



# **Effect of Case Management on Time to Return to Work: A Systematic Review and Meta-Analysis**

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## Background

- In an effort to optimize disability management practices, a number of disability benefit providers have implemented Case Management
- There is no standard definition of what Case Management is; however, some authors have suggested that successful Case Management requires skills in communication, diplomacy and relationship building, as well as assessment, planning, implementation, coordination, monitoring and evaluation of a rehabilitation plan.<sup>1</sup>

1. Maki S, Case management, in: *Sourcebook of Occupational Rehabilitation*. Plenum Press, New York, NY, 1998



## Background

- Given the widespread and increasing use of Case Management by organizations providing wage replacement benefits, it would be helpful to better understand to effectiveness of this intervention.
- To inform this issue we conducted a systematic review and meta-analysis of randomized controlled trials that enrolled patients in receipt of disability benefits and randomized 1 arm to receive ‘Case Management’ – any coordinated effort targeted at faster RTW.



# Search

## Identification

820 records from MEDLINE

908 records from Cochrane  
Central Register of Controlled  
Trials

## Screening

1033 records without duplicates;  
screened for exclusion by two  
raters

920 records excluded

## Eligibility

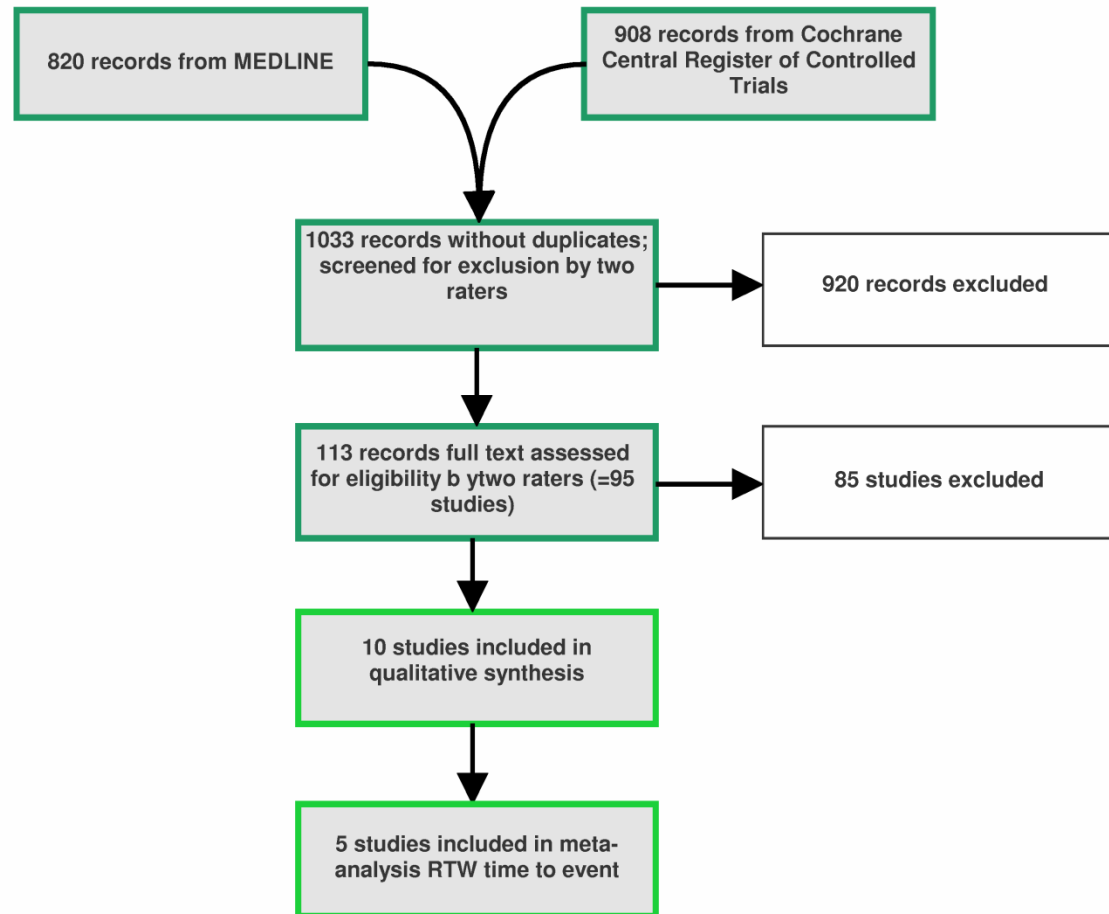
113 records full text assessed  
for eligibility by two raters (=95  
studies)

85 studies excluded

## Inclusion

10 studies included in  
qualitative synthesis

5 studies included in meta-  
analysis RTW time to event





## Populations

- Netherlands: Adults with non-specific LBP, absent from work <2 years
- Quebec: Adults with non-specific axial pain, absent from work for 4 to 8 weeks
- Belgium: Adults undergoing surgery for sciatica, off work for <1 year \*
- Netherlands: Adults with a disabling mental disorder, off work for 6 to 52 weeks
- Quebec: Adults with non-specific thoracic or LBP, off work for at least 4 weeks



## Interventions

- Netherlands: Integrated Care vs. Usual Care
  - Integrated care was coordinated by an Occupational Physician and consisted of participatory ergonomics & a graded activity program “based on CBT principles”
- Quebec: The CORE Program vs. Usual Care
  - The CORE program consisted of a physician assessment, and case coordination by a nurse. Weekly patient interviews and ongoing consultation with the CORE physician to refine the approach. Notes to Tx team and no contact with employers.



## Interventions

- Belgium: Medical advisors using rehabilitation guidelines vs. Usual Care \*
- Netherlands: Psychiatric consultation vs. Usual Care
- Quebec: Consultation with back pain specialist and back care school vs Usual Care



## Hypothesized Sources of Heterogeneity

1. Clinical population (MSK vs. Mental illness)
2. Clinical duration (acute/subacute vs. chronic)
3. Intervention setting (within an insurance company vs. outsourced)
4. Case Management expertise
5. Differences in the Intervention



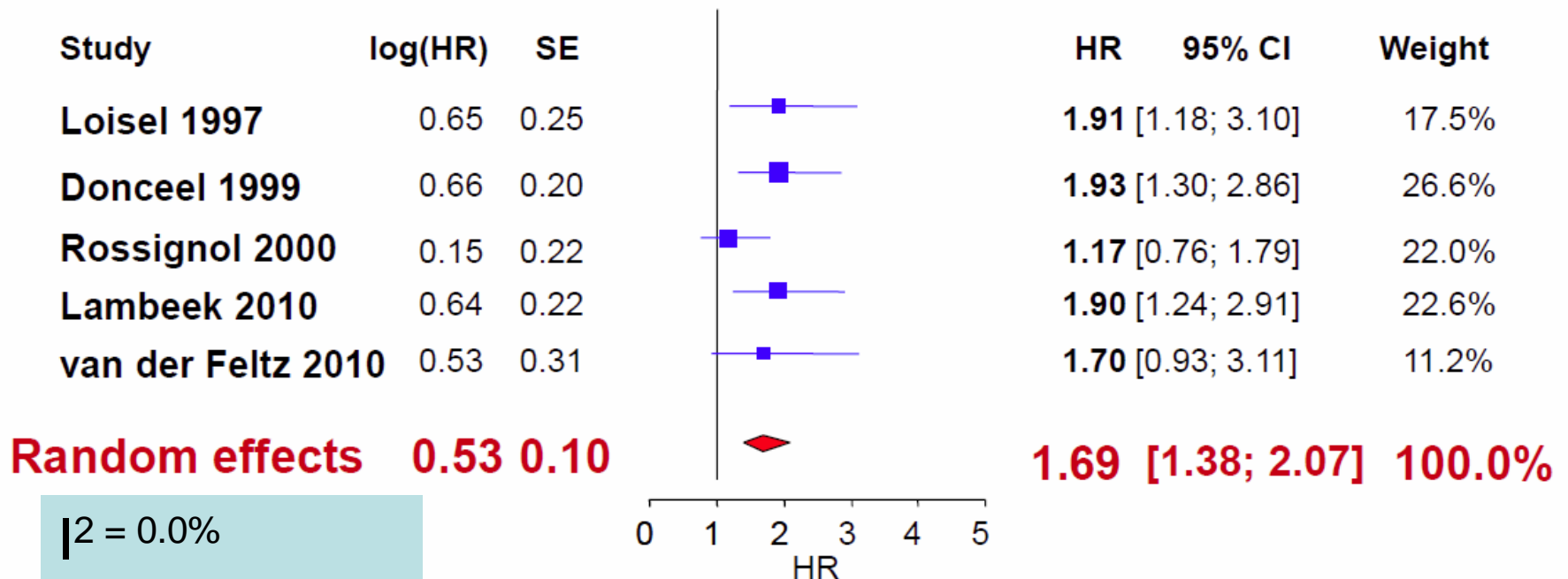


# Study Quality

1 2 3 4 5

	Arnetz 2003	Bültmann 2009	Davey 1993	Donceel 1999	Lambeek 2010	Lindh 1997	Loisel 1997	Rossignol 2000	von der Feltz-Cornelis 2010	
Risk of bias	Sequence generation?	-	+	?	+	+	?	?	+	+
	Allocation concealment?	?	?	?	?	+	?	?	+	+
	Blinding Patient/ Case Manager?	-	-	-	±	-	-	-	-	-
	Blinding Outcome assessor/ data collector/ data analyst?	-	±	-	-	±	-	±	±	±
	Outcome measured in a valid way?	+	+	?	?	?	+	?	?	-
	Explicit description of drop-out-rate?	?	+	?	?	?	?	?	?	?
	Intention-to-treat-Analyse?	?	+	?	?	+	?	-	?	?
Transfer into practice	Unequivocal inclusion criteria?	-	+	-	+	+	+	+	+	+
	Precise description of the case manager's qualification?	-	-	-	-	-	-	-	-	+
	Precise description of the CM-Intervention?	+	+	-	+	+	+	+	+	+
	Precise description of the control group intervention?	-	-	-	-	+	+	+	-	-
	Outcome <i>lasting</i> RTW?	-	-	-	-	+	-	-	-	+
	Adequate follow-up <i>after</i> RTW?	-	-	-	-	-	+	-	-	-

## Effect of Case Management on RTW





## Effect of Case Management on RTW

- Netherlands: A median of 88 days to RTW versus 208 days (improvement of pain between groups did not differ)
- Quebec: Returned to work an average of 6.6 days faster ( $p > 0.05$ )
- Belgium: At 1 year, 10% of the Tx group had not returned to work vs. 18% of the control group \*
- Netherlands: At 3 months, 58% of Tx group had returned to work versus 44% of the control group
- Quebec: Median duration of work absence was 67 days for the Tx group versus 121 days for usual care



## Discussion

- Case Management, in a variety of forms, appears to be effective in improving RTW rates when compared to care-as-usual
- There is no significant between study heterogeneity
  - Is doing 'something' better than not?
- Case management is associated with costs. What is the return on investment?



## Discussion

- 1 RCT has conducted an economic analysis of Case Management
- Established that the net societal benefit was \$5,744 per case
- Differences were driven by productivity costs
- Study is limited by 13% loss to follow-up, and lack of long-term follow-up (outcome was back at work for 4 weeks)



## Conclusions

- Limited evidence supports the use of Case Management with disabled patients in receipt of wage replacement benefits.
- Future studies should clearly describe the qualifications of Case Managers, focus on sustainable RTW, pursue longer follow-up after patients have resumed employment, and provide cost-benefit analyses.
- Trials of Case Management within insurance-settings are sparse, and the optimal approach to Case Management remains uncertain.
- Existing disability duration and cost data are skewed, suggesting that certain cases contribute much more than others. A one-size-fits-all approach to Case Management may not be optimal.



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