Integrated Care for people with COPD in Barcelona

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Moving towards Integrate Care

Reasons / influences behind the choice
• A problem in allocation of resources: Seasonal exacerbations of COPD patients altering the surgical procedures planning in a tertiary university hospital.
• Poor management of exacerbated COPD patients: Up to 30% of patients discharged were readmitted in the following 8 weeks.

Why and how this approach was adopted
• To reduce number of readmissions / need for emergency room care (decrease in direct costs)
• Diffusion of the work of Wagner and colleagues.
• Better management of COPD patients, holistic approach (co-morbidities, social issues, other…)
Implementation overview

Aspects of redesign and implementation

Milestones
2003 – Clinical pilot Home Hospitalisation in COPD patients
2006 – Clinical pilot prevention of exacerbations in COPD
2007 – Creation of the integrated care unit
2010 – Creation of a spin-off Linkcare for the ICT solution
2013 – Comprehensive ICS (extended conditions), Introduction of rehabilitation
Implementation overview

Aspects of redesign and implementation

Creation of case managers (2000)

Concept of programmes / ICS (2007)

Territorial (2013)
Integrated Care for COPD at present

- The term most often used is Integrated Care Service (ICS).
- It is defined as a set of well standardised patient-centered actions to be applied to each patient on the basis of his/her predefined health condition and social circumstances, referred as inclusion and exclusion criteria.
- Each ICS targets specific service objectives; and any given patient can be associated to one or more integrated care service.
- Target group: COPD
  - Home Hospitalisation / Early discharge
  - Prevention of exacerbations (aka frail patients’ programme)
  - Wellness-Rehab (pilot experience)
Home hospitalisation /Early discharged

Goal:
• Provide acute, home-based, short-term intervention aiming at fully (hospital avoidance) or partially (early discharge) substituting conventional hospitalisation.

Aims at:
• Reduced number of readmissions / need for emergency room care
• Shorter length of overall stay (hospital stay + home-based stay)

Includes:
• Comprehensive assessment of patient at ER/discharge (Severity, comorbid conditions, social support) translated into an individually tailored care plan.
• Educational programme on self-management
• Home visits by hospital nurses/specialist.
• Accessibility to the control centre (case manager nurse) by phone / ICT equipment – monitoring vital signs-.

Coordination with Primary Care at discharge of the programme
Reimbursement as flat rate (aprox 1/3 of in-hospital admission)
Prevention of frail patients

Goal
- Low intensity programme aiming at reducing number of exacerbations and decrease the use of health care resources (Admissions, Emergency room, outpatient clinics, primary care)

Includes:
- Comprehensive assessment of patient at discharge (Severity, comorbid conditions, social support)
- Educational programme on self-management
- Agreement on individually tailored care plan, shared across the system via interaction between the specialised nurse case manager and the primary care team
- Accessibility of the specialised nurse to patients/carers and primary care professionals during follow up period (Facilitated through ICT platform)
- Accessibility to the control centre (case manager nurse) by phone / ICT equipment –monitoring vital signs–.

Payment: Patient – provider encounters
Impact

Home hospitalisation COPD (2003)

- Readmission: 28% Control group, 20% Intervention group
- Emergency room visits: 10% **
- Δ SGRQ Total: - 2.4, - 6.9 **
- Savings: 2033€, 1255€ **

Impact

Prevention of exacerbations COPD (2006)

Impact

Cost study COPD (2007)

Table 4 Expected cost per patient for different levels of disease

<table>
<thead>
<tr>
<th>Patient type</th>
<th>Variables values according to severity levels</th>
<th>Predicted cost by intervention group</th>
<th>Savings&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FEV&lt;sub&gt;1&lt;/sub&gt;</td>
<td>Total SGRQ score</td>
<td>Admissions previous year (number)</td>
</tr>
<tr>
<td>Slight</td>
<td>70</td>
<td>35</td>
<td>1</td>
</tr>
<tr>
<td>Moderate</td>
<td>50</td>
<td>55</td>
<td>2</td>
</tr>
<tr>
<td>Severe</td>
<td>30</td>
<td>85</td>
<td>3</td>
</tr>
<tr>
<td>Average</td>
<td>41.40</td>
<td>49.5</td>
<td>0.71</td>
</tr>
</tbody>
</table>

Costs are expressed in euros at year 2000 prices. The smearing estimator has been applied.

FEV<sub>1</sub> forced expiratory volume during the first second at 8 weeks of follow-up, Total SGRQ score total Saint George Respiratory Questionnaire score, HH home hospitalization, CH conventional hospitalization

<sup>a</sup> 95% confidence interval

Impact

Patient / Carers
- Since first pilot experiences, patients’ and carers’ satisfaction has always been very high:
  - 99% of the subjects treated in the HH/ED programme reported that the treatment received was very good;
  - 90% of patients and 94% of carers stated that they would repeat the experience if needed.

Professionals
- Initial resistances to implementation from both Hospital and Primary Care staff markedly decreased over time.
- Professionals of the Integrated Care Unit showed high degree of satisfaction throughout the deployment period.

Management
- Dedicated hospital resource created in (end of) 2006 (staff: Case manager, 4 nurses, 1 internist, 1 admin)
- Director of Chronic Care since 2013 (link Hospital – Primary care)
Use of ICT
Conclusions

• ICS are a safe option to be considered for COPD patients admitted in a hospital.
• Both efficacy and cost-containment have been demonstrated.
• Organisational changes aiming at implementing territorial care, as a model of interactions between hospital and community, are needed.
• Health professionals with adequate skills to support the program are needed.
• Specific logistics to support the tasks involved in the program must be in place.
• An open ICT platform supporting organizational interoperability and collaborative tools across healthcare tiers is needed as a key enabler of the program implementation.
• Sustainability is linked to the formulation of a business case including novel reimbursement policies