Incapacity and re-integration in Belgium: navigating between scientific and economic influences

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A few milestones on the time line

- 2004: multidisciplinary rehabilitation program for low back pain patients
- 2006: law on professional reintegration
- 2009: enrichment of the social insurance physicians legal roles
- 2011: «back to work» project at the government level
- 2013: facilitation of partial return to work
- 24/11/2016: new legal framework for reintegration at work of patients on sickness benefits
Networking health care practitioners and OH prevention services for early rehabilitation of low back pain workers

Ph. Mairiaux, School of Public Health, U Liège, G. Creytens, D. Delaruelle, O. Poot, P. Strauss, FMP-FBZ
Project scientific background

How to prevent the transition from acute to chronic low back pain?
How to prevent disability?

(Frank et al. 1996)
Prevention of low back pain transition to chronicity

- New paradigm opened by the Quebec task force report (Spitzer et al 1987) outlining step by step interventions with predetermined time frames and explicit assessment criteria for low back pain patients/workers

- New perspective: a multifactorial phenomenon needs multidisciplinary interventions involving social, medical, regulatory, and/or economic components
The Sherbrooke model RCT, Quebec
[Loisel et al. 1994]

35 COMPANIES (> 175 staff)
(20000 workers)

Stratification
Randomisation

No occupational intervention

WORKERS
4 weeks sick leave

Consent
randomisation

Clinical -
Clinical +

Usual care
(n=26)
Clinical intervention
(n=31)

Occational / ergo intervention

WORKERS
4 weeks sick leave

Consent
randomisation

Clinical -
Clinical +

Occupational intervention
(n=22)
Full intervention
(n=25)
Sherbrooke model: return to work results [Loisel et al 1997]

Intervention

........ usual care

_____ full

Signification:
p = 0.022
Prevention of chronic LBP and disability
Who should be involved?

[Diagram showing the involvement of health care/insurance system, workplace, health services, and the employee/patient]

(after Loisel 2001)
The arena of disability prevention
Dutch replication of the Sherbrooke model: workplace intervention impact

- Outcome: N calendar days until lasting (>28 d.) return to own work
- WI Usual Care
  - 64 days 79 days (median; logrank p=.011)
- Cox regression analysis; Intention to treat/per protocol
- Workplace intervention effective after 60 days of sick leave and onwards (hazard ratio = 2.5 [CI 1.5 to 4.1]; p=0.0003).

Steenstra, Anema 2004
How to avoid LBP transition to chronicity? Evidence based guidelines

- **Speed up the return to work if worker still absent after 4-6 weeks** through structured RTW intervention programs - target: GP’s, but also employers, occupational health physicians (OP’s), ergonomists, ...

- **RTW programs associating**
  - Multidisciplinary treatment programs of a medical nature (health care sector)
  - Workplace or ergonomics intervention (OH prevention services and enterprises)
Belgian project background

- *Scientific evidence in favour of “return to work” programs (Sherbrooke model...)*

- The Belgian Health Minister, Frank Vandenbroucke, with an Oxford Ph.D, ...and a strong interest for evidence-based practices

- At the Health Ministry and National Institute for Health and Disability insurance (NIHDI) level, need for balancing the health care budget: decision to rationalize the physiotherapy sector and to cut reimbursement of non-ebm therapies
Belgian project background

• Social pressure upon the Fund for Occupational Diseases (FOD) to get a formal recognition for work-related diseases (low back pain, burnout,...) and to do something for the neglected burdened back of health care workers (mainly women)

• A 3-yrs discussion process : should one
  ▫ Compensate back pain workers ? And if so, how to limit the expected costs ?
  ▫ Devote money instead to secondary prevention ?
Integrating disability prevention in the country health system? The Belgian case

Health insurance
multidisciplinary back rehabilitation

22/06/04

16/07/04

04/07/04

Fund for Occup. Diseases Back prevention project

Putting together three pieces of a regulatory puzzle

Pre-return to work visit Labour Ministry
The NIHDI health care multidisciplinary back rehabilitation program

36 sessions (max) of 2 hr duration for groups of 8

+ Pain emotional components by a psychologist

Ergonomics module by a trained team member
FOD back prevention program background - 2004

- Back pain became the 1\textsuperscript{st} recognised work-related disease (this new legal category may benefit from prevention programs but not from compensation allowances)

- A “Royal decree” allowed the Fund to launch a pilot project for back pain prevention
  - among nursing staff exposed to back pain risk factors in general or geriatric hospitals
The FOD back prevention program : promoting an early return to work

After a pilot phase (2005-06)
Royal Decree 17th May 2007

FOD is offering besides the NIHDI rehabilitation program
a complementary RTW program for workers exposed either to material manual handling or to whole body vibrations.
The FOD back prevention program

**Medical axis**

Incentives to the worker for entering the health care back rehabilitation program

**Workplace axis**

Ergonomic analysis of the worker tasks (402 € incentive for the employer)

Networking between care and prevention physicians
Today: 70 collaborating rehabilitation centres
Participating workers
Challenges to overcome?
Main challenges to overcome in implementing such a social innovation

• Informing the target population (patients + physicians) as yearly participation rate remains rather low

• Ensuring a balanced application of the program: among the participating workers, only 25% (on average) benefit from a workplace intervention

• Promoting inter-professional collaboration between GP’s, OP’s and physicians from the rehab centres
Barriers to participation

• For back pain sufferers:
  ▫ The opportunity to meet the OP during the sick leave still not known by many workers
  ▫ Wrong beliefs: “exercise would aggravate my injury”
  ▫ Access: no rehab centre close to my home

• For GP’s:
  ▫ Some (many?) are not in favour of active treatments
  ▫ Some (many?) are afraid not to get the patient back after the treatment in the rehab. centre or are putting more emphasis on passive treatments for LBP
Challenges to overcome: ensuring a balanced application of the program

• Medical rehabilitation component most used:
  ▫ It benefits from the support given by the health care system: content and procedures precisely defined, good return on investment if applied at a large scale....

• Workplace intervention less developed:
  ▫ content not so well formalized
  ▫ money incentives too low from the OHS point of view
  ▫ difficult to carry out if not part of a prevention policy endorsed by the employer and the workers representatives
  ▫ employers’ culture of “100% fit for work” does not match the program aim: facilitating a progressive and early return to work
Challenges to overcome: promoting inter-professional collaboration

- For > 40 yrs caring GP’S and specialist physicians have been encouraged not to collaborate with OH physicians !!
- Within rehabilitation teams, the networking requests made by the FOD are often unknown from the ergo- and physiotherapists who are treating the worker...
- Networking involves an extra administrative burden for the centers and their staff is asked to be productive...
- The program is still marginal in the daily tasks of both rehab. centers and OH services
- Contacting the worker OP is sometimes difficult
Some conclusions from the Belgian case

- The most efficient way for implementing such an evidence-based intervention (the Canadian Sherbrooke model) at a country level warrants more research in the future.

- An effective networking between physicians belonging to the curative sector and those active in preventive services would need:
  - Time
  - Alterations of mutual misperceptions
  - Perception of benefits arising from this collaboration in daily practice
  - Incentives from the health system
More infos on the FOD program?

Application forms? List of rehabilitation centres?
Criteria to fulfill?
Look at
http://fedris.be/fr/victime/maladies-professionnelles-secteur-prive/programme-de-reeducation-lombaire
Partial return to work

Before ...and after a change in regulation in 2013
Partial return to work (Art. 100. § 2\textsuperscript{nd} ) before April 2013

- Is still considered as unfit for work the worker who comes back to a beforehand authorized work activity, providing he maintains a minimum 50\% reduction of medical capacity
- In practice, the procedure implies
  - Some prior improvement in the worker health problem
  - His/her willingness to return to work
  - A formal authorization of the insurance physician
  - The employer agreement for a partial return to work
  - When back in part-time work, earnings = the part-time fraction of his salary \textit{and} a reduced sickness benefit (up to a level corresponding often to the previous full-time salary)
Partial return to work ....the obvious players ...

- Employer, first line management
- Enterprise
- Worker
- Occup. Health physician
- GP / treating specialist
- Social insurance physician
Partial return to work before April 2013

• In practice, the procedure was as follows
  ▫ The worker (often at the suggestion of the GP, or upon request from the SIP) contact his/her employer and declare his/her willingness to return to work on a part-time basis
  ▫ If an agreement is reached, he asks then for an appointment at the sickness fund
  ▫ Some time later (usually 2 weeks but up to 4), he is examined by the SIP who gives (or not) his authorization for a half-time work schedule
  ▫ This system promoted in fact a delayed RTW!
Partial return to work
Royal Decree starting April 12 2013

- **The authorization** of the social insurance physician **is presumed to have been given** if the worker has sent his request for partial RTW at the latest on the working day just before the day of effective return to work.

- **The final authorization will be given a posteriori** (within the next 30 d) by the SIP and this would not necessarily request (as in the previous procedure) a medical examination of the beneficiary.
Moreover the sickness funds will underline for their SIPs the flexibility allowed by the legal framework: it does not imply a half-time RTW; in fact 20%, 30%, 40% or 60% or even 70% work time may be accepted!

What is compulsory: to present a 50% reduction of work capacity on medical grounds.
Partial return to work, the obvious and hidden players ...
Partial return to work: some side-effects and hidden barriers....

- Partial RTW
  - an employment trap?
  - a source of conflict in the working team?
  - employer saying: no, we need 100% fit workers!
  - what an administrative burden!
Identification of sickness benefits recipients with a higher likelihood of successful reintegration at work

Ph Mairiaux, C. Duchesnes, A-F Donneau

L. Godderis, S. Vandenbroeck
History: political program of the new government Michel

• Art 153 from the program-law, 19 December 2014

Il a été décidé par le gouvernement la mise en place d'un plan de réintégration. Concrètement, dans les trois mois qui suivent le début de la période d'incapacité primaire, un plan de réintégration multidisciplinaire doit être établi à l'intention du travailleur, par le médecin-conseil après une consultation approfondie entre celui-ci et les parties concernées (médecin traitant, médecin du travail, service régional de l'emploi...).

• Political negotiations in 2015: traject with or without a stick behind the door?
• December 2015: agreement of the « groupe des Dix » - voluntary basis maintained!
Belgian new reintegration paths - State Journal 24 November 2016

Treating physician → patient → SIP

Quick scan

Occupational health physician

Re-integration traject possible?

- NO
- YES

Start of RTW process

Partial RTW possible

Transition towards other possibilities

Medico-social analysis

- Is herinschakeling mogelijk na trajectbegeleiding beroepsopleiding herscholing?

Follow-up

Every two months
How to make a quick scan of sickness benefits recipients?

- Logistic challenge: N recipients on sick leave since >= 3 months ...105 à 110,000 people / yr

- Scientific challenge: which criteria to classify those recipients in one of the four categories to be used to determine the reintegration path to follow?

- National Institute for Health and Disability Insurance (NIHDI) commissioned a research study
Study design

WP 1 literature review 2005-2015: RTW predictive factors

Useful, valid and available indicators?

WP 2 qualitative analysis of a sample of retraining files

WP 3 Identification of target groups for a successful reintegration

Prediction algorithm
WP1 - Literature review algorithms

(reintegration or rehabilitation or return to work) (((sick or sickness) (leave or absence)) or absenteeism or disability) (predict$) OR (reintegration or rehabilitation or return to work) (((sick or sickness) (leave or absence)) or absenteeism or disability) (((cardiac or cardiovascular or musculoskeletal) (diseases or disorders)) or (back pain) or (neck pain) or (mental (diseases or disorders)) or depression or anxiety or burnout or (adjustment (diseases or disorders)) or ((colorectal or colon) cancer))

Complement (reintegration or return to work) (predict$) OR (reintegration or return to work) (((cardiac or cardiovascular or musculoskeletal) (diseases or disorders)) or (back pain) or (neck pain) or (mental (diseases or disorders)) or depression or anxiety or burnout or (adjustment (diseases or disorders)) or ((colorectal or colon) cancer))

Final check return to work AND systematic
<table>
<thead>
<tr>
<th>Category</th>
<th>Studies</th>
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<tr>
<td>MS Disorders</td>
<td>Hallegraef et al., 2012 (MA)</td>
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<td>Verkerk et al., 2012</td>
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<tr>
<td></td>
<td>Heitz et al., 2009</td>
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<tr>
<td></td>
<td>Ilies et al., 2008</td>
</tr>
<tr>
<td></td>
<td>Kuijer et al., 2006</td>
</tr>
<tr>
<td></td>
<td>Steenstra et al., 2005</td>
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<tr>
<td>Mental health</td>
<td>Andersen et al., 2012 (MS)</td>
</tr>
<tr>
<td></td>
<td>Cornelius et al., 2011</td>
</tr>
<tr>
<td></td>
<td>Blank et al., 2008</td>
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<td></td>
<td>Michon et al., 2005</td>
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<td>C.Vasc. Disease</td>
<td>Stergiou-Kita et al., 2014 (MS)</td>
</tr>
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<td>Islam et al., 2014</td>
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<td></td>
<td>Van Muijen et al., 2013</td>
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<td>Cancer</td>
<td>Duijts et al., 2007 (MA)</td>
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<td>Cancelliere et al., 2104</td>
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<td>Saltychev et al., 2013</td>
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<tr>
<td></td>
<td>Detaille et al., 2009</td>
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<tr>
<td>Others</td>
<td>Van Velzen et al., 2009</td>
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<tr>
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<tr>
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</tbody>
</table>
Analysis of 15 systematic reviews, 2 meta-analyses, 2 qualitative meta-syntheses

Colour codes for results presentation

+ Promoting RTW
- Delaying RTW

+ Promoting RTW
- Delaying RTW

Not predictive

? No evidence
## Results

### Evidence level
- **S**: Strong
- **M**: Moderate
- **W**: Weak
- **I**: Insufficient

### Homogeneous results

| Expectation about recovery and Self efficacy (good) | 5 | 2 | 7 |
| Smoking | 1 | 2 | 3 |

### Results with some inconsistencies

| Age (old)     | 5 | 1 | 3 | 2 | 1 | 12 |
| Gender (female) | 1 | 2 | 2 | 4 | 3 | 13 |
| Educational level (high) | 2 | 2 | 1 | 1 | 2 | 1 | 10 |
| Health status (bad) | 2 | 1 | 1 | 4 |
| Pain (presence) | 1 | 2 | 2 | 2 | 1 | 8 |
| Workload (heavy) | 3 | 2 | 1 | 1 | 2 | 9 |
| Job satisfaction | 1 | 1 | 2 | 4 |
WP2 - NIHD1 files analysis: indicators availability

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Measurement</th>
</tr>
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<tbody>
<tr>
<td>Age</td>
<td>Birth date</td>
</tr>
<tr>
<td>Gender</td>
<td>Man / Women</td>
</tr>
<tr>
<td>Education level</td>
<td>No education</td>
</tr>
<tr>
<td></td>
<td>Primary school</td>
</tr>
<tr>
<td></td>
<td>Secondary school</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
</tr>
<tr>
<td></td>
<td>Master</td>
</tr>
<tr>
<td>Perception health status</td>
<td>No measurement</td>
</tr>
<tr>
<td>Expectations about recovery and RTW</td>
<td>No measurement</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>No measurement</td>
</tr>
<tr>
<td>Pain</td>
<td>No measurement</td>
</tr>
<tr>
<td>Heavy work</td>
<td>No measurement</td>
</tr>
<tr>
<td>Work satisfaction</td>
<td>No measurement</td>
</tr>
</tbody>
</table>
WP2 - Records quality and usability

- Many open questions
- Few predetermined answer categories
- Few standardised coding systems are used
  \textit{(i.e. ISCO for occupation not used)}
- No use of validated questionnaires

\begin{itemize}
  \item Quantitative analyses hard to perform!
\end{itemize}
<table>
<thead>
<tr>
<th>Variable</th>
<th>Assessment after training program</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Success (n = 131)</td>
<td>Failure (n = 173)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>n 131</td>
<td>n 173</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.63</td>
</tr>
<tr>
<td>Women</td>
<td>n 63 (48.1)</td>
<td>n 88 (50.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>n 68 (51.9)</td>
<td>n 85 (49.1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>Mean 41.7 ± 8.01</td>
<td>Mean 40.2 ± 7.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.13</td>
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<tr>
<td>Occupational category</td>
<td>n 128</td>
<td>n 170</td>
<td></td>
<td></td>
<td></td>
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<td>0.55</td>
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<tr>
<td>Office work</td>
<td>n 27 (21.1)</td>
<td>n 25 (14.7)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Manual work</td>
<td>n 75 (58.6)</td>
<td>n 106 (62.4)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Health sector</td>
<td>n 17 (13.3)</td>
<td>n 26 (15.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>n 9 (7.03)</td>
<td>n 13 (7.65)</td>
<td></td>
<td></td>
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</table>
NIHDI Database analysis
Success vs « Failure or Abandon » (n=304 files)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Success (n = 131)</th>
<th>Failure (n = 51)</th>
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</thead>
<tbody>
<tr>
<td>Pathology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Musculo-skeletal diseases</td>
<td>46 (35.9)</td>
<td>73 (42.4)</td>
<td>0.46</td>
</tr>
<tr>
<td>Mental disorders</td>
<td>29 (22.7)</td>
<td>41 (23.8)</td>
<td></td>
</tr>
<tr>
<td>Injury and poisoning</td>
<td>20 (15.6)</td>
<td>26 (15.1)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>33 (25.8)</td>
<td>32 (18.6)</td>
<td></td>
</tr>
<tr>
<td>Disability duration before retraining</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(years) - P50 (P25 – P75)</td>
<td>2.38 (1.38 – 3.37)</td>
<td>2.64 (1.47 – 4.00)</td>
<td>0.22</td>
</tr>
</tbody>
</table>

- No statistical difference
- The available parameters have no influence on the assessment results after completion of the retraining program
Conclusions of this study

• Few factors are of predictive value for a successful reintegration at work
• They are either not recorded in the NIHDI files or recorded in a non-valid or non usable way
• Research team recommendations:
  ▫ Inclusion of complementary variables in the recipient file
  ▫ Use of validated questionnaires for assessing some variables and of standardized coding systems for others
• Further ongoing research:
  ▫ Development of a short self-administered questionnaire that will be sent to the sickness benefit recipient after 6 weeks sick leave
New legal framework for reintegration: pro’s and con’s

- **Pro’s**
  - Early intervention of the health care system
  - Structured collaboration with OP’s and workplace settings
  - Patient voluntary participation

- **Con’s**
  - No incentives for employers
  - Underlying cost-cutting objectives
  - No communication platform between physicians available yet
Thank you for your attention
Merci pour votre attention
Dank u voor uw aandacht

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