Innovated case management between primary care clinics and healthcare centers for frequent users of healthcare services: A multiple embedded case study

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BACKGROUND

• Certain people frequently use healthcare services due to complex healthcare needs and are at risk of incapacity and mortality.2
• An abundance of literature supports case management (CM) to improve outcomes of this clientele.3

AIM AND OBJECTIVES

• Aim: To implement and evaluate an intervention, with PC nurses working closely with case managers in healthcare centers, to improve care integration for frequent users of healthcare services.
• Objectives: 1) to describe the barriers and facilitators to implementation, and 2) to evaluate the influence of context on implementation and impacts (self-management, care integration, resources utilization and costs).

DESCRIPTION OF CM

Case managers identified frequent users in each PC clinic with the computerized platform of the healthcare centers. PC nurses worked in close collaboration with case managers to develop an individualized services plan and ensure coordination and self-management support over a 6-month period.

METHODS

• Design: Multiple embedded case study4
• Setting: 3 healthcare centers and 4 PC clinics (Saguenay-Lac-St-Jean, Quebec, Canada)
• Definition of frequent use: ≥ 4 ED visits or ≥ 3 hospitalizations in the previous year
• Conceptual model: Consolidated Framework for Implementation Research (CFIR)5
• Data collection (0 and 6 months):
  1) Semi-structured interviews with case managers (n=3), PC nurses (n=10), programs managers (n=3), and patients (n=19), and 2 focus groups per clinic with family physicians and other professionals
  2) Participant observation of implementation meetings (n=7) and non-participant observation of CM activities (25 hours)
  3) Patient self-administered questionnaires (n=33): Patient Experience of Integrated Care Scale, Partners in Health Scale6
• Services used: ED and PC visits, hospitalizations (not presented here)
• Informed consent (not presented here)
• Analysis: 1) Qualitative data: mixed thematic analysis using the CFIR
  2) Quantitative data: descriptive statistics; paired post-pre t test
• Cases were compared using history (integrating qualitative results). Quantitative results were integrated at the end.

RESULTS

Qualitative results

Main observations from the cases integration

• Leadership from case managers, physicians and nurses were the main facilitators for cases that fully implemented the intervention.
• Most clinics did not have access to patient hospital records for confidentiality reasons and were not always informed of patients’ care, hence the risk of duplication of services.
• Training and coaching were needed for the nurses to feel comfortable in their new role.

Quantitative results

Table 1. Patients sociodemographic characteristics (n=33)

<table>
<thead>
<tr>
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<th>Mean (SD)</th>
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<tbody>
<tr>
<td>Age</td>
<td>56 (20.9)</td>
</tr>
<tr>
<td>Male</td>
<td>5 (15.6)</td>
</tr>
<tr>
<td>Number of conditions</td>
<td>5.6 (2.8)</td>
</tr>
<tr>
<td>Most frequent conditions:</td>
<td></td>
</tr>
<tr>
<td>Arthritis</td>
<td>19 (57.6)</td>
</tr>
<tr>
<td>Overweight</td>
<td>19 (57.6)</td>
</tr>
<tr>
<td>Back pain</td>
<td>18 (54.5)</td>
</tr>
<tr>
<td>Depression &amp; anxiety</td>
<td>24 (72.7)</td>
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</tbody>
</table>

Table 2. Paired sample t test results for pre- and post-measures

<table>
<thead>
<tr>
<th>Tool</th>
<th>Mean (SD)</th>
<th>t</th>
<th>p</th>
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<tbody>
<tr>
<td>Self-management</td>
<td>75.3 (10.2)</td>
<td>2.01</td>
<td>0.04</td>
</tr>
<tr>
<td>Care integration</td>
<td>33.9 (7.0)</td>
<td>4.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Depression scores</td>
<td>20.4 (5.5)</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
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DISCUSSION

• Full implementation of the intervention and positive patient outcomes were observed in clinics where leadership of stakeholders and support for nurses were present.
• More access to information from frequent users hospital records and strategies to support engagement of physicians in regards to the intervention are needed to overcome the main barriers.
• No improvement in the self-management of the participants, which may require a longer follow-up for patients with such complex healthcare needs.

STRENGTHS AND LIMITS

• This study provides an in-depth examination of how an intervention where PC nurses work closely with case managers in healthcare centers can improve the care integration of frequent users of healthcare services.
• Sample size for the quantitative questionnaires and patient interviews was low in some clinics.

CONCLUSION

“Integrated case management between primary care clinics and healthcare centers for frequent users of healthcare services is a promising intervention that facilitates collaboration between providers and care integration for patients.”

ACKNOWLEDGEMENTS

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REFERENCES

6. Hudon E, et al., Measuring self-care management of the participants, (5.5) - (8.4) - (29.4).

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