Learning and Coping Strategies in cardiac rehabilitation
- can a patient education method improve return to work?
- a randomised controlled trial

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Background
The patient education method ‘Learning and Coping Strategies’ (LC) aims to promote personal resources through an inductive, pedagogical approach integrated in cardiac rehabilitation programmes for people living with ischemic heart disease and heart failure. This study aimed to assess the effect of adding LC strategies in CR Phase II compared to standard CR measured on return to work at one year follow up. Furthermore to assess the ability of the LC strategies to prevent relapse from return to work during follow up.

Methods
The study was conducted across three hospital units in Denmark from the open randomised trial, LC REHAB. Participants were enrolled at the CR unit and were eligible for the LC-REHAB trial if they were referred to, and motivated for phase II CR after hospitalisation for IHD or HF. The population for the present analysis consisted of 244 participants aged 18 to ≤60 who had not permanently left the labour market. Return to work was derived from the Danish Register for Evaluation of Marginalisation (DREAM) and was compared between arms using logistic regression.

Results
There was no difference in return to work status between arms one year after inclusion. Nor did LC strategies prevent relapse during follow up (table 1).

Table 1 Return to work (RTW) status at one-year follow-up with comparison of LC arm and control arm

<table>
<thead>
<tr>
<th>RTW status at one year²</th>
<th>Relapsed patients at one year³</th>
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<tbody>
<tr>
<td></td>
<td>n=244</td>
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<tr>
<td>Yes n (%)</td>
<td>No n (%)</td>
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<tr>
<td>Control arm 86 (69)</td>
<td>39 (34)</td>
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<tr>
<td>LC arm 77 (65)</td>
<td>42 (35)</td>
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<td>Total 163 66</td>
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1 Frequencies and percentages, analysed using logistic regression. Crude and adjusted odds ratios (OR).
2 Adjusted for age and stratification variables: gender, diagnosis and hospital unit.
3 Comparison across arms of patients who experienced the event of RTW during follow up but were not registered RTW at one year follow up (relapsed patients), analysed using chi-square test.

* P-value= 0.50, **0.32

LC arm
- Individual clarifying interview with nurse or physiotherapist trained in LC strategies
- 8 week group based CR programme with LC strategies applied (a situational, inductive pedagogical approach)*
- Physical exercise 1½ h x 3/week
- Participation of expert patient
- Final individual interview with nurse or physiotherapist

Control arm
- 8 week group based standard CR programme
- Physical exercise 1½ h x 3/week
- Education 1½ h/week

Conclusion and perspectives
Addition of LC strategies in CR showed no improvement in return to work at one year. Further research and development of CR interventions to improve return to work should compromise involvement of contextual factors like workplaces and job types in the development and implementation of CR patient education.

*Elaboration of the theoretical background and practical implications of LC strategies in the initial study protocol for the LC REHAB trial by Lynsgaard et al. 2014. Available through the QR code.