Shifting acute care delivery from hospitals to homes in Ireland

Problem definition
Ireland, like many European countries, is facing a rise in chronic morbidities. This disease burden combined with a limited availability of community care contributed to increasing rates of acute events and the need for hospitalization. A reliance on institutional services and extended hospital stays, due to a lack of alternatives, resulted in long-wait times and patients increasingly in need of hospital beds (Box 1).

Box 1
What problems did the initiative seek to address?

- Elevated rates of chronic disease.
- Overreliance on institutional services and lack of community care alternatives.
- Long waiting times for hospital services and frequent shortages of hospital beds.

Overview
In 2010, in response to strained acute care services in Carlow-Kilkenny regional hospitals, Caredoc – a non-profit organization commissioned to provide out-of-hours medical care by the Irish Health Services Executive – devised the Caredoc Community Intervention Team model as a means to relieve hospitals of patients who could be better managed through specialized community-based care. In 2011, funds for the project were secured from the national Health Services Executive who, at the time, was under considerable pressure to improve what was perceived as an “acute care crisis”. After extensive collaboration with stakeholders to design the intervention, generate clinical algorithms for referrals, adapt the electronic medical records system and build general support for the initiative, the first Caredoc Community Intervention Team began operating in the Carlow-Kilkenny region in 2012. The new model of care works through hospitals, referring patients for early discharge where applicable and with general practitioners referring patients directly to avoid hospital admission. Community Intervention Teams are composed of specialized nurses who work with hospital staff, general practitioners and patients to provide acute care services within home-care settings. The new approach to providing acute care services has appeared successful; between September 2012 and September 2013, the initiative provided nearly 4000 interventions between 2012 and 2013, averting 2300 hospital bed days and 215 ambulance trips. Clear and simple referral services, effective use of information technology and cooperative teamwork across levels of care have been credited to the now streamlined, high-quality service in place. Patient satisfaction surveys show respondents are pleased with the service; finding the quality of care to be high, flexible to needs and convenient. As a result of the initiative’s success, the Health Services Executive has incorporated the model into its annual budget. Building on the success in the Carlow-Kilkenny region, the service expanded to Wicklow in 2014 and plans are underway for further expansions across the entire south-east.

Health services delivery transformations
Timeline of transformations
Throughout the 2000s, the pressure placed on services delivery in the Carlow-Kilkenny region from increase rates of chronic disease and limited community care alternatives was noticed by providers working in the out-of-hours medical care organization, Caredoc. These observations triggered the development of the Caredoc Community Intervention Team model in the early 2010s as a means to shift care from hospitals to community-based settings (Table 1). In 2011, the Irish Health Services Executive approved the service and funding for the project, serving to officially launch the new Caredoc Community Intervention Team. Today, the service continues to be actively implemented across Carlow-Kilkenny and plans for expansion are underway.
Organizing providers. Acute events continue to be managed by hospital providers, unless a patient has already registered with a Community Intervention Team or they enter the health system through their general practitioner who can refer the patient, mitigating the hospital all together. Hospital providers make the majority of referrals to the service and the Community Intervention Team has an office within the local hospital facilitating close collaboration. Community nurses, who typically provide public health services, have been re-profiled to be able to provide acute care and act as the primary provider to patients in their homes. Electronic medical records, instantly updated following patient visits via electronic tablets carried by nurses, allow for consultation from both general practitioners and hospital providers should the originally devised care plan require adjusting.

Managing services. Caredoc is a non-profit private company contracted to deliver the Community Intervention Team service. Oversight for the service is shared between the Health Services Executive regional branch in Carlow-Kilkenny and the Caredoc management team. Additionally, local hospital executives are responsible for managing hospital referrals to the Caredoc service. The Health Services Executive provided funding for needed resources. Supportive technologies and equipment to enable effective home-based care delivery were purchased including electronic tablets, mobile medical equipment and vehicles.

Improving performance. All nurses working in the initiative received specialized training through Caredoc provided by the local hospital. Nurses were trained to manage acute care needs outside of a hospital setting, coaching patients’ self-care and screening techniques for medication compliance. Hospital providers and general practitioners also received ad hoc training on

---

### Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Description of the initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000s</td>
<td>Caredoc organization contracted to deliver out-of-hours general practice services in the Carlow-Kilkenny region.</td>
</tr>
<tr>
<td>2009</td>
<td>Senior nurses within Caredoc observe increasing strain on local hospitals to provide acute care; idea for Community Intervention Team service pitched to Caredoc management.</td>
</tr>
<tr>
<td>2010</td>
<td>Multi-professional working group established to lead development of the initiative; after three months of planning, the initiative is submitted to the Irish Health Services Executive for approval and funding.</td>
</tr>
<tr>
<td>2011</td>
<td>Approval and funding granted for the initiative; engagement of stakeholders begins; clinical algorithms and care pathways developed.</td>
</tr>
<tr>
<td>2012</td>
<td>Community Intervention Team service officially launches in Carlow-Kilkenny; extensive public awareness campaign run for the service.</td>
</tr>
<tr>
<td>Present</td>
<td>Community Intervention Team service formally incorporated into the regional Health Services Executive budget; expansion of the service to other areas underway.</td>
</tr>
</tbody>
</table>
using the new clinical algorithms and e-referral systems introduced by the initiative. Collection of patient information through the electronic platform is used to monitor and evaluate ongoing efforts. Operational meetings are held every six weeks between the hospital and Caredoc to review this information and collectively strategize on any operational difficulties.

Engaging and empowering people, families and communities
This initiative has challenged the traditional role of patients as passive recipients of medical care to be empowered and active agents in managing their own health. “When patients are in hospitals it creates a huge disruption to regular life. The initiative allows them to keep their regular life, eat their food and sleep in their bed. We think that adds a huge degree of independence to their lives.” Patients, along with their family or caregivers, are involved throughout the care process and receive coaching from Caredoc nurses to help them in managing their own care needs at home.

Health system enabling factors
Caredoc is a private, non-profit organization contracted by the Irish Health Services Executive to provide the Community Intervention Team service. The Health Services Executive finances the initiative, holding Caredoc accountable for performance under established contract terms. Prior to the initiative, Caredoc had provided out-of-hours care in the region for over a decade. The organization was therefore well-placed to extend contracted services to include community-based acute care (Table 3).

A specialized new nursing role was formalized within the Caredoc organization and the recruitment of nurses with the right mix of experience and skills for Community Intervention Teams was a critical

Table 2
How was the delivery of health services transformed through the initiative?

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Selecting services</strong></td>
<td><strong>Designing care</strong></td>
</tr>
<tr>
<td>Hospital-facing acute services; no community-based acute care services.</td>
<td>Patients receive uniform acute care in hospitals; no standards or protocols in place for community-based acute care.</td>
</tr>
<tr>
<td><strong>Organizing providers</strong></td>
<td>Clinical algorithm for referral to Community Intervention Team developed; clear care pathways and referral systems in place to streamline patient transition between providers; personalized care plans implemented in consultation with patients.</td>
</tr>
<tr>
<td>General practitioners manage most patient care needs with hospitals providing acute care services; some collaboration across care levels to manage care, but gaps in continuity exist; long waiting times for hospital services; Caredoc acts as an out-of-hours and overflow provider for hospitals and primary care providers.</td>
<td>Caredoc nurses provide home-based care, assisted by general practitioners, hospital providers and patients; hospital providers make the majority of referrals to Community Intervention Teams, facilitated by a new e-referral system for the service.</td>
</tr>
<tr>
<td><strong>Managing services</strong></td>
<td>Caredoc contracted to provide community-based acute care; oversight for services shared between the Health Services Executive and the Caredoc management team; investments in mobile medical equipment facilitate effective delivery of home-care services.</td>
</tr>
<tr>
<td>No resources available to provide community-based acute care; Caredoc contracted to provide out-of-hours urgent care; Caredoc electronic medical records system connects providers across sectors.</td>
<td>Nurses trained to provide acute care in home settings; all providers trained on new clinical algorithms and e-referral systems; regular operational meetings held between Caredoc and hospital management to review performance data and strategize any concerns.</td>
</tr>
<tr>
<td><strong>Improving performance</strong></td>
<td></td>
</tr>
<tr>
<td>Caredoc nurses not trained to provide community-based acute care.</td>
<td></td>
</tr>
</tbody>
</table>

Case profile
The initiative was designed and led by two community nurses working within Caredoc who, through observing the increasing strain on acute care resources while working closely with local hospitals, were able to leverage their technical insights and the authority of their senior role within Caredoc to raise the idea of acute-community care with Caredoc directors. Senior management for Caredoc was supportive of the idea and convened a multidisciplinary working group - including community health leaders, hospital administrators and public health professionals – to plan the initiative. Once consensus was achieved, senior management for Caredoc took the proposal to policy-makers within the Health Services Executive for approval and funding. Today, Caredoc continues to manage delivery of the Community Intervention Team service with support from the working group and dedicated nurses within its Community Intervention Teams.

Box 2
What were the main outcomes of the initiative?

- Over 142 000 patients living in the Carlow-Kilkenny region have access to Community Intervention Teams and the initiative continues to expand coverage across the south-east.
- Between September 2012 and September 2013, Community Intervention Teams in the Carlow-Kilkenny region delivered 3880 interventions; as a result 2300 hospital bed days were saved and 215 ambulances were avoided, resulting in 50% cost savings.
- Patient satisfaction surveys report that 100% of patients regard the Community Intervention Team service as “excellent” or “very good”.

Outcomes
The Caredoc Community Intervention Team continues to work on facilitating early hospital discharge, avoiding acute hospital admissions, reducing hospital readmissions, decreasing ambulance transportation use and educating, coaching and empowering patients to self-manage their own care. Benefits to patients include decreased exposure to hospital-acquired infections and faster recovery times. Reported outcomes for the initiative are positive and patient responses have been favourable (Box 2), demonstrating the ability of Community Intervention Teams to be reactive to patient needs and integrate seamlessly between providers.

Box 3
Who were the key actors and what were their defining roles?

- Caredoc senior level nurses. Created the concept for Caredoc Community Intervention Teams; led and managed the initiative.
- Caredoc management. Supported creation of Community Intervention Teams; brought initiative to the Health Services Executive for government-level approval and funding.
Initiating change
Timing for the initiative was well coordinated as there was a building pressure on the Health Services Executive to respond to the apparent acute care crisis. This pressure was compounded by extensive negative media coverage of the strained situation in hospitals and pushed action on improving acute care delivery. Furthermore, Caredoc’s experience working in the region, as well as their positive reputation among providers and local policy-makers helped secure support for the initiative and drive it forward.
Opportunities to engage stakeholders were developed from the outset, with this process considered to be the most time consuming and difficult task of planning the initiative. Extensive communication about the win-win situation for stakeholders - whereby overburdened providers are relieved of patients without need for inpatient care and patients receive more personalized services conveniently in their own homes - helped achieve broad stakeholder support for activities. Persistence and clear communication were important throughout this process. “Consideration has to be given to the competing agendas and priorities of other groups, while not taking away from the momentum of the planned initiative.”

Implementation
While general practitioners and hospital providers were enthusiastic and quick to become involved given their previous positive experiences of working with Caredoc, public health nurses were initially resistant as they felt Community Intervention Teams would infringe on their role. A series of meetings with public health nurses helped to communicate the different role Community Intervention Team nurses would fill and win public health nurses’ support. To address general practitioners’ concerns that patients would be released too early, the clinical governance group for the initiative worked with hospitals to develop clinical algorithms for patient release. Keeping these planning meetings brief and ensuring the algorithms developed were simple and user-friendly were important factors in minimizing the burden on hospital time. A close working relationship with local hospital executives enabled an office space for the service to be made available in the local hospital, giving the Caredoc Community Intervention Team easy and direct access to their target population.

After approximately six months of planning and building momentum for the project, the Community Intervention Team service was officially launched, with an extensive public campaign run alongside to raise awareness for the new service. Meetings and information sessions were also held with local providers and elderly care facilities to help generate referrals for the service. While initially there was a focus on building referrals from hospital providers, outreach has been gradually extended to general practitioners and elderly care providers as the initiative becomes more established.

Moving forward
The Health Services Executive has incorporated the Community Intervention Team service into its budget for 2014, indicating a commitment to the initiative moving forward. Benefiting from the momentum of successes to date, the initiative was recently extended to the region of Wicklow and planning is underway for further expansion across the south-east. The long-term aim is to achieve national coverage of the Community Intervention Team model across Ireland.

Highlights
• First-hand insights of providers enabled the identification of services delivery challenges and supported the development of relevant solutions.
• Supportive senior management generated momentum for change and helped secure approval for activities from the necessary authorities.
• Stakeholder engagement was described as time consuming, but was considered to be a crucial factor in the initiative’s success; careful consideration and respect for differing schedules, agendas and engagement levels of stakeholders was given.
• Electronic medical records and other technologies facilitated the creation of a simple, connected and user-friendly service.
• Training for senior nursing staff was important for establishing the necessary clinical competencies to deliver acute care services in home-care settings.