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Workplace-based Return-to-Work Interventions: A Systematic Review of the Quantitative and Qualitative Literature

Summary

About this summary:

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This summary is based on the report of the Workplace-based RTW
Interventions Systematic Review Group. *See Appendix B*

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1.0 Introduction

Employers, insurers and workers have expressed a growing interest in workplace-based return-to-work (RTW) intervention studies. However, studies in this area are scarce, and those which exist have used a variety of research designs. This can make it difficult to interpret the research findings.

To provide a comprehensive summary of the most effective workplace-based RTW interventions and to direct future research priorities in this area, the Institute for Work & Health conducted a systematic review of the literature on return to work published since 1990. The project was initiated at the request of the Workplace Safety & Insurance Board of Ontario (WSIB).

2.0 What research was included?

We sought to answer the following question: “What workplace-based return-to-work interventions are effective and under what conditions?”

A unique aspect of our review was that it included both quantitative* and qualitative** studies.

This reflects a growing consensus that both types of research are essential to develop a complete understanding of a social phenomenon such as return to work.

- The literature review of the quantitative research included studies examining workplace-based RTW interventions. We included studies reporting the effectiveness of clinical RTW interventions only if care was delivered by healthcare professionals linked specifically with the workplace. Effectiveness was examined in terms of what impact the interventions had on 1) duration of work disability, 2) associated compensation and healthcare costs, and 3) workers’ quality-of-life. To focus the review, we limited our scope to studies of workers with pain-related conditions.

**Quantitative research involves the use of standardized measurement, representative samples and meaningful comparison groups to obtain reliable and valid estimates of the association between an intervention and measures of outcome.*

***Qualitative research involves organizing and interpreting non-numerical observations to discover important underlying dimensions and patterns. Such research usually includes interviews with or observations of small numbers of people and/or analysis of written materials to elicit meanings, concepts, characteristics and symbols.*

- The literature review of the qualitative research included studies examining workers' experience of the return-to-work trajectory, as well as the perceptions and/or experiences of various other players such as employers, labour representatives, insurers and rehabilitation professionals.

3.0 What is a Systematic Review?

In doing a systematic review, researchers develop a clearly formulated question, use systematic and explicit methods to identify, select and critically appraise relevant research, and then analyze data from studies selected in the review process. The review normally includes the following steps in order:

▪ determining the question ▪ developing a search strategy and searching the literature ▪ selecting studies that meet inclusion/exclusion criteria ▪ assessing the methodological quality of selected studies and eliminating those in which quality is not sufficient ▪ systematically extracting and summarizing key elements of the included studies ▪ describing the results from individual studies ▪ synthesizing the results and reporting them.

4.0 How did we proceed?

4.1 Literature search

Seven databases were searched for relevant studies published in English and French between January 1990 and December 2003. We also searched peer reviewed reports published by major research centres. In total, 4,124 papers were identified.

4.2 Study relevance

Study relevance was determined by review of titles, abstracts and where necessary, the full text of papers. The review was carried out by two independent reviewers who came to agreement on relevance. From the total of 4,124 papers identified in the search, 35 quantitative studies and 15 qualitative studies met our study relevance selection criteria.

4.3 Quality appraisal and data extraction

Pairs of independent reviewers systematically appraised the methodological quality of studies and extracted data from those of "very high" or "high" quality. If consensus could not be reached, disagreement was resolved by

consulting with a third reviewer. Of the 50 studies judged to be relevant, 24 studies – 11 quantitative and 13 qualitative – met our quality appraisal criteria and were included in the final evidence synthesis.

4.4 Evidence synthesis

For quantitative studies, we relied on the best evidence synthesis approach developed by Slavin (1986, 1995). Best evidence synthesis involves combining three aspects of the research literature: the number of studies identified; their methodological quality; and the consistency of the results across different studies.

The strength of evidence, based on these three aspects of all selected quantitative studies, was ranked on a scale from “strong evidence” to “no evidence.” (*see Appendix A, page 12*)

For qualitative studies, we used a meta-ethnographic approach proposed by Noblit and Hare (1988) and further developed by Campbell (2003). This approach involves identifying “key concepts” across the selected studies and then re-interpreting the findings. In some cases the concepts are naturally embedded in a particular study or studies; in other cases, the researchers derive new, common concepts which then become part of the overall review results.

5.0 Results and recommendations

5.1 Findings from the quantitative studies

Our best evidence synthesis finds that RTW interventions are effective in reducing the duration of work disability. They also reduce associated wage replacement and healthcare costs. The evidence that such interventions improve quality-of-life for workers is weaker. Here are some key findings and recommendations:

- There is moderate evidence that three components – early contact with the worker by the workplace; a work accommodation offer; and contact between healthcare providers and the workplace – significantly reduce work disability duration and associated costs. Therefore:

We recommend that workplace-based RTW interventions include these three core disability management strategies.

- There is moderate evidence that two other RTW components – ergonomic* worksite visits and the involvement of an individual with responsibility for RTW coordination – also reduce work disability duration and associated costs. In the studies reviewed, ergonomic visits were conducted by third party specialists such as physiotherapists, ergonomists and occupational therapists. The intensity and timing of these visits varied across studies. Therefore:

We recommend that workplace-based RTW interventions include a strong ergonomic component, as facilitated by ergonomic worksite visits. We also recommend that such interventions include RTW coordination.

- There is moderate evidence that educating supervisors and managers leads to reductions in work disability duration. In the studies we reviewed, this consisted primarily of education about participatory ergonomics** and safety training. Therefore:

We recommend that RTW interventions contain an educational component for supervisors and managers.

- There is moderate evidence that labour-management cooperation is associated with shorter work disability duration. There is limited evidence that both people-oriented culture and safety-committed culture are associated with shorter work disability duration.

We recommend that increased attention be given to labour-management relations and consideration be given to workplace culture.

* *Ergonomics is the study and process of designing and/or modifying tools, materials, equipment, work spaces, tasks, jobs, products, systems and environments to match the abilities, limitations and social needs of human beings in the workplace.*

** *Participatory ergonomics refers to the implementation of ergonomic solutions involving the participation of the worker and other workplace staff, such as the supervisor.*

- Certain intervention components were directly related to insurer activity and decision-making. One study showed that a RTW-focused, insurer-based case management program was effective in achieving positive RTW outcomes. As well, another study suggested that supernumerary replacements* may be an effective RTW strategy. Therefore:

We suggest that insurance providers consider the merits of expanding their investment in the following activities: increasing the focus on RTW in their case management and examining the role of supernumerary replacements.

- The quality of workers' lives after RTW, including their levels of pain, function and general physical health, is central to understanding the effectiveness of RTW interventions. However, our review found that the levels of evidence across studies were too diverse for us to conclude that these interventions had a positive impact on the quality-of-life of workers. Therefore:

We recommend more research be conducted in this area.

5.2 Findings from the qualitative studies

To synthesize findings from the qualitative literature, we identified several key concepts relevant to the process of workplace-based RTW. These concepts were developed through a process of multiple, detailed and critical analytic readings of the qualitative literature. The review yielded a number of findings and recommendations:

- **Conditions of goodwill and mutual confidence are influential factors contributing to the success of RTW arrangements.** These conditions stem from an understanding of and a respect for the needs of the parties involved. Even when recommended conditions – such as early contact and a proactive approach to disability management – exist, people must have confidence in the RTW process and know that their well-being has been considered.

We advise that building confidence in the return-to-work process among all parties (recovering workers, their supervisors, managers, physicians and insurance providers) and gaining their commitment are important for successful return to work.

* *Supernumerary replacement refers to a person hired to replace an ill or injured worker who is receiving benefits while doing modified or part-time work. The funds used to cover the salary of the replacement worker may be provided by a government insurance program, a private insurer, or by the employer. However, such arrangements are still relatively uncommon.*

- **Developing good relationships among unions, management and health-care providers is important for successful RTW interventions.** When it comes to return to work, unions and labour representatives may sometimes face competing responsibilities. For example, an employee seniority agreement which protects one group of workers can conflict with the process of work accommodation. The research, which is supported by the quantitative literature, suggests that when unions and labour representatives are committed to and participate fully in the RTW process, their involvement is very beneficial.

We recommend employing strategies to encourage a “shared understanding” of RTW – for example, processes that bring together workers, unions, employers, insurers and healthcare providers.

- **The RTW process is laden with potential for miscommunication and misunderstanding.** Successful return to work after injury or illness is not a straightforward process. The qualitative studies highlight the many difficulties workers face in meeting their “duty to cooperate” with employers and workers’ compensation boards. Their navigation through that system is often arduous, marked by a lack of information about process and procedures at a time when they feel vulnerable and less than self-reliant. Workers are usually not familiar with rules about workers’ compensation or the specialized language used by health care and insurance professionals.

We recommend that employers, insurers and health-care providers provide adequate and consistent information when communicating with ill or injured workers about return to work. It is important to simplify procedures and language around RTW processes and requirements, and to ensure that workers have been fully informed of their rights and obligations.

- **There are important social aspects to modified work.** Modified work can involve difficult social dislocation which produces new sets of relationships and routines. The injured worker may have to deal with co-workers who resent having to take over some of his or her workload, or who may feel that the worker has managed to get an “easier” job. An awkward fit with a modified work environment or a negative social atmosphere can contribute to a breakdown of the RTW process.

We recommend that creativity and sensitivity to the needs of all parties be considered an integral part of modified work planning.

- **Return to work requires careful coordination and consideration of the needs of the various players.** The needs and experiences of workers, co-workers, supervisors, managers and healthcare providers will affect the success of RTW. For instance, supervisors who must maintain competitive production levels may find that this conflicts with their ability to fully accommodate the needs of an injured worker. In this case, organizational restructuring may modify supervisor performance requirements so that RTW needs do not compete with production targets.

We recommend that at each step, the parties consider the feasibility of RTW plans and the ability of workers to successfully negotiate the process. We also emphasize the importance of engaging with top management to ensure their consideration of and support for the resources needed for a successful RTW process.

- **Supervisors can play an important role in the RTW process.** They were identified as important to the success of RTW due to their proximity to the worker, their ability to manage the immediate RTW work environment, and their organizational position, which provides a link between the worker and senior workplace decision-makers. These findings are reinforced by moderate evidence from the quantitative literature that educating supervisors and managers leads to reductions in work disability duration.

To support their role in successful return to work, we recommend that supervisors be included in RTW planning and offered related training.

- **Rehabilitation and occupational health professionals can be key to RTW success because they are a bridge between the workplace and the healthcare system.** These professionals are able to communicate with health specialists, to visit worksites to assess RTW conditions, and to offer tailored advice that is sensitive to the workers' immediate work environment.

The review findings show that the involvement of rehabilitation and occupational healthcare providers in the RTW process is important.

6.0 Areas for further research

In the process of conducting our systematic review, we identified several major gaps in the existing research knowledge about RTW interventions. We believe the following areas are fertile ground for further inquiry:

- Limited research exists about quality-of-life – both at work and at home – among workers who have experienced a work-related injury or illness. In future studies, it will be important to consider workers’ quality-of-life when designing and evaluating RTW interventions.
- The research literature contains many examples of how difficult it is for injured workers to navigate complex health care and compensation systems. We need further studies to identify ways to improve this process.
- More research is also needed to examine the impact of insurance-based case management and insurance-supported supernumerary replacements on the RTW trajectory of workers.
- Future research should pay more attention to the role of organized labour and other worker representatives, and to finding ways to enlist their support in the RTW process.

7.0 Next steps: Knowledge Transfer & Exchange

The systematic review has identified which workplace-based actions have been found to enhance RTW and reduce worker disability and associated costs.

The Institute is now working with various stakeholders, including the Workplace Safety & Insurance Board (WSIB), to translate evidence from the systematic review into “key messages” by engaging representatives from three key target audiences:

The Workplace Audience This includes injured workers, their co-workers, their supervisor(s), top management and, where applicable, unions. In some instances the workplace may include other specialized personnel such as RTW coordinators, disability managers and/or other in-house occupational health specialists.

The Healthcare Audience This includes professionals such as physicians, physiotherapists, kinesiologists, chiropractors, occupational health nurses, occupational therapists and ergonomists who manage and treat injured workers. The level of involvement with the patient’s workplace varies from provider to provider.

The Insurer Audience This includes private insurance companies and workers’ compensation systems.

8.0 Conclusion

Our systematic review represents the most comprehensive review to date of the literature about workplace-based RTW interventions and processes. We are now confident in sharing evidence-based knowledge about “what works” in RTW and under what conditions.

Both the knowledge and our confidence are firmly founded on the highly systematic approach we used when analyzing both the quantitative and qualitative literature. Integrating research evidence into the development of return-to-work policies and programs will improve their effectiveness in reducing workplace disability.

9.0 References

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10.0 Appendices

Appendix A: Best evidence synthesis guidelines

Strong evidence

Minimum quality: Very high

Minimum number of studies: 3 very high quality studies

Consistency: Very high quality studies must all agree, and > 50% of high quality studies are consistent with very high quality studies.

Moderate evidence

Minimum quality: High

Minimum number of studies: 3 high quality studies

Consistency: 100% of high quality converge on the same finding
OR

66% of very high quality studies converge on the same findings,
with > 50% of other studies are consistent with very high quality studies.

Limited evidence

Minimum quality: High

Minimum number of studies: 2

Consistency: Two studies converge on the same findings.

Mixed evidence

Minimum quality: High

Minimum number of studies: 2 or 3

Consistency: If there are two studies, they do not converge on the same findings.

If there are three studies, only two are consistent.

Insufficient evidence

Minimum quality: High

Minimum number of studies: 1

No evidence

There are no high or very high quality studies on the subject.

Appendix B: Workplace-based Return-to-Work Interventions Systematic Review Group

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