Lumbosacral Radicular Syndroom (LRS)

- Severe back pain
- Radiation to the legs
- Mainly caused by spinal disc herniation
Guidelines for GP, physiotherapist, medical specialist

- Conservative management in first 6 weeks
  - No referral to neurologist
  - No magnetic resonance imaging (MRI)

- Treatment consists of:
  - Adequate pain management
  - Mobilising the patient

Daily practice

- 15%-25% of patients referred in first 6 weeks
- Waiting times become longer for patients who require referral

- GPs unhappy with waiting times
- Patients demand referral
- Neurologist ‘does not want to see’ these patients
Solution: shared care guideline

Two regions: Eindhoven and Helmond
• 2 hospitals: 9 neurologists and 18 radiologists
• 360 GPs
• 550 physiotherapists

Trade-off

IF
GP complies with conservative approach in first 6 weeks
(national guideline)

THEN
hospital guarantees a priority appointment after 6 weeks
Activities

- Redesigning the care process in hospital
- Implementation of shared care guideline among GPs, physiotherapists, neurologists, radiologists

Innovation framework
(Fleuren et al., 2004)

Determinants

- guideline
- adopting person
- organisation
- context

Innovation process

- implementation strategy
  - dissemination
  - adoption
  - implementation
  - continuation
Determinant analysis: focus interviews

- Patient pressure on GP for referral
- Lack of coordination between care providers
- Pain medication in national guideline is too conservative

- All care providers will provide the same information
- Trade-off will alleviate patient pressure for referral

Strategies

- Enhancing knowledge awareness
  - General meetings, personal letters
  - Patient information brochure
  - Information campaign for general public

- Enhancing adoption and implementation
  - Meetings with small GP and physiotherapist practices
  - Adaptations to prescription of pain medication
Evaluation of effect of shared care guideline

- Unnecessary early referrals

- Duration of the total diagnostic procedure
  - days between referral GP and when neurologist makes final diagnosis

- Prospective registration by neurologists over period of 6 months
  - Pre-test in 2005
  - First post-test in 2006
  - Second post-test in 2007

Trade-off

IF
GP complies with conservative approach in first 6 weeks

THEN
hospital guarantees a priority appointment with neurologist

LABEL PATIENT
as ‘fast-track’, otherwise standard procedure with standard waiting times
### Unnecessary referrals within 6 weeks

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>1st post-test</th>
<th>2nd post-test</th>
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<tbody>
<tr>
<td>n=178</td>
<td></td>
<td>n=224</td>
<td>n=321</td>
</tr>
<tr>
<td>All patients</td>
<td>15%</td>
<td>9%  ▼</td>
<td>8%  ▼</td>
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However, 50% standard referral instead of fast-track

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<th>2nd post-test</th>
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<tbody>
<tr>
<td>Fast-track</td>
<td>15%</td>
<td>6%  ▼</td>
<td>7%  ▼</td>
</tr>
<tr>
<td>Standard</td>
<td>15%</td>
<td>11%</td>
<td>9%</td>
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▼ Significant decrease compared to pre-test

### Total diagnostic procedure in mean days

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<tbody>
<tr>
<td>All patients</td>
<td>50</td>
<td>34 ▼</td>
<td>45 ▼</td>
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<table>
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<th>2nd post-test</th>
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</thead>
<tbody>
<tr>
<td>Fast track</td>
<td>50</td>
<td>18 ▼</td>
<td>27 ▼</td>
</tr>
<tr>
<td>Standard</td>
<td>50</td>
<td>54 ▲</td>
<td>65 ▲</td>
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</tbody>
</table>

▼ Significant decrease compared to pre-test
▲ Significant increase compared to pre-test
Conclusion

- Implement a national guideline at regional level by introducing a shared care guideline with trade-off
- Reduces unnecessary referrals and duration of diagnostic procedure
- Short-term effects persist at two-year follow-up.
- Implementation can improve: 50% referred for fast track procedure

Fleuren et al. 2010: Int J Qual Health Care (Open Access)