10). Hindering conditions were also cited by the players: any form of contestation, consultation with an employer-designated medical expert, non-collaboration of the treating physician in choosing the work to be performed on a temporary assignment, as well as interpersonal difficulties with other members of the work team or the supervisor.

Table 10. Organization D – Procedures and practices, and conditions facilitating or hindering RTW

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
Accident			
<p>Immediately after the event, the <i>W</i> informs his <i>S</i> of the accident and explains the facts.</p> <p>With the <i>S</i>'s help, the <i>W</i> fills out an accident declaration form. The <i>S</i> enters the accident in the accident/incident register. The <i>S</i> leads an investigation into the accident as soon as possible, using the investigation form, for purposes of prevention.</p> <p>With an investigation team composed of the <i>W</i> (if he is able), the <i>production manager</i>, <i>C</i>, <i>workers' representative</i> on the HSC, and the <i>preventionist</i>, the <i>S</i>:</p> <ul style="list-style-type: none"> • collects the facts surrounding the accident; • identifies the cause(s) of the accident; • formulates short-, medium-, and long-term solutions. 	<p>The <i>W</i> follows the procedure.</p> <p>The <i>S</i> follows the procedure.</p> <p>The <i>production manager</i>, <i>workers' representative</i> on the HSC, and <i>preventionist</i> participate in the accident investigation.</p>	<p>The <i>W</i> may continue to work despite the pain, notify his <i>S</i>, and complete the accident declaration form a few days after the accident.</p>	
Sick leave			
<p>At each medical appointment, the <i>W</i> has the <i>physician</i> sign a TA form and takes it back to the <i>employer</i>.</p> <p>The <i>W</i> takes the medical documents (sick leave or TA) back to the employer. The <i>S</i> adds certain tasks that are useful in his department to the TA form, then the <i>W</i> goes to see a physician with this TA form in hand.</p> <p>The <i>S</i> sends the required documents to</p>	<p>The <i>W</i> follows the procedure.</p> <p>The <i>S</i> follows the procedure:</p> <ul style="list-style-type: none"> - sends the <i>W</i> to see a <i>physician</i> with a TA form indicating specific tasks that the <i>W</i> could perform; - sends the required documents to <i>HR</i>. 	<p>Sometimes the <i>S</i> communicates with the worker on sick leave.</p> <p>This organization encourages the return to a TA as quickly as possible.</p>	<p>FC: Communicating with the <i>W</i> and keeping him informed.</p> <p>HC: Long-term sick leave. Any form of contestation. Consultation with the <i>employer's medical expert</i>. Interpersonal difficulties with other members of the work team or the <i>S</i>.</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
<p><i>HR.</i> The C sends the required documents (accident declaration, sick leave certificate, etc.) to the CNESST. The C and S discuss any sick leaves at a weekly meeting to determine a RTW plan. The C turns the complicated CNESST cases over to an external firm for management.</p>	<p>The C follows the procedure.</p>		<p>Non-collaboration of the <i>treating physician</i>. A W who is afraid to return to work. A W who does not cooperate.</p>
<p>TA The S assigns the W one or more light tasks within his department that comply with the limitations prescribed by the <i>treating physician</i>. The W performs the tasks assigned by the S and does not exceed the limitations prescribed by the <i>physician</i>. The S ensures that the TA is performed according to the limitations prescribed by the <i>treating physician</i> regarding time, activities, and capacities, etc. The S takes the W's therapy appointments into account when assigning work schedules.</p>	<p>The W follows the procedure: - works in his department at various lighter tasks in terms of weights handled and repetitiveness of movements, or duration, according to the limitations prescribed by the <i>treating physician</i> and as assigned by the S; - sees his physician regularly, and the latter adjusts the limitations prescribed for the TA as needed. The S follows the procedure: - sometimes assigns the W to tasks that are completely unrelated to his usual work and that</p>	<p>The W may continue to receive treatments. The S sometimes assigns the W to tasks that exceed the limitations prescribed by the <i>treating physician</i>. Sometimes the S does follow-up with the W in order to adjust the TA. The adjustment may involve tasks or work schedules (for example, if the W feels the need for time off, usually it is granted while he is on a TA). Management asks to see the W after</p>	<p>FC: Meaningful TA. Budget for the TA separate from the operating budget. Giving the worker sufficient time. A W who goes at his own pace is able to choose his own tasks. A W who wants to return to work. HC: Premature return to work. Difficulty finding a meaningful TA (organizational context: presence of different collective agreements, depending on the work activities).</p>

Procedural element	Practice		Condition
	Application	Note	Facilitating (FC)/Hindering (HC)
	the <i>W</i> finds meaningless or punitive; - leaves the <i>W</i> the freedom to do the tasks he feels capable of and to organize his work schedule.	speaking with the CNESST about the employer's non-compliance with the functional limitations.	
Resumption of regular work			
When the <i>treating physician</i> allows it, the <i>W</i> returns to his regular job and performs his regular pre-accident tasks, given the possibly new arrangements (physical and organizational).	The <i>W</i> follows the procedure: - returns to his regular job and performs his regular pre-accident tasks, given the possibly new arrangements (physical and organizational).	The <i>W</i> may return to work with persistent pain, avoiding certain tasks as much as possible. The <i>S</i> sometimes accepts that the <i>W</i> not have to perform all his regular work or not work at certain work stations or tasks, for a few weeks.	HC: The <i>W</i> does not apply the new work methods. Interpersonal difficulties with other members of the work team or the <i>S</i> .
Follow-up			
-	-	-	-

W: worker; *S*: supervisor; *C*: disability and RTW administrator/counsellor; FC: facilitating condition; HC: hindering condition; HR: Human Resources; HSC: health and safety committee; TA: temporary assignment.

4.2.5 Cross-case synthesis

This sub-section first describes the similarities and differences between the four organizations' actual procedures and practices, and then between the conditions facilitating and hindering the RTW as described by the players. Table 11 synthesizes the main information about the context and the information sources regarding the RTW process within the organizations.

Actual procedures and practices

The procedures of the four organizations showed similarities, particularly regarding the stipulations of the *Act respecting industrial accidents and occupational diseases* (AIAOD, CQLR c.A-3.001). For example, a temporary assignment to light work constitutes a right conferred upon the employer; only the employer may exercise this right. As the name indicates, the assignment must be temporary, and consist of a productive activity related to the type of activities carried out by the organization and likely to be beneficial to the worker's rehabilitation so he can return to his regular work (CNESST, 2015, *Politique 3.06*). An employer that wishes to give a worker a temporary assignment must submit a form detailing the job envisaged, the duration of the assignment, the tasks to be performed and the workload, as well as the working conditions and anticipated work schedules, to the worker's physician for approval (AIAOD, section 179). According to the Act, this work must be "beneficial to the worker's rehabilitation." Thus, orienting the organizational structures and practices toward prevention efforts (e.g., accident declaration, investigation), complying with the limitations prescribed by the physician regarding the right time to resume work and the right to the temporary assignment constitute procedural elements of the practices of all four organizations. The procedural elements regarding litigious cases or cases that are the subject of applications to the CNESST, the Bureau d'évaluation médicale (BEM), and the Tribunal administratif du travail (TAT) also appear to be the same for the four organizations.

By contrast, the formalization of RTW policies and procedures appears to vary among the organizations. For example, the role and responsibilities of various categories of players are formalized to varying degrees and the responsibilities of one category of players in particular seem to be inconsistent, from one organization to the other.

Table 12 presents the organizations' practices regarding the various procedural elements, by phase/stage, system/player, and the ways they are applied, in order to highlight the similarities and differences between the main procedural elements or between the key players' practices within the organizations. Regarding actual practices, several procedural elements appear to be applied in all four organizations. They concern primarily general elements, such as accident analysis, temporary assignments, work adjustments and accommodations, etc. The application of certain other procedural elements is somewhat similar. Two of the organizations use the services of a medical consultant to obtain a second opinion regarding the diagnosis or an evaluation when the sick leaves drags on for no apparent reason. Also, one of the organizations systematically uses the services of an external firm to manage sick leaves. Lastly, certain other procedural elements are missing or very limited in the practices reported by the players. For example, daily follow-up, mentioned by a few players as a daily task of the supervisor, does not appear to be applied in the same way in all the organizations or by all the supervisors within a given organization.

Generally speaking, despite the diversity in the actions taken by phase/stage in the RTW process and by category of player (supervisor, disability and RTW administrator/counsellor,

worker), the actual practices, by procedural element, are similar for any given category of player and across the organizations. Thus, supervisors ensure that accidents are reported by workers and that the accidents are investigated either by themselves or in collaboration with others, to prevent similar types of accidents from occurring. In the temporary assignment context, supervisors, in collaboration with disability and RTW administrator/counsellors, define the work to be performed by the worker. There may be a period during which workers are assigned to light work in their own department or elsewhere, or a period in which they stay in their department, at their job, but in a supernumerary capacity. Advisors are responsible for the workers' files, and take care of contacts with external players, send the required documents to the CNESST, and receive the medical reports from the treating physicians. A diverse range of professional backgrounds and training is apparent among the disability and RTW administrator/counsellors and supervisors from the different organizations, particularly with regard to occupational health and safety. In addition, a major difference is observed—between the two activity sectors—in the supervisors' professional trajectories and training. In fact, most of the supervisors in the organizations associated with the health services sector had training in health, whereas very few from the manufacturing sector had such training. Yet the fact of having training in health could constitute an asset when it comes to the task of evaluating the fit between the worker's capacities and the work demands. Moreover, more than half of the disability and RTW administrators/counsellors and preventionists reported having taken refresher training regarding the attitudes and skills needed to perform their functions.

The level of worker engagement in the RTW process varies from one organization to the other. The perception of this level of engagement also varies from one key player to the other, depending on their attitudes and perceptions of the worker involved in the RTW process. In several organizations, some key players expect the worker to return to work only after a complete recovery, while others endeavour to facilitate the workers' reintegration into their teams and gradual resumption of their tasks. On the other hand, there are workers who appear to push themselves beyond their capacities, thus endangering their health. For example, in three of the organizations, some workers revealed that they had continued working after their accident because the pain was tolerable, or that they had performed tasks that were more demanding than those recommended by the treating physician, thus increasing the risks of an aggravation, relapse, or recurrence of their injury. Several supervisors said they are on the lookout for this type of behaviour in their workers. However, sometimes it is the supervisors who appear to be overly demanding and who ask the workers to perform their pre-accident tasks, even if they are not yet fit to do so.

Conditions facilitating or hindering RTW

In general, the various categories of players in the four organizations concur as to what constitute facilitating and hindering conditions for a sustainable RTW. Moreover, the conditions they mentioned correspond to various organizational and procedural elements and their application. Table 13 presents the conditions facilitating or hindering a sustainable RTW identified by the various categories of players (disability and RTW administrator/counsellor, supervisor, union representative, medical consultant, preventionist, HR manager, co-worker, production manager, and worker) from the different organizations, by procedural element cited.

Twelve of the 14 facilitating conditions were mentioned by three categories of players, eight were cited by key players from at least three organizations, and six were mentioned by the players from all four organizations. The conditions seen as facilitators by at least three categories of players were: doing a temporary assignment within one's own department, having

a meaningful temporary assignment, doing a temporary assignment in a supernumerary capacity (no financial penalty), performing light tasks (during the temporary assignment and the gradual return to work, and even during the regular RTW), offering a RTW program, and offering tips to the worker. The temporary assignment, a measure provided for by law to promote a RTW, was generally seen by the players as a condition facilitating a sustainable RTW. However, several methods of application were seen as playing a role in the success of the temporary assignment, as the issues involved in its application affect mainly the worker and the supervisor. If the worker on a temporary assignment becomes a supernumerary and his salary comes from another budget than that of the department, the supervisor sees him as someone who can help the other workers attain their performance objectives. For workers, being on a temporary assignment is beneficial, provided that the tasks to be performed are interesting and gratifying and that they do not jeopardize their gradual recovery of their capacities. Several of these conditions were cited by the key players as needing to be integrated into the organizations' policies and procedures. The facilitating conditions cited by the supervisors were primarily related to their attitude toward the RTW process and their experiences with managing certain workers (e.g., a worker who wants to return to work, communication with the worker's supervisor, or the supervisor's collaboration with the disability and RTW administrator/counsellor).

Ten of the 14 hindering conditions were mentioned by at least three different categories of players and six by key players from at least three organizations. The hindering condition mentioned by the largest number of players and by all the organizations was the non-collaboration of the treating physician. Other hindering conditions that emerged from the key players' discourse were: difficulty finding a temporary assignment, a worker on long-term sick leave, interpersonal difficulties with co-workers or the supervisor, contestations, examinations performed by the employer's medical consultants, and the worker's non-engagement and fears regarding his RTW. According to the workers and some supervisors, it is important to let workers choose their own work pace and work tasks, at least in the early days.

Generally speaking, what were perceived as facilitating or hindering conditions for a sustainable RTW depended largely on the organizational context and the players' attitudes and perceptions. In fact, few similarities were noted when the facilitating or hindering conditions reflected a unique organizational context (e.g., a small workplace where everyone knows everyone else, too many physiotherapy treatments, a sick-leave culture, or the distance between the place where care is given and the worker's home), and the systematic application of certain procedural elements (e.g., personalized RTW support programs or contestations). Also, few similarities were noted in the conditions relating to the workers' characteristics. In fact, the different key players mentioned them in the context of their personal experiences in various RTW situations (e.g., a worker who does not want to return to work; a worker who has various personal, psychological or financial problems; or a worker who is nearing retirement). Presumably the level of experience of the different players colours their attitudes and perceptions regarding what facilitates or hinders the RTW process.

Table 11. Synthesis of the context and information sources, by organization

Information	Organization			
	A	B	C	D
Context				
Type	Public	Private	Public	Private
Size	~1,500 workers	~1,500 workers	~500 workers	~300 workers
Union status	Unionized	Non-unionized	Unionized	Partly unionized
Sector	Health care and social assistance	Manufacturing	Health care and social assistance	Manufacturing
Geographic location	Greater Montreal region	Greater Montreal region	Remote region	Central region
Sick-leave management	Heads of OHS department and disability and RTW administrator/counsellors	External firm	Head of OHS department, counsellor, RTW program experts	OHS counsellor (sick-leave and RTW management)
Information sources				
Documents remitted	Policy, procedure, guide for workers in the event of a work-related accident	Procedure for the supervisor in the event of an accident, TA procedures for the manager and <i>W</i> to follow	Individualized RTW program designed and offered in collaboration with external experts	None
Number of key players interviewed (directly or indirectly involved in the RTW of the interviewed workers)	N=13	3	N=10	N=6
Number of workers interviewed about their RTW	N=5	N=2	N=4	N=3
- Injury	Back	Back, lower limb	Back, lower limb	Back, upper limb
- Sick leave	0-7 weeks	1 week	4-14 weeks	0-1 week
- Duration of the TA/GRTW	6-30 weeks	6-12 weeks	4-22 weeks	5-15 weeks
Time elapsed between the accident and the definitive RTW	12-36 weeks	4 and 6 weeks	12-36 weeks	2-16 weeks

Table 12. Similarities and differences between the organizations' actual procedures and practices

Procedural element	Similarity	Difference in the methods of applying the procedures
<u>Accident declaration and investigation</u>		
Immediately after the event, the <i>W</i> informs his <i>S</i> of the accident and fills out an accident declaration form.	A, B, C, D	
The <i>S</i> notifies the <i>C</i> and sends the required documents to <i>HR</i>	A, B, C, D	
After consulting a physician, the <i>W</i> submits the papers to <i>HR</i> : accident declaration form, medical papers, <i>W</i> claim form.	A, B, C	The <i>W</i> transmits his documents to the <i>S</i> , who is responsible for submitting them to HR (D).
The <i>C</i> contacts the CNESST.	A, C, D	The <i>C</i> notifies the firm responsible for managing sick leaves, which in turn communicates with the CNESST (B).
The <i>S</i> conducts an accident investigation to determine the causes. He implements corrective measures if needed	A, B, C, D	An investigation team comprising the <i>W</i> (if he is able), <i>S</i> , production manager, <i>C</i> , workers' representative on the HSC, and preventionist collect the facts surrounding the accident, determine the causes, and identify short-, medium-, and long-term solutions. (D).
<u>Information sent to the union¹²</u>		
The <i>union</i> receives a list of the workers who are on sick leave (CNESST and salary insurance).	A, C, D	N/A (B)
<u>Communication during the sick leave</u>		
After each medical appointment, the <i>C</i> and the <i>W</i> communicate by phone or in person.	A, B, C, D	The <i>S</i> also communicates with the <i>W</i> immediately after the accident and during his sick leave to give him news of the work team or plan accommodations (e.g., provide a computer so he can work from home) (B).
<u>Preparation for the temporary assignment</u>		
The <i>C</i> ensures that the <i>W</i> is fit to return to work, i.e., that the acute phase of his injury is over, then plans the TA with the <i>S</i> .	C	A TA form is prepared for the <i>W</i> to give to the physician. This form may specify tasks that could be performed within the department or other tasks available in the organization and that are more or less meaningful for the <i>W</i> . (A, B, D). The TA procedure is more or less formalized and managed

¹² N/A: Procedural element not applicable.

Procedural element	Similarity	Difference in the methods of applying the procedures
<p>The <i>S</i> and <i>C</i> complete the TA form for the <i>W</i> to give to the physician.</p>	<p>A, B, C, D</p>	<p>by the <i>Cs</i>, except for the individualized RTW program, which is offered in collaboration with external resources) (<i>C</i>). The form is modified or supplemented with a list of tasks available by department (<i>A, B, D</i>).</p>
<p><u>Medical authorization of the temporary assignment</u> The <i>W</i> has the <i>treating physician</i> sign a <u>TA form</u> and takes it back to his employer.</p>	<p>A, B, C, D</p>	<p>The treating physician does not always consent to the TA as soon as the employer requests it; sometimes, he prescribes a sick leave first. He adjusts the limitations prescribed for the TA as needed (<i>A, C, D</i>).</p>
<p><u>Temporary assignment tasks</u> The <i>S</i> assigns the <i>W</i> one or more tasks that comply with the limitations prescribed by the physician.</p>	<p>A, B, C, D</p>	<p>The <i>S</i> may have the <i>W</i> perform tasks that have often been put on the back burner (<i>B</i>). The <i>W</i> may be authorized to use the TA to do refresher courses (<i>A, B</i>). Sometimes the <i>W</i> is assigned to light tasks in a department where he has asked to be reassigned (<i>C</i>). Sometimes the <i>S</i> assigns the <i>W</i> to a basic task that is completely unrelated to his usual work and that the <i>W</i> finds meaningless or punitive (<i>A, D</i>). No follow-up of this kind (<i>B, C</i>).</p>
<p>The <i>S</i> ensures compliance with the limitations prescribed by the physician regarding time, activities, capacities, etc.</p>	<p>A, D</p>	<p>No follow-up of this kind (<i>B, C</i>).</p>
<p><u>Temporary assignment budget</u> The <i>W</i>'s salary while on a TA comes from a specific budget other than the operating budget. Thus the allotted operating budget is not associated with the productivity losses of the injured worker.</p>	<p>A, C, D</p>	<p></p>
<p><u>Gradual return to work</u> The <i>W</i> resumes his regular tasks, but on a reduced schedule and possibly at a slower pace.</p>	<p>A, C</p>	<p>N/A (<i>B, D</i>) The GRTW may affect not only the work schedules, but also the tasks (nature of the tasks, e.g. the pace and frequency of material handling tasks).</p>

Procedural element	Similarity	Difference in the methods of applying the procedures
The S checks regularly how the GRTW is going and makes adjustments as needed.	A, B	
<u>Physiotherapy treatments</u> The W continues the physiotherapy treatments during the TA and the GRTW.	A, B, C, D	The physician-prescribed physiotherapy treatments are numerous (A, C), early (C), long-term (A, C) and controversial (A, C, D) in terms of results related to the W's recovery (C).
The S takes the W's therapy treatments into account when assigning work schedules.	A, C, D	
<u>Evaluation of the work station</u> Together with all the parties involved (W, S, C, employer's representative, union representative, preventionist, etc.) , the expert evaluates the job on site.	C	No evaluations are done of the W's capacity to perform the tasks involved in his job (A, B, D)
<u>Solutions</u> Following the accident investigation, in order to prevent the recurrence of such accidents, relapses, or the occurrence of other similar cases involving other workers, the OHS department and the S propose different types of solutions: reconfiguration of the work station, new equipment, change in the work methods, training, etc.	A, B, D	The solutions concern certain jobs. Sometimes the S communicates with the <i>preventionist</i> or with the <i>Physical Resources Department</i> to speed up implementation of the solution (A). The <i>preventionist</i> , the S, and the W collaborate to propose and implement different solutions, both temporary and permanent (B).
Following the accident investigation, different types of temporary and permanent solutions are implemented: the work station or equipment is modified, the parts supplier or types of parts are changed, or the work postures and methods are modified.	A, B, C, D	Implementing solutions can take time (A, D). Some solutions involve training on work methods (A, C), work that the W can do temporarily at home, and accommodations regarding departure times (to prevent the person from having to assume uncomfortable postures during rush hour) (B).
The C ensures that the solutions are	B, C	Different types of temporary and permanent solutions are proposed and implemented in the context of the individualized, supported RTW program. The external expert proposes various adjustments, tricks, methods, movements, alternative tools, etc. (C).

Procedural element	Similarity	Difference in the methods of applying the procedures
implemented.		
<u>RTW</u>		
When the treating physician allows it, the <i>W</i> returns to his regular job and performs his regular tasks, given the possibly new arrangements (physical and organizational).	A, B, C, D	For some workers and for a certain length of time, the <i>S</i> may distribute the more demanding tasks among other members of his team (A, B).
<u>Follow-up</u>		
The <i>S</i> does regular follow-up with the workers in his department.	A, B, C	
<u>Role of the <i>employer's physician</i></u>		
The <i>C</i> has the <i>W</i> evaluated by the employer's physician if the sick leave seems unreasonably long.	A, C	
The employer's physician assesses whether the employer should take steps to involve the Bureau d'évaluation médicale (BEM).	A, C	
The employer's physician may suggest a TA or a GRTW to the treating physician.	C	
The employer's physician requests a medicolegal evaluation by a specialist, if need be.	A, C	The employer's physician proposes solutions (knowledge of the context) and applies pressure on the <i>W</i> to return to (C).

W: worker; *S*: supervisor; *C*: disability and RTW administrator/counsellor; TA: temporary assignment; GRTW: gradual return to work.

Table 13. Facilitating and hindering conditions cited in the organizations by the various categories of players

Condition	Organization	Player
<u>Facilitating conditions</u>		
The TA per se	A, B, C, D	S, C, preventionist, HR manager
Carrying out the TA in one's own department	A	W, C, HR manager
Having a meaningful TA	A, D	C, HR manager, W, co-worker
Having a specific TA budget separate from the operating budget	A, C, D	W, S, C, HR manager, union, Production manager
Giving the worker sufficient time when performing tasks; not putting pressure on him	A, B, C, D	S, union
Allowing the worker to work at his own pace, and having the right to decide and choose his own tasks	A, B, C, D	W, S, union
Light tasks during the GRTW and even during the regular RTW	A	S, C, union
Existence of a RTW program	C	S, C, HR manager, preventionist
Intervention by external party	C	S, preventionist
Offering the W tips and tools	C	S, preventionist, union
W who wants to return to work	A, B, C, D	W, S, C, HR manager, preventionist, Production manager
Collaboration	A, B, C, D	W, S, C, preventionist, union, HR manager
Communicating with the W and keeping him informed	B, C, D	Preventionist, S, union
S who facilitates the process	A, B, C, D	W, S, C, preventionist, union, HR manager
<u>Hindering conditions</u>		
Long-term sick leave	A, C, D	S, C, preventionist, HR manager, Production manager
A sick-leave culture	C, D	Union, HR manager

Condition	Organization	Player
Difficulty finding a meaningful TA	A, B, D	S, preventionist
Premature return (TA, GRTW, RTW)	C, D	W, C, union
Physiotherapy (too many sessions, too often)	C	W, C, preventionist, union
W who has personal problems: psychological, financial, or other.	C	S, HR manager, preventionist
Interpersonal difficulties with other members of the work team (<i>co-workers</i>) or the S.	B, C, D	W, S, HR manager, preventionist, union
Unclear roles and responsibilities	A	W, preventionist, union
Contestations or <i>employer consultations with medical consultants</i>	A, C, D	W, preventionist
Non-collaboration of the treating physician	A, B, C, D	S, C, preventionist, HR manager, union, Production manager
W who is afraid to return to work	A, D	S, C, union
W who does not collaborate	B, C, D	S, C, preventionist, union, HR manager
W who is older	C	C, HR manager, preventionist
Small workplace where everyone knows everyone else	C	S, HR manager

W: worker, S: supervisor, C: disability and RTW administrator/counsellor; HR: Human Resources; TA: temporary assignment; GRTW: gradual return to work.

4.3 Discrepancies between Best Practices and the Organizations' Actual Practices

In general, these results reveal the uneven application of best practices across the organizations. Table 14 highlights a number of differences between elements of the best practices presented in sub-section 4.1.4 and the actual practices reported in the four organizations.

First, discrepancies exist among the practices of at least three organizations with respect to nine elements of 28 best practices. These discrepancies concern mainly actions specific to a phase/stage or a category of player. Actions such as the supervisor's contact with the worker soon after the accident, the evaluation of the job (specialist, supervisor), the planning and implementation of the RTW solution (specialist, disability and RTW administrator/counsellor, supervisor) figure little in the practices of the key players interviewed about the RTW situations studied. In fact, the workers and key players made little mention of actions related to such activities. Moreover, in none of the organizations does the disability and RTW administrator/counsellor systematically identify obstacles to the RTW. In addition, workers and their jobs are evaluated in only one of the organizations, where an individualized RTW plan is being developed and implemented. This organization is the one that uses the services of external experts to implement an individualized, supported RTW program whenever a worker's sick leave is extended.

Other discrepancies exist regarding strategic elements, particularly the following three: encouraging the worker to remain active, concerted action by the players, and the worker's participation in the development and implementation of solutions. Encouraging the worker to remain active is reflected in his participation in reconditioning or work-hardening sessions in the workplace; yet such programs were not mentioned in any of the organizations visited in the context of this study. Regarding the other two elements of best practices, concerted action was possible in only one organization – the same as that mentioned above – thanks to structures and discussion forums provided in the context of the individualized RTW process.

The last discrepancy concerns the formalization of the RTW policies and procedures, a vital prerequisite for the application of best practices in organizations. Despite the fact that formal policies and procedures were given to the research team by some organizations, they seemed only partial (e.g., focused on the temporary assignment or prevention activities) rather than specific to the RTW. Thus, although several procedural elements were described informally by the key players in all four organizations, the degree of formalization, robustness, and clarity of the instructions appeared insufficient. In addition, the roles and responsibilities of the various categories of players involved in the RTW – procedural elements that are essential to the RTW – appear to be more or less specified in these organizational procedures.

Table 14 also brings to light certain correspondences between elements of best practices and those of the organizations' actual practices. One such element for which there was a correspondence with the actual practices of at least three organizations concerns the prevention culture. In fact, as mentioned in sub-section 4.2.5, the orientation of the organizational structures and practices toward prevention efforts (e.g., accident declaration and investigation) not only helps prevent similar accidents involving other workers, but also promotes the sustainable RTW of the injured worker.

Correspondences exist as well for several strategic elements of best practices: collaboration, coordination, and supervisor involvement/participation in the development and implementation of solutions. All these elements, which were reported more or less systematically by the various players, constitute the pillars of concerted action, a principle based on decision making through consensus among the internal and external players.

However, most of the correspondences concern activities carried out in a given phase/stage of the RTW process. These activities are as follows: receiving the medical certificate (employer); referring the case to the disability and RTW administrator/counsellor (sick-leave manager); proposing tasks to the treating physician; offering the worker light tasks, temporary modifications, or the possibility of resuming regular tasks gradually; welcoming the worker back (supervisor); and making adjustments in the RTW plan as needed. In the Québec legislative context, several of these essential activities are prescribed in the AIAOD (e.g., the temporary assignment, the employer's obligation to take back the worker, and if need be, to modify the job in order to facilitate his rehabilitation). However, even if these legal requirements are followed to the letter, the procedural elements deriving from them appear to be applied inconsistently within any given organization (e.g., meaningful and productive light tasks offered as a temporary assignment versus meaningless and unproductive tasks), depending on the RTW situation or key player.

Lastly, with respect to the nine other elements of best practices, discrepancies are observed with the actual practices of two of the participating organizations and correspondences with those of the other two organizations. These elements concern general conditions (information/training/education, coordination between prevention and sick-leave-management structures, and a proactive approach to disability prevention), strategic elements (communication and mutual aid), and specific activities (adjustments and daily follow-up of implementation of the RTW solution, assistance from co-workers, and giving the worker feedback and encouragement regarding his progress). The application of some of these elements of best practices appears to be related to the organizational context. For example, in two organizations, integrative structures allow prevention services to be combined with sick-leave-management services for the purpose of more effective disability prevention. Similarly, offering information and training to the players involved and upgrading their education helps reinforce their confidence, and consequently, their willingness to act and engage in the RTW process.

Overall, we can conclude that the procedures, whether formal or informal, correspond to the best practices recommended in the literature, but that the actual practices depend on the key players' interpretations, perceptions, and attitudes, which, in turn, are the result of their lack of training or experience in RTW matters.

Table 14. Discrepancies between best practices and actual practices

Best practice	Discrepancy between best practices and actual practices
	Discrepancy present
<u>General characteristics</u>	
RTW policies and procedures (formalization, robustness, clarity, details of roles and responsibilities)	A, B, C, D
Information, training, and education of players regarding the RTW process	C, D
Integrative approach	
- Prevention culture (prevention structures and actions)	-
- Coordination of prevention and sick-leave-management structures	A, C
Proactive approach: early intervention to return the <i>W</i> to work	A, C
<u>Strategic elements</u>	
Encouragement of the <i>W</i> to remain active: re-education, rehabilitation, treatments in the workplace or during working hours	A, B, C, D
Concerted action: decisions made on a consensus basis by several players	A, B, D
Communication: presence of structures and spaces for discussing solutions (e.g., meetings, committees)	A, C
Collaboration with external resources (clinicians, OHS professionals, insurers, etc.)	-
Coordination of the RTW	B
<i>W</i> 's involvement and participation in the development and implementation of the solution	A, B, D
<i>S</i> 's involvement and participation in the development and implementation of the solution	-
Help from co-workers, fellow team members	C, D
<u>Actions specific to a phase/stage and category of player</u>	
Receiving the medical certificate (<i>manager</i>)	-

Best practice	Discrepancy between best practices and actual practices
	Discrepancy present
Referring to a <i>disability and RTW administrator/counsellor (manager)</i>	-
Proposing tasks to the treating physician (<i>disability and RTW administrator/counsellor, S</i>)	-
Making contact with the <i>W</i> soon after the accident to inquire about his recovery (<i>S</i>)	A, C, D
Evaluating the <i>W</i> and the tasks (<i>S, specialist</i>)	A, B, D
Identifying the obstacles to the RTW, discussion with the <i>W (disability and RTW administrator/counsellor)</i>	A, B, C, D
Developing the RTW plan (individualized and coordinated) including an offer of modified work (<i>disability and RTW administrator/counsellor</i>)	A, B, D
Offering meaningful light tasks (temporary and transitional) and, if possible, in the same department (<i>S</i>)	-
Offering modifications (temporary, permanent): adaptations, accommodations, and adjustments to work station and tasks (<i>disability and RTW administrator/counsellor and S</i>)	-
Offering a gradual RTW through graded exposure (tasks, work schedules) (<i>disability and RTW administrator/counsellor</i>)	-
Implementing the planned-work solution (<i>S</i>)	A, B, D,
Welcoming the <i>W</i> back: distributing and assigning the tasks (<i>S</i>)	-
Making daily adjustments (<i>S</i>)	C, D
Giving the <i>W</i> feedback on his RTW progress (<i>S</i>)	A, C
Making adjustments to the RTW plan as needed (<i>S, disability and RTW administrator/counsellor</i>)	D

W: worker, *S*: supervisor

5. DISCUSSION

The general objective of this project was to identify and describe the discrepancies between the best evidence-based RTW practices and the actual RTW practices of a handful of Québec organizations for workers with MSDs. The conceptual framework based on the co-construction of optimal RTW solutions for the workplace acknowledges the need to identify and describe the discrepancies between research findings (best practices) and workplace practices (actual practices). The initial hypothesis of the project was that, to date, few best practices (as defined in the literature) are currently applied in Québec organizations. In fact, as several authors have asserted, the implementation of best practices in organizations still poses considerable challenges (Costa-Black et al., 2013, Fassier et al., 2011, Loisel and Côté, 2013).

This study took the first steps toward achieving this co-construction of optimal RTW solutions. To achieve the first specific objective, which was to identify the best practices for workplaces, this project identified the best evidence-based RTW practices in the literature. To achieve the second objective, the project described the actual practices as perceived by the players in four Québec organizations, as well as the conditions regarded as facilitating and hindering a sustainable RTW. Lastly, the third specific objective consisted of identifying and assessing the discrepancies between what is recommended in the literature and what is actually done in these organizations. This assessment led to reflection on possible courses of action for minimizing, and eventually eliminating, these discrepancies, which would in turn help improve actual RTW practices with workers who have MSDs. However, the validity of these potential ameliorative courses of action must be verified with the principal users, namely, workplaces, and with other stakeholders in the RTW process.

5.1 Best Practices for Sustainable RTW

Three categories of best practices were found in the literature: general characteristics, strategic elements, and activities essential to a sustainable RTW in the workplace. The first category concerns the conditions and means put in place by organizations with successful OHS and work-disability management track records (e.g., application of policies and formalization of procedures, concerted action) to instill an organizational culture conducive to the reintegration of injured workers. The second category concerns the organizational strategies aimed at attaining the sub-objectives related to successful and sustainable RTW (e.g., communication, collaboration, and coordination). The third category (essential activities) comprises sets of actions carried out by a given category of player and during a particular phase/stage of the RTW (e.g., supervisor making initial contact with the worker as soon as possible after the accident, planning of the temporary assignment and RTW solution) with the goal of sustainable RTW. This review takes stock of the best practices for the workplace as documented in the literature in terms of effectiveness, process, resources, actions, and key players in the RTW. In addition, the main contribution of this integrative review is that it systematizes these details on best practices according to the different levels of action within the organization (general, strategic, or operational). Defining best practices according to these levels of action could provide a basis for formalizing procedures in the workplace and clarifying the roles and responsibilities of the various departments and individuals. Taking these different levels of action into account may also be useful in the various audits potentially conducted after RTW procedures have been formalized and implemented in organizations.

5.2 Actual Practices and Conditions Facilitating Sustainable RTW

The multiple case study, which was conducted in organizations operating in two different activity sectors and characterized by varying contexts (in terms of unionization, geographic location, etc.) yielded three main findings. The first finding concerns the consistency between what is done in the organizations studied and what is prescribed by law. In fact, the legal provisions concerning essential activities mentioned in the AIAOD are applied to the letter in the organizations. The instructions to be respected are very clear with regard to the general objectives, but details are lacking on the specific actions to be taken to ensure implementation of the activities essential to sustainable RTW.

A second finding concerns the gaps between what the key players know about the activities essential to sustainable RTW that are not specified in the Act, and what is done in actual practice. These activities are written down and thus officially recognized as such in the organizational procedures, and were cited by most of the key players as essential for sustainable RTW. The transfer of knowledge about activities essential to sustainable RTW in organizations therefore appears to be bearing fruit. This may be the result of longstanding efforts made by research communities to disseminate knowledge on RTW practices. Thus, recommendations – such as those made in the online document titled “*Seven ‘Principles’ for Successful Return to Work*,” produced in Ontario by the Institute for Work and Health (2005), or in the document titled “*Work-related Musculoskeletal Disorders. Guide and Tools for Modified Work. TMW Guide*” produced in Québec and published by the IRSST (Stock *et al.*, 2005), and in strategic training programs on disability prevention (Loisel *et al.*, 2013) – were cited by the various players interviewed. However, the results of our study reveal a relative lack of know-how (knowing what to do). Generally speaking, in the interprofessional education context, evaluation of the results of knowledge transfer strategies often concerns perceptions/attitudes or knowledge. Yet little attention is paid to the different levels of acquisition of skills or to behavioural changes (Hammick *et al.*, 2007). According to the classification of interprofessional education results, different levels must be attained before a change in organizational practices can be envisaged, and even before seeing a more general impact on worker health (reaction, modification of perceptions & attitudes, acquisition of knowledge & skills, behavioral change (Hammick *et al.*, 2007). This contention is further supported by studies in the field, which observe that the implementation of practices still poses major challenges in terms of engagement of the various categories of players, as well as their conflicting interests in the RTW process (Loisel *et al.*, 2005, Tjulin *et al.*, 2009, Pomaki *et al.*, 2010, Costa-Black *et al.*, 2013).

In ergonomics, this gap is associated with the absence of resources and means within the organization (participatory structures and capacity evaluation resources) (Leplat, 1980, Leplat and Montmollin, 2001, Guérin *et al.*, 1991), or with difficulties carrying out certain activities. These difficulties could be the result of the particular contexts present in the organizations: insufficient resources, lack of time, similar demands in all the jobs, rigid collective agreements, external coordination in the workplace, existence of RTW programs, perceived or real attitudes toward the RTW process, and the other players in the process (facilitating supervisor, worker who wants to return to work, helpful co-workers, disability and RTW administrators/counsellors who pressure the worker to return to work, etc.). Moreover, the different conditions facilitating or hindering sustainable RTW that were cited by the various key players align closely with the aforementioned difficulties. They point naturally to avenues and areas for improvement in organizational practices (Kendall *et al.*, 2009, NICE 2009, Fassier *et al.*, 2011).

Regarding the key players' know-how, another hypothesis could be advanced. Argyris and Schön's theory (1974) concerns the existence of a gap between "espoused theory" and "theory-in-use." Their work highlights the fact that in the interview context, a gap exists between a person's explanations of what he should do (espoused theory, for example, what is prescribed by the employer) and what he actually does (theory-in-use). In fact, in our study, the key players' discourse, when triangulated with the discourse of other players who described what they actually experienced during the RTW process, partly supports the hypothesis that the study participants for the most part had a general knowledge of best practices, but that in the field, these practices were minimally applied. What the work of Argyris and Schön (1978) and, more recently, of St-Arnaud *et al.* (2003), suggests is the need, in the context of training activities, to give practitioners an opportunity to reflect on their actions and thus bring about a change in their behaviours/actions.

The last finding concerns the variation in the practices of supporting the worker throughout the RTW process (initial contact with the worker as soon as possible after the accident, following up on implementation of the RTW solution, etc.). These practices depend on the key players' skills in communicating and evaluating work capacities. For example, some supervisors spoke about their difficulty finding meaningful tasks to offer employees as temporary assignments, while others reported finding ways of offering workers interesting work alternatives (e.g., training, temporary work from home). Supervisors are, in fact, increasingly recognized in research as pivotal players in the RTW process (Lemieux *et al.*, 2010, Nieuwenhuijsen *et al.*, 2004, Durand *et al.*, 2014). They are responsible not only for applying safety rules and attaining production targets, but also for the atmosphere, fairness, and cohesiveness within their work team. When an employee is grappling with a work disability, his supervisor has to reorganize the team's work in order to both meet the accommodation needs and address legitimate needs regarding the RTW (Durand *et al.*, 2014). While supervisors are not the decision makers regarding the RTW of employees with work-related disabilities, they are responsible for putting in place conditions conducive to the workers' resumption of their work activities (Lemieux *et al.*, 2010, Nieuwenhuijsen *et al.*, 2004, Durand *et al.*, 2014). Moreover, a recent study by researchers on our team brought to light the role that those responsible for coordinating the RTW activities attribute to the supervisor-worker dyad (Durand *et al.*, 2016). This is probably due to supervisors' knowledge of the demands posed by the work tasks in their department, as well as their skills in terms of strategic communication with all the workers on their teams.

5.3 Discrepancies between Best Practices and Actual Practices

By comparing the literature with the multiple case study, we were able to identify three types of discrepancies between best practices and the actual practices of the organizations involved and to propose possible courses of action for reducing them and improving the organizations' practices. These discrepancies concern the diverse ways of conducting the activities essential to sustainable RTW, the absence of resources and structures for implementing sustainable-RTW strategies, and the absence of formalized procedures.

The first discrepancy concerns the diversity of actions taken by the key players, which did not always correspond to those identified in the literature as activities essential to sustainable RTW (Durand *et al.*, 2014, NICE *et al.*, 2005, Kendall *et al.*, 2009, Stock *et al.*, 2005). From a systemic standpoint, this diversity could be explained by the general nature of the obligations imposed by law, which leaves considerable room for different representations and interpretations by the players. These representations and perceptions could be attributable to the fact that, in some organizations, the players do not have to deal with many RTW situations and are therefore

caught off-guard when they occur. In fact, when a supervisor handles only one or two accidents every five years, he can hardly develop the necessary skills for managing a worker who is returning to work. Moreover, a study on the practices of disability and RTW administrators/counsellors highlights the presence of this type of profile in the Québec context (Durand *et al.*, 2016). Providing an organization's players with information, training, and education on ways to carry out the essential activities could help improve their understanding and hence their representations of the process involved in sustainable RTW. Organizations could also offer to appoint a key person to coordinate the RTW process, preferably in-house, which could offset certain players' lack of experience in RTW situations. Coordination involves distributing the different actions among various persons, as well as determining a sequence according to the various times and phases/stages of the RTW process; this should be done by the most appropriate players, such as the supervisor, worker, and disability and RTW administrator/counsellor (Durand *et al.*, 2016, Schandelmaier *et al.*, 2012, Shaw *et al.*, 2007). Concerted action, the mechanism at the very crux of RTW coordination, could help reduce this discrepancy through communication activities and structures facilitating workers' and supervisors' collaboration and engagement in the development, planning, implementation, and follow-up of the RTW solution.

The second discrepancy concerns the structures and resources made available to the organizations' key players to fulfill their roles and responsibilities regarding the RTW process and take the actions associated with the activities essential to sustainable RTW. First, employers make little use of external experts or rehabilitation teams to implement RTW programs, yet the involvement of such teams or rehabilitation professionals in workplaces has been amply shown to be effective in achieving a sustainable RTW (Anema *et al.*, 2004, Franche *et al.*, 2005, Loisel *et al.*, 2005, Campbell *et al.*, 2007, Durand *et al.*, 2007, Podniece *et al.*, 2007, Waddell *et al.*, 2009). Indeed, even though work adjustments and accommodations are essential to sustainable RTW (Waddell and Burton 2001, Anema *et al.*, 2004, Boocock *et al.*, 2007, Burton *et al.*, 2009, Williams *et al.*, 2007), the participating organizations make little use of ergonomists or occupational therapists to assess the fit between a worker's capacities and the demands of his work. Moreover, the RTW solutions implemented rarely include work modifications other than those required to reduce physical efforts, despite the fact that the key players perceive RTW-related fears and worries as major obstacles to the RTW, and many interventions proposed in the literature seek to address them (Ozguler *et al.*, 2004, Hlobil *et al.*, 2005, Campbell *et al.*, 2007, Hoefsmit *et al.*, 2012).

Next, there is little interaction between the structures and resources responsible for industrial accident and occupational disease prevention and those responsible for work disability management. Yet several studies highlight the importance of complementarity and collaboration between prevention departments and sick-leave management departments in ensuring sustainable RTW and preventing long-term disability (Boocock *et al.*, 2007, Burton *et al.*, 2009, Waddell *et al.*, 2008, Gensby *et al.*, 2012). In fact, in the participating organizations, the little interaction between structures and resources may have an impact on the coordination of the activities essential to sustainable RTW. This could be attributable to an organizational culture centred on prevention actions and healthy workers, and to the perception of the RTW process as involving non-productive activities and largely influenced by factors external to the organization (sick-leave management firm, cost sharing between organizations, communications with the CNESST, etc.). However, it could also be attributable to the organizational changes under way in three of these organizations, which are likely to bring about structural changes in the future.

The last discrepancy concerns the lack of formalization of organizational procedures. In fact, one element of the best RTW practices which obtains consensus in the literature consists of having formalized, robust, clear, and precise policies and procedures regarding the roles and responsibilities of the players involved. This would appear to help establish a proactive organizational culture aimed at preventing long-term disability and based on collaboration among the players within the organization and with external resources when needed (Employers' Forum on Disability 2008, Franche *et al.*, 2007, Gensby *et al.*, 2012, Waddell *et al.*, 2008). According to some authors, clear and effectively transmitted policies and procedures would minimize inaction by key players in the different phases/stages of the RTW process (Durand *et al.*, 2014, NICE 2009, Pomaki *et al.*, 2010). Yet in this multiple case study, few formal RTW policies and procedures were submitted by the participating organizations. This lack of formalized RTW procedures could be the source of the lack of clarity regarding the roles and responsibilities of the players in the RTW process. In this regard, Williams-Whitt *et al.* (2016) point out that studies on work disability prevention deal mainly with the changes to be made in the workplace, but rarely with role clarification.

To offset the lack of formal procedures, some organizations develop their own forms or use existing standard forms. However, the use of such forms could result in varying actions when the items are not specific to the organizational context or the work activity. These organizations would therefore be well advised to consider formalizing their policies and procedures or revising them in-depth in order to, among other things, clarify the roles and responsibility of the various categories of players and partners and to spell out clearly the actions to be taken in the different phases/stages of the RTW process.

5.4 Applicability of the Results

Certain key messages were formulated by the researchers involved in this study. They are based on the best RTW practices documented in the integrative review and the discrepancies observed between them and the organizations' actual practices.

These key messages are directed first at the participating organizations. They pertain to the formalization of procedures or to their revision for the purpose of clarifying the players' roles and responsibilities. These messages could also serve as the basis for an information, training, and education program designed more broadly for the participating organizations' entire personnel and describing the desired courses of action for achieving sustainable RTW. Indeed, from the perspective of improving organizational practices, the scope of these messages could render them applicable to organizations of similar sizes and associated with the same activity sectors. However, the way these elements are applied to attain a sustainable RTW depends largely on the organizational culture.

Key messages

- 1) It is essential to formalize RTW policies and procedures. This should make it possible to:
 - a. Determine the players' roles and responsibilities regarding the essential activities and different RTW phases/stages. The involvement of players such as supervisors and disability and RTW administrators/counsellors in this process would yield a detailed and realistic description of their roles and responsibilities.

- b. Develop and implement a communication plan to inform all players within the organization about the activities essential to sustainable RTW and the actions needed.
 - 2) Studying the organization's resources and structures in light of the factors facilitating the RTW should make it possible to define needs associated with carrying out essential RTW activities.
 - a. Making early contact with the worker and clearly showing the organization's and work collective's support for the RTW process should be promoted.
 - b. Temporary assignments should be envisaged as soon as possible after the accidental event, taking into account tasks perceived as gratifying and meaningful for the worker and respecting his limitations and the progression in his capacities.
 - c. The RTW solution envisaged by the organization should be the result of collaboration between the various structures and resources and allow for flexible application. For example, implementing the solution in practice should enable the worker to gradually regain confidence in his capacities and to develop strategies for performing his work that will ensure a sustainable RTW.
 - d. The means available to the key players should allow for continuous follow-up of the RTW solution implemented and for daily adjustments to be made, according to the worker's condition and progression.
 - 3) Planning the training to be offered in terms of the target competencies and goals for the various categories of RTW players should allow for:
 - a. The supervisor's involvement in all phases/stages of the RTW process, particularly in the proposal, implementation, and follow-up of the RTW solution
The competencies sought should be related to:
 - i. The inventory of possible work situations that provide a fit between production demands and the worker's capacities during his recovery.
 - ii. The equitable distribution and dividing up of tasks perceived as gratifying and meaningful for all members of the work collective.
 - b. The worker's involvement is also considered desirable in all these phases/stages. The goal sought is to:
 - i. Promote the worker's mobilization and engagement in his RTW process.
 - c. The in-house coordination of all communication actions and collaboration activities between the internal and external players should help identify or create fair and appropriate RTW solutions for both the worker and his co-workers in the work collective.

5.5 Strengths and Limitations of This Study

This study included various methods, each with its own strengths and limitations.

First, the selection criterion for the studies in the integrative review, which was to retain solely “review”-type documents, reports, and evidence-based practice guides, represents a strength. In fact, arguably this review covers most of the studies published before 2015 on the subject under investigation here. In addition, this broad coverage is indirectly confirmed by the overlap of the results extracted from the studies. However, by applying this selection criterion to the literature, certain recent individual studies may have been excluded even though their content might have added new knowledge. Also, this integrative review may potentially have been influenced by publication bias. This bias consists of presuming that what is published and available includes more studies with positive results than negative. Thus, the limitation is that of having access to published studies only, regardless of studies refused by publishers and whose content may have influenced the best practices identified. However, it is impossible to estimate the degree of this publication bias.

A multiple case study was conducted in two different activity sectors in order to define actual practices in Québec organizations. The first strength is the detailed description of each case, by units of analysis, sources, and methods. The methods and sources were triangulated in each organization case, allowing data saturation to be reached and ensuring internal validity. In addition, the data extraction forms for the intracase and intercase analyses were developed through consensus among the researchers involved in the study, and the extraction of material was verified, thus minimizing individual interpretations. However, mention must be made of a potential bias related to the social desirability of the key players interviewed. Even so, the form of the interview with its neutral questions and the triangulation of the sources suggests that this bias was minimized. One of the strengths of multiple case studies is the in-depth understanding they provide of the phenomenon under study, but the results remain deeply rooted in the contexts from which they derive, such that generalization of the results must be limited. However, the process developed in our study, with the analysis of the discrepancies, can most definitely be transposed to all medium-sized and large enterprises.

Lastly, the complementarity of the disciplines of the research team members (ergonomics, occupational therapy, psychology, engineering, and medicine) contributed to a transdisciplinary analysis and interpretation of the research results. This in turn allowed the researchers to formulate key messages based on evidence from various disciplines and to propose interesting avenues of research that should enhance understanding of the complexity of the dimensions of the work disability problem.

5.6 Benefits of This Study and Avenues for Future Research

To the best of the authors’ knowledge, this study is one of few to have compared what is known in research with what is applied in practice. It did so by comparing literature reviews on RTW interventions with their implementation in concrete situations and various workplaces. The benefits of this study are both scientific and practical. Scientifically speaking, the results add to the knowledge of best practices and to the formation of an overview of actual practices in certain Québec organizations. On the one hand, the results of the integrative review themselves constitute a worthwhile effort to synthesize the main general characteristics of organizational policies and procedures, components, and the resources needed in the workplace to achieve healthy and sustainable RTW. Practically speaking, this review provides a framework

encompassing ideal practices, a model that could serve as a source of inspiration for companies wishing to optimize their practices. In addition, the comparison of the results of the integrative review with those of the multiple case study provides a better understanding of certain contextual elements related to the application of these best practices in Québec organizations. This comparison also casts light on areas where changes are needed in these organizations by formulating a set of possible courses of actions for reducing these discrepancies. These proposed courses of actions could also be used to initiate reflection in other companies, including medium-sized and even the smallest, organizations.

Two avenues for future research emerge from the findings of this study. First, further research is warranted on possible solutions for reducing the discrepancies between best practices and actual practices and could provide the subject for a first feasibility study with the various stakeholders in the RTW process. Some of the solutions could then be tried out and their effects on the implementation of best practices studied. A multiple case study in such organizations could help shed light on particular issues and solutions adapted to their physical and human resources. Practically speaking, this could take concrete form in the development of an audit tool designed to help organizations evaluate and improve their organizational practices.

6. CONCLUSION

This study is one of few to have compared what is known in research with what is actually applied in practice. It did so by comparing literature reviews on RTW interventions with the implementation of such interventions in concrete situations and different workplaces. It also identified clearly, on the basis of an integrative view of the RTW literature, the best practices of organizations with regard to MSDs, practices that are essential to successful RTW and applicable in the Québec context. The multiple case study, conducted on RTW situations in real workplaces, looked at the actual practices as well as the conditions facilitating and hindering their implementation in four Québec organizations. The comparison of best practices in the workplace, gleaned from the integrative review, with the actual practices of the organizations brought to light numerous discrepancies and generated proposals of possible courses of action to reduce them. Overall, the discrepancies concern the methods of carrying out the activities essential to a sustainable RTW, the structures and resources made available to the key players and devoted—in the organizations—to carrying out these essential activities, and the lack of formalized, explicit policies and procedures. Of the courses of action proposed to reduce these discrepancies and foster the improvement of organizational practices in the participating organizations, formalizing procedures with explicit descriptions of the roles and responsibilities of each category of key player, and providing these players with information, education and training on the actions to be taken, appear the most essential to the success of healthy and sustainable RTW.

From a practical standpoint, this study offers organizations a framework for self-evaluating and improving their RTW procedures. In fact, though not designed to assess or compare the effectiveness of the RTW process in the different workplaces, it informed them about the activities and structures required for a successful RTW process. In addition to informing the organizations about the best practices, the methodology of this study is replicable in any other organization. This methodology should consist of documenting the organizational context, procedures, practices, and conditions, using several information sources (documents, managers, key players, and workers). Lastly, based on the results of this study, conceivably a process for continuously improving RTW practices could be developed for organizations. This process would involve adapting the recommendations made here to the context of different organizations, such as small and medium-sized enterprises or organizations operating in a particular activity sector. As the context differs from one organization to the other, the reiteration of this adaptation process seems essential in order to transpose it to each type of organization and ensure that the latest knowledge is integrated into the organization's practices.

BIBLIOGRAPHY

- Aas, R. W., Tuntland, H., Holte, K. A., Roe, C., Lund, T., Marklund, S. and A. Moller. "Workplace Interventions for Neck Pain in Workers". *The Cochrane Database of Systematic Reviews*, doi: 10.1002/14651858.CD008160.pub2
- Anema, J. R., Steenstra, I. A., Urlings, I. J. M., Bongers, P. M., de Vroome, E. M. M. and W. van Mechelen. "Participatory Ergonomics as a Return-to-Work Intervention: A Future Challenge?". *American Journal of Industrial Medicine*, Vol. 44, No. 3, 2003, p. 273-81.
- Anema, J. R., Cuelenaere, B., van der Beek, A. J., Knol, D. L., de Vet, H. C. W. and W. van Mechelen. "The Effectiveness of Ergonomic Interventions on Return-to-Work After Low Back Pain; A Prospective Two Year Cohort Study in Six Countries on Low Back Pain Patients Sicklisted for 3–4 Months". *Occupational and Environmental Medicine*, Vol. 61, 2004, p. 289-294.
- Anema, J. R., Steenstra, I. A., Bongers, P. M., de Vet, H. C. W., Knol, D. L., Loisel, P. and W. van Mechelen. "Multidisciplinary Rehabilitation for Subacute Low Back Pain: Graded Activity or Workplace Intervention or Both? A Randomized Controlled Trial". *Spine*, Vol. 32, No. 3, 2007, p. 291-298.
- Arguin, P., Cloutier, M. and L. Giard. *Loi sur les accidents du travail et les maladies professionnelles*, Collection Alter Ego, Montréal, Wilson & Lafleur Ltée, 1996, 583 pages, ISBN 2-89127-373-9.
- Argyris, C. and D. A. Schön, eds. *Theory in practice: increasing professional effectiveness*. 1974, Jossey-Bass: San Francisco.
- Argyris, C. and Schön, D. *Organizational learning: A theory of action perspective*. Reading, Mass.: Addison-Wesley, 1978, 305 p.
- Bardin, L. *L'analyse de contenu*. Paris, France: P.U.F, 1997, 320 p.
- Baril, R., Martin, J. C., Lapointe, C. and P. Massicotte. *Étude exploratoire des processus de réinsertion sociale et professionnelle des travailleurs en réadaptation*. Montréal, Canada, Institut de recherche Robert-Sauvé en santé et sécurité du travail (IRSSST), 1994.
- Baril, R., Berthelette, D., Ross, C., Gourde, D., Massicotte, P. and A. Pajot. *Components and organizational determinants of workplace interventions designed to facilitate early return to work*. Montréal, Canada: Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSSST), 2000, 60 p.
- Black, C. *Working for a healthier tomorrow*. Norwich, United Kingdom: The Stationery Office, 2008, 115 p.
- Boocock, M. G., McNair, P. J., Larmer, P. J., Armstrong, B., Collier, J., Simmonds, M. and N. Garrett. "Interventions for the Prevention and Management of Neck/Upper Extremity Musculoskeletal Conditions: A Systematic Review". *Occupational and Environmental Medicine*, Vol. 64, No. 5, 2007, p. 291-303.
- Briand, C., St-Arnaud, L. and M. Corbière. "How Well Do Return-to-Work Interventions for Musculoskeletal Conditions Address the Multicausality of Work Disability?". *Journal of Occupational Rehabilitation*, Vol. 18, No. 2, 2008, p. 207-217.
- Burton, A. K., Kendall, N. A. S., Pearce, B. G., Birrell, L. N. and L. Bainbridge. "Management of Work-Relevant Upper Limb Disorders: A Review". *Occupational Medicine*, Vol. 59, No. 1, 2009, p. 44-52.
- Campbell, J., Wright, C., Moseley, A., Chilvers, R., Richards, S. and L. Stabb. *Avoiding long-term incapacity for work: developing an early intervention in primary care*. Devon, United Kingdom: Peninsula Medical School Primary Care Research Group, 2007, 124 p.
- Carroll C, Rick J., Pilgrim H., Cameron J. and J. Hillage. "Workplace Involvement Improves Return to Work Rates among Employees with Back Pain on Long-Term Sick Leave: A

- Systematic Review of the Effectiveness and Cost-Effectiveness of Interventions”. *Disability and Rehabilitation*, Vol. 32, No. 8, 2010, p. 607–621.
- CNESST (Commission des normes, de l'équité, de la santé et de la sécurité du travail du Québec) (2016). Statistiques sur les lésions attribuables aux TMS en milieu de travail 2012-2015. Retrieved at (<http://www.cnesst.gouv.qc.ca/Publications/300/Documents/DC300-322web.pdf>). {Last consulted: May 24, 2017}
- CSST (Commission des normes, de l'équité, de la santé et de la sécurité du travail du Québec) (2016). Principales statistiques de 2014 – Accidents du travail, maladies professionnelles et décès. Retrieved at (<http://www.csst.qc.ca/actualites/2015/Documents/deuil2015.pdf>). {Last consulted: April 21, 2016}.
- Collerette, P. “Méthodologie. L'étude de cas au service de la recherche”. *Recherche en soins infirmiers*, No. 50, 1997, p. 81-88.
- Costa-Black K. “Core Components of Return-to Work Interventions”. In: *Handbook of Work Disability: Prevention and management*. Loisel P. and J. Anema (eds.). New York, NY: Springer, 2013, p. 427-440.
- CSST, 2015, Recueil des politiques en matière d'indemnisation et de réadaptation. Politique 3.06. L'assignation temporaire. (http://www.csst.qc.ca/lois_reglements_normes_politiques/recueil_politiques/Documents/Reinsertion_professionnelle/3_06_assignation.pdf). {Last consulted: May 24, 2017}
- CSST (Commission de la santé et de la sécurité du travail). *Le maintien du lien d'emploi: Pour un prompt et durable retour au travail*. Québec, Canada, 1993, 6 p.
- Durand, M.-J. and P. Loisel. “Therapeutic Return to Work: Rehabilitation in the workplace”. *Work: a Journal of Prevention, Assessment & Rehabilitation*, Vol. 17, No. 1, 2001, p. 57-63.
- Durand, M.-J., Loisel, P., Hong, Q. N. and N. Charpentier. “Helping Clinicians in Work Disability Prevention: The Work Disability Diagnosis Interview”. *Journal of Occupational Rehabilitation*, Vol. 12, No. 3, 2002, p. 191-204.
- Durand, M.-J., Vézina, N., Loisel, P., Baril, R., Richard, M.-C. and B. Diallo. “Workplace interventions for workers with musculoskeletal disabilities: a descriptive review of content”. *Journal of Occupational Rehabilitation*, Vol. 17, No. 1, 2007, p. 123-136.
- Durand, M.-J., Baril, R., Loisel, P. and J. Gervais. “Trajectoires des travailleurs recevant un programme de retour au travail: étude exploratoire des discussions d'une équipe interdisciplinaire”. *Pistes*, Vol. 10, No. 2, 2008, p. 1-16.
- Durand M.-J. , Corbière, M., Coutu, M.-F., Reinharz, D. and V. Albert. “A review of best work-absence management and return-to-work practices for workers with musculoskeletal or common mental disorders”. *Work*, Vol. 48, No. 4, 2014, p. 579-589.
- Durand, M.-J., Nastasia I., Coutu M.-F. and M. Bernier. “Practices of Return-to-Work Coordinators Working in Large Organizations”. *Journal of Occupational Rehabilitation*, 2016. doi:10.1007/s10926-016-9640-7.
- Eisenhardt, R. M. “Building theories from case study research”. *Academy of Management Review*, Vol. 14, No. 4, 1989, p. 532-550.
- Elders, L. A. M., van der Beek, A. J. and A. Burdorf. “Return to Work After Sickness Absence Due to Back Disorders – a Systematic Review on Intervention Strategies”. *International Archives of Occupational and Environmental Health*, Vol. 73, No. 5, 2000, p. 339-348.
- Employers' Forum on Disability. *Attendance management and disability: line manager guide*. London, United Kingdom: Business Disability Forum, 2008, 40 p.
- Fassier, J. B., Durand, M.-J. and P. Loisel. “Implementing return to work interventions for workers with low back pain – a conceptual framework to identify barriers and facilitators”.

- Scandinavian Journal of Work and Environmental Health*, Vol. 37, No. 2, 2011, p. 99-108.
- Feuerstein, M. "A multidisciplinary approach to the prevention, evaluation, and management of work disability". *Journal of Occupational Rehabilitation*, Vol. 1, No. 1, 1991, p. 5-12.
- Franche, R. L., Cullen, K., Clarke, J., Irvin, E., Sinclair, S. and J. Frank. "Workplace-Based Return-to-Work Interventions: a Systematic Review of the Quantitative Literature". *Journal of Occupational Rehabilitation*, Vol. 15, No. 4, 2005, p. 607-631.
- Franche, R.-L., Severin, C. N., Hogg-Johnson, S., Cote, P., Vidmar, M. and H. Lee. "The Impact of Early Workplace-Based Return-to-Work Strategies on Work Absence Duration: A 6-Month Longitudinal Study Following an Occupational Musculoskeletal Injury". *Journal of Occupational and Environmental Medicine*, Vol. 49, No. 9, 2007, p. 960-974.
- Frank, J., Sinclair, S., Hogg-Johnson, S., Shannon, H., Bombardier, C., Beaton, D. and D. Cole. "Preventing Disability From Work-Related Low-Back Pain – New Evidence Gives New Hope – If We Can Just Get All the Players Onside". *Canadian Medical Association Journal*, Vol. 158, No. 12, 1998, p. 1625-1631.
- Gatchel, R. J. "Psychosocial Factors that Can Influence the Self-Assessment of Function". *Journal of Occupational Rehabilitation*, Vol. 14, No. 3, 2004, p.197-206.
- Gensby U., Lund, T., Kowalski, K., Saidj, M., Jørgensen, A. M. K., Filges, T., Irvin, E., Amick III, B. C. and M. Labriola. "Workplace Disability Management Programs Promoting Return to Work: A Systematic Review". *The Campbell Corporation Library of Systematic Reviews*, Vol. 8, No. 17, 2012, 154 p.
- Gibbs, Graham. *Qualitative Data Analysis: Explorations With NVivo (Understanding Social Research)*. London, United Kingdom: McGraw-Hill Education, 2002, 224 p.
- Grant, M. and A. Booth. "A typology of reviews: an analysis of 14 review types and associated methodologies". *Health Information and Libraries Journal*, doi:10.1111/j.1471
- Guerin, F., Laville, A., Daniellou, F., Duraffourg, J. and A. Kerguelen. (1997). "Comprendre le travail pour le transformer. La pratique de l'ergonomie". Lyon, France: ANACT, Coll. outils et methods, 287 p.
- Hammick, M., Freeth, D., Koppel, I., Reeves, S. and H. Barr. (2007). A best evidence systematic review of interprofessional education: BMEE Guide. No. 9 Med Teach. 2007 Oct;29(8):735-51. doi: 10.1080/01421590701682576.
- Higgins, A., O'Halloran, P. and S. Porter. "Management of Long Term Sickness Absence: A Systematic Realist Review". *Journal of Occupational Rehabilitation*, Vol. 22, No. 3, 2012, p. 322-332.
- Hlobil, H., Staal, J. B., Spoelstra, M., Ariens, G. A., Smid, T. and W. van Mechelen. "Effectiveness of a Return-to-Work Intervention for Subacute Low-Back Pain". *Scandinavian Journal of Work, Environment and Health*, Vol. 31, No. 4, 2005, p. 249-257.
- Hoefsmid, N., Houkes, I. and F. J. Nijhuis. "Intervention Characteristics that Facilitate Return to Work after Sickness Absence: A Systematic Literature Review". *Journal of Occupational Rehabilitation*, Vol. 22, No. 4, 2012, p. 462-477.
- IWH. 2007. Seven 'principles' for successful return to work. Institute for Work & Health, Toronto (consulted online on March 26, 2016 at www.iwh.on.ca).
- Kendall, N. A. S., Burton, K., Main, C. and P. Watson. *Tackling Musculoskeletal Problems: A Guide for Clinic and Workplace – Identifying Obstacles Using the Psychosocial Flags Framework*. London, United Kingdom: The Stationery Office, 2009.
- Krause, N., Dasinger, L. K. and F. Neuhauser. "Modified work and return to work: A review of the literature". *Journal of Occupational Rehabilitation*, Vol. 8, No. 2, 1998, p.113-139.
- Landry, R. "L'analyse de contenu". In: *Recherche sociale de la problématique à la collecte de données*. Gauthier, B. (ed.). Québec, Canada, 1997, p. 329-356.

- Lemieux, P. and M.-J. Durand. "Supervisors' Perception of the Factors Facilitating or Hindering the Return to Work of Workers with Mental Health Disorders". In: *The First Scientific Conference on Work Disability Prevention and Integration*. Angers, France, September 2010.
- Leplat, J. *La psychologie ergonomique*, 1980. Paris: Presses universitaires de France.
- Leplat, J. and M. de Montmollin. *Les compétences en ergonomie*, 2001. Toulouse: Octarès éditions.
- Loi sur les accidents de travail et les maladies professionnelles. L.R.Q., c.A-3.001, section 179. Consulted online on January 25, 2015 at http://www2.publicationsduquebec.gouv.gc.ca/dynamicSearch/telecharge.php?type=2&file=/A_3_001/A3_001.html (ENGLISH VERSION: Act respecting industrial accidents and occupational diseases, CQLR c A-3.001, section 179).
- Loisel, P., Durand, P., Abenhaim, L., Gosselin, L., Simard R., Turcotte, J. and J. M. Esdaile. "Management of Occupational Back Pain: The Sherbrooke Model. Results of a Pilot and Feasibility Study". *Occupational and Environmental Medicine*, Vol. 51, No. 9, 1994, p. 597-602.
- Loisel, P., Durand, M.-J., Berthelette, D., Vézina, N., Baril, R., Gagnon, D., Larivière, C. and C. Tremblay. "Disability Prevention – New Paradigm for the Management of Occupational Back Pain". *Disease Management & Health Outcomes*, Vol. 9, No. 7, 2001(a), p. 351-360.
- Loisel, P., Gosselin, L., Durand, P., Lemaire, J., Poitras, S. and L. Abenhaim. "Implementation of a Participatory Ergonomics Program in the Rehabilitation of Workers Suffering from Subacute Back Pain". *Applied Ergonomics*, Vol. 32, No. 1, 2001(b), p.53-60.
- Loisel, P., Buchbinder, R., Hazard, R., Keller, R., Scheel, I. and M. van Tulder. "Prevention of Work Disability Due to Musculoskeletal Disorders: The Challenge of Implementing Evidence". *Journal of Occupational Rehabilitation*, Vol. 15, No. 4, 2005, p. 507-524.
- Loisel, P. "Building International Network". In: *Handbook of Work Disability: Prevention and Management*. Loisel P. and J. Anema (eds.). New York, NY: Springer, 2013, p. 461-474.
- Lysaght, R., Donnelly, C. and D. Luong. "Best Practices in the Rehabilitation of Acute Musculoskeletal Disorders in Workers With Injuries: an Integrative Review and Analysis of Evolving Trends". *Work*, Vol. 35, No. 3, 2010, p. 319-333.
- MacEachen, E., Clarke, J., Franche, R. L. and E. Irvin. "Systematic Review of the Qualitative Literature on Return to Work After Injury". *Scandinavian Journal of Work, Environment & Health*, Vol. 32, No. 4, 2006, p. 257-269.
- Martin, J.-C. and R. Baril. "Isolement et vulnérabilité des travailleurs accidentés". *Revue internationale d'action communautaire*, Vol. 69, No. 29, 1993, p. 109-124.
- Nastasia, I., Tcaciuc, R. and M.-F. Coutu. *Strategies for Preventing Prolonged Disability in Workers Compensated for Work Related Musculoskeletal Disorders – A Systematic and Comprehensive Literature Review*. Montréal, Canada: Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), 2011, 146 p.
- Nastasia, I., Coutu, M.-F. and R. Tcaciuc. "Topics and trends in research on non-clinical interventions aimed at preventing prolonged work disability in workers compensated for work-related musculoskeletal disorders (WRMSDs): A systematic, comprehensive literature review". *Disability and Rehabilitation*, Vol. 36, No. 22, 2014, p. 1841–1856.
- Negura, Lillian. (October 22, 2006). L'analyse de contenu dans l'étude des représentations sociales. *SociologieS*. Retrieved at <http://sociologies.revues.org/993>. {Last consulted: April 25, 2016}.
- National Institute for Health and Clinical Excellence (NICE). *Managing Long Term Sickness Absence and Incapacity of Work*. London, United Kingdom: National Institute for Health and Clinical Excellence, 2009, 87 p.

- Nieuwenhuijsen, K., Verbeek, J. H. A. M., de Boer, A. G. E. M., Blonk, R. W. B. and F. J. H. van Dijk. "Supervisory Behaviour as a Predictor of Return to Work in Employees Absent from Work Due to Mental Health Problems". *Occupational and Environmental Medicine*, Vol. 61, No. 10, 2004, p. 817-823.
- Ozguler, A., Loisel, P., Boureau, F. and A. Leclerc. "Efficacité des interventions s'adressant à des sujets lombalgiques, du point de vue du retour au travail". *Revue d'épidémiologie et de santé publique*, Vol. 52, No. 2, 2004, p. 173-188.
- Palmer, K. T., Harris, E. C., Linaker, C., Barker, M., Lawrence, W., Cooper, C. and D. Coggon. "Effectiveness of Community – and Workplace-Based Interventions to Manage Musculoskeletal-Related Sickness Absence and Job Loss: A Systematic Review". *Rheumatology*, Vol. 51, No. 2, 2012, p. 230-242.
- Podniece, Z., Pinder, A., Yeomans, L., van den Heuvel, S., Blatter, B., Verjans, M., Muylaert, K., De Broeck, V., Eeckelaeart, L., Nevala, N., Kaukiainen, N., Lischka, J., Kudas, F. and M. Kosina. *Work-Related Musculoskeletal Disorders: Back to Work Report*. Bilbao, Spain: European Agency for Safety and Health at Work, 2007, 100 p.
- Pomaki, G., Franche, R.-L., Khushrushahi, N., Murray, E., Lampinen, T. and P. Mah. (2010). *Best Practices for Return-to-work/Stay-at-work Interventions for Workers with Mental Health Conditions*. Vancouver, BC: Occupational Health and Safety Agency for Healthcare in BC (OHSAH), 2010, 95 p.
- Pransky, G. S., Shaw, W. S., Franche, R. N. and A. Clarke. "Disability Prevention and Communication among Workers, Physicians, Employers, and Insurers: Current Models and Opportunities for Improvement". *Disability and Rehabilitation*, Vol. 26, No. 11, 2004, p. 625-634.
- Schandelmaier, S., Ebrahim, S., Burkhardt, S. C., de Boer W.E., Zumbunn, T., Guyatt, G. H., Busse, J. W. and R. Kunz. "Return to Work Coordination Programmes for Work Disability: a Meta-Analysis of Randomised Controlled Trials". *PloS One*, doi: 10.1371/journal.pone.0049760.
- Schultz, I. Z., Stowell, A. W., Feuerstein, M. and R. J. Gatchel. "Models of Return to Work for Musculoskeletal Disorders". *Journal of Occupational Rehabilitation*, Vol. 17, No. 2, 2007, p. 327-52.
- Shaw, W., Hong, Q., Pransky, G. and P. Loisel. "A Literature Review Describing the Role of Return-to-Work Coordinators in Trial Programs and Interventions Designed to Prevent Workplace Disability". *Journal of Occupational Rehabilitation*, doi: 10.1007/s10926-007-9115-y.
- Spitzer, W. *Rapport du groupe de travail québécois sur les aspects cliniques des affections vertébrales chez les travailleurs*. Montréal, Canada: Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), 1986, 320 p.
- Statistics Canada. "Work Absence Rates 2010". *Statistics Canada*, No. 71-211-X, 2011, 144 p.
- Stock, S., Deguire, S., Baril, R. and M.-J. Durand. *Travailleuses et travailleurs atteints de lésions musculosquelettiques: Les stratégies de prise en charge en milieu de travail dans le secteur électrique et électronique de l'Île de Montréal. Workready Phase 1: Volet québécois*. Montréal, Canada: Direction de la santé publique, RRSSS Montréal-Centre, 1999, 62 p.
- Stock, S., Baril, R., Dion-Hubert, C., Lapointe, C., Paquette, S., Sauvage, J., Simoneau, S. and C. Vaillancourt. *Work-related Musculoskeletal Disorders. Guide and Tools for Modified Work. TMW Guide*. Montréal, Canada: Institut de recherche Robert-Sauvé en santé et

- en sécurité du travail (IRSST) and the Direction de la santé publique, 2005, 63 p. (Consulted at <http://www.irsst.qc.ca/media/documents/PubIRSST/OMRT-En.pdf>).
- Steenstra, I. A., Knol, D. L., Bongers, P. M., Anema, J.R., van Mechelen, W. and H. C. W. de Vet. "What Works Best for Whom? An Exploratory, Subgroup Analysis in a Randomized, Controlled Trial on the Effectiveness of a Workplace Intervention in Low Back Pain Patients on Return to Work". *Spine*, Vol. 34, No. 12, 2009, p.1243-1249.
- St-Arnaud, Y. L'interaction professionnelle: Efficacité et coopération. Second edition. Collection intervenir, Montréal, Canada: Les Presses de l'Université de Montréal, 2003, 288 p.
- Tjulin, Å., Edvardsson, E., Ekberg, K. and S. Ekberg. "Experience of the Implementation of a Multi-Stakeholder Return-to-Work Programme". *Journal of Occupational Rehabilitation*, Vol. 19, No. 4, p. 409-418.
- van Oostrom, S. H., Driessen, M. T., de Vet, H. C. W., Franche, R. L., Schonstein, E., Loisel, P., van Mechelen, W. and J. R. Anema. "Workplace Interventions for Preventing Work Disability". *Cochrane Database of Systematic Reviews*, doi: 10.1002/14651858.CD006955.pub2.
- Verbrugge, K. M. and A. M. Jette. "The Disablement". *Social Science and Medicine*, Vol. 38, No. 1, 1994, p. 1-14.
- Vermeulen, S., Anema, J. R., Schellart, A. J., Knol, D. L., van Mechelen, W. and A. J. van der Beek. "A Participatory Return-to-Work Intervention for Temporary Agency Workers and Unemployed Workers Sick-Listed Due to Musculoskeletal Disorders: Results of a Randomized Controlled Trial". *Journal of Occupational Rehabilitation*, Vol. 21, No. 3, 2011, p. 313-324.
- Waddell, G., Aylward, M. and P. Sawney. *Back pain, incapacity for work and social security benefits*. London, United Kingdom: Royal Society of Medicine Press, 2002, 354 p.
- Waddell, G. and A. K. Burton. "Occupational Health Guidelines for the Management of Low Back Pain at Work: Evidence Review". *Occupational Medicine*, Vol. 52, No. 2, 2001, p.124-135.
- Waddell G., Burton A. K. and N.A.S. Kendall. *Vocational Rehabilitation: What Works, For Whom and When?* London, United Kingdom: Report for the Vocational Rehabilitation Task Group, 2008, 309 p.
- Whittemore R. and K. Knafl. "The integrative review: Updated methodology". *Journal of Advanced Nursing*, Vol. 52, No. 5, 2005, p. 1-8.
- Williams, R. M. and M. Westmorland. "Perspectives on Workplace Disability Management: A Review of the Literature". *Work*, Vol. 19, No. 1, 2002, p. 87-93.
- Williams, R. M., Westmorland, M. G., Schmuck, G. and J. C. MacDermid. "Effectiveness of Workplace Rehabilitation Interventions in the Treatment of Work-Related Upper Extremity Disorders: A Systematic Review". *Journal of Hand Therapy*, Vol. 17, No. 2, 2004, p. 267-273.
- Williams, R. M., Westmorland, M. G., Lin, C. A., Schmuck, G. and M. Creen. "Effectiveness of Workplace Rehabilitation Interventions in the Treatment of Work-Related Low Back Pain: A Systematic Review". *Disability and Rehabilitation*, Vol. 29, No. 8, 2007, p. 607-624.

- Williams-Whitt, K., Bültmann, U., Amick III, B., Munir, F., Tveito, T. H. and J. R. Anema. Workplace Interventions to Prevent Disability from Both the Scientific and Practice Perspectives: A Comparison of Scientific Literature, Grey Literature and Stakeholder Observations. Hopkinton Conference Working Group on Workplace Disability Prevention. *Journal of Occupational Rehabilitation*. 2016 Sep 10. [Epub ahead of print]
- Yin, R. K. *Case study research: Design and methods*, 3rd ed. California, United States: Sage Publications, 2003, 312 p.
- Young, A. E. "Return to work following disabling occupational injury – facilitators of employment continuation". *Scandinavian Journal of Work, Environment & Health*, Vol. 36, No. 6, 2010, p. 473-483.
- Young, A. E., Roessler, R. T., Wasiak, R., McPherson, K. M., van Poppel, M. N. and J. R. Anema. "A Developmental Conceptualization of Return to Work". *Journal of Occupational Rehabilitation*, Vol. 15, No. 4, 2005, p. 557-568.

APPENDIX – QUESTIONS AND THEMES RAISED WITH THE WORKERS AND KEY PLAYERS DURING THE INTERVIEWS

Theme	Question	Worker	Supervisor	Advisor	Preventionist	Manager	Co-worker	Union
Procedures	What written RTW procedures does your organization have for cases compensated by the CNESST? To whom and how are they distributed?			X		X		
Role of key players	What is your role during the sick leave of a worker who has sustained an MSD and is compensated by the CNESST?		X	X	X	X		X
	<ul style="list-style-type: none"> What is supposed to happen? Does it always happen like that? 			X				
Stages: from time of accident to completed RTW	Tell us about your accident [or Worker X's accident]. How did it happen, and what did you do personally?	X	X	X		X	X	X
	<ul style="list-style-type: none"> Contacts made regarding the accident during the sick leave and the various steps taken 							
	<ul style="list-style-type: none"> Evaluation of the worker's capacities and of the job demands in order to take the worker's capacities into account 	X	X	X	X	X		X
	<ul style="list-style-type: none"> Work modifications (physical, organizational) made after the work accident 	X	X	X	X	X	X	X
	<ul style="list-style-type: none"> Return to work per se: how did that go? 	X	X	X	X	X	X	X
	<ul style="list-style-type: none"> Role of the other workers in the department 		X			X		
	<ul style="list-style-type: none"> Follow-up done after the return to work 		X			X	X	
	<ul style="list-style-type: none"> In this specific case, what were the hindering and facilitating factors? Was there something that could have been done differently or better? If so, what? 			X				
<ul style="list-style-type: none"> How were your proposed changes taken into account? Was there a 				X				

Theme	Question	Worker	Supervisor	Advisor	Preventionist	Manager	Co-worker	Union
	process of continuous improvement?							
	<ul style="list-style-type: none"> Impact of Worker X's sick leave on your work 						X	
Current situation	What is your current situation at work (pain, difficulties, productivity, relationships with others, etc.)?	X						
Suggestions	Can you suggest any improvements that could be made to the RTW process? Which ones?			X				
Comments	Do you have any comments you would like to add?	X	X	X	X	X	X	X