Geriatric CO-mAnagement for Cardiology patients in the Hospital

G-COACH

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Why G-COACH?

• 70% of older adults suffer from cardiovascular disease
• 60% of patients with cardiovascular disease have ≥ 1 geriatric syndrome(s)
• Cardiovascular care = diagnosis driven
  • Guidelines
  • Functional, psychosocial & environmental needs neglected
• Geriatric co-management
  • Improved outcomes in trauma patients
Geriatric co-management

- Shared responsibility and decision making
- Cardiology team and a geriatric liaison team
- Complementary geriatric care
- Prevention of acute geriatric-oriented complications
G-COACH framework

Meta-analysis
- What is the potential effect?

Quality indicators
- How should co-management be performed?

Risk prediction
- Which patients should be targeted for intervention?

Intervention theory

Geriatric co-management care model

Local context

Stakeholder engagement

Acceptability

Feasibility
- Is the intervention feasible to perform?

Efficacy
- What is the effect?

Process evaluation
- Why did it work, or why did it not work?
G-COACH program

Comprehensive geriatric assessment within 24 hours of admission on cardiology ward by geriatric nurse specialist

- Low risk
  - Proactive consultation

- High risk
  - Prevent functional decline

- Acute problem
  - Treat acute geriatric problems

G-COACH team =
Geriatric nurse specialist, geriatrician, cardiologist, nursing staff, physiotherapist, occupational therapist, social worker

Implementation & coordination of interdisciplinary care plan

- Evidence-based protocols for geriatric problems
- Early rehabilitation
- Early discharge planning

- Diagnostic & therapeutic interventions
- Medication review
Evaluation

MODELS OF GERIATRIC CARE, QUALITY IMPROVEMENT, AND PROGRAM DISSEMINATION

Journal of the American Geriatrics Society

Geriatric co-management for cardiology patients in the hospital: A quasi-experimental study

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Evaluation

- Quasi-experimental study
  - Before measurement: Sept 2016 – June 2017
  - Implementation: June 2017 – Januari 2018
  - After measurement: Januari – October 2018

- Sample: cardiac care units UZ Leuven
  - Aged 75 years or older
  - Cardiovascular disease & TAVI
  - Length of stay > 3 days
# Results: in-hospital outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Control group</th>
<th>Intervention group</th>
<th>Effect size (95% CI) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional decline (Katz), n (%)</td>
<td>68/158 (43)</td>
<td>38/151 (25)</td>
<td>OR = 0.5 (0.3 – 0.8)</td>
</tr>
<tr>
<td>Delirium (CAM), n (%)</td>
<td>30/158 (19.0)</td>
<td>9/151 (6.0)</td>
<td>OR = 0.3 (0.1 – 0.7)</td>
</tr>
<tr>
<td>Infections (clinical), n (%)</td>
<td>26/158 (16.5)</td>
<td>10/151 (6.6)</td>
<td>OR = 0.3 (0.1 – 0.6)</td>
</tr>
<tr>
<td>Obstipation, n (%)</td>
<td>23/158 (14.6)</td>
<td>7/151 (4.6)</td>
<td>OR = 0.3 (0.1 – 0.9)</td>
</tr>
<tr>
<td>Length of stay, mean (95% CI)</td>
<td>9.4 (8.5 – 10.3)</td>
<td>8.9 (8.0 – 9.8)</td>
<td>MD = -0.5 (-1.8 – 0.8)</td>
</tr>
<tr>
<td>EQ-5D QoL, mean (95% CI)</td>
<td>65.8 (63.2 – 68.4)</td>
<td>65.1 (62.3 – 67.9)</td>
<td>MD = 0.03 (-0.01 – 0.08)</td>
</tr>
</tbody>
</table>

* Adjusted for relevant baseline confounders
## Results: care processes

<table>
<thead>
<tr>
<th>Care process, %</th>
<th>Control group</th>
<th>Intervention group</th>
<th>Difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received physical therapy</td>
<td>70%</td>
<td>79%</td>
<td>9% (0 – 19)</td>
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<tr>
<td>Received discharge planning</td>
<td>29%</td>
<td>37%</td>
<td>8% (0 – 18)</td>
</tr>
<tr>
<td>Received nutritional advice</td>
<td>68%</td>
<td>79%</td>
<td>11% (0 – 21)</td>
</tr>
<tr>
<td>Catheter utilization rate</td>
<td>13.5%</td>
<td>5.9%</td>
<td>-8% (-9 – -6)</td>
</tr>
<tr>
<td>Physical restraint utilization rate</td>
<td>4%</td>
<td>2.5%</td>
<td>-1.5% (-5 – 2)</td>
</tr>
<tr>
<td>Referral to falls clinic</td>
<td>3%</td>
<td>5%</td>
<td>2% (-2 – 6)</td>
</tr>
<tr>
<td>Referral to memory clinic</td>
<td>3%</td>
<td>19%</td>
<td>16% (9 – 23)</td>
</tr>
</tbody>
</table>
Conclusion

- Nurse led geriatric co-management was effective in
  - Improving care processes
  - Patient outcomes
  - Without additional resources
- Proof of concept for cardio-geriatric co-management
- Investigate scaling-up in follow-up project: G-COMAN
Thank you

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