Shifting acute care delivery from hospitals to homes in Ireland

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[1]. 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.

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.

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.

Table 1
What were the chronological milestones for the initiative?

2000s	Caredoc organization contracted to deliver out-of-hours general practice services in the Carlow-Kilkenny region.
2009	Senior nurses within Caredoc observe increasing strain on local hospitals to provide acute care; idea for Community Intervention Team service pitched to Caredoc management.
2010	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.
2011	Approval and funding granted for the initiative; engagement of stakeholders begins; clinical algorithms and care pathways developed.
2012	Community Intervention Team service officially launches in Carlow-Kilkenny; extensive public awareness campaign run for the service.
Present	Community Intervention Team service formally incorporated into the regional Health Services Executive budget; expansion of the service to other areas underway.

Description of transformations

Selecting services. Community Intervention Team nurses deliver a range of home-based acute care services following early discharge. The selection of services are chosen in partnership with the patient's family caregiver as well as the professional responsible for the patient throughout their hospital stay or the general practitioner in the community. Together providers ensure that services are tailored to the individual needs of patients. Available interventions include intravenous therapy, feeding tube insertion or reinsertion, catheterization, medication reconciliation and hospital discharge support to postoperative patients or patients with chronic disease.

Designing care. Clear care pathways and protocols have been developed for the initiative. Whereby, hospital providers identify eligible patients using a specially developed clinical algorithm; the algorithm is simple and user-friendly to ensure easy application for hospital providers. Providers are now expected to fill out an e-referral form that triggers a phone call from a Community Intervention Team nurse to initiate a discussion with the provider currently treating the patient. A visit is then arranged between a Community Intervention Team nurse and the patient to develop a personalized care plan and prepare the patient to be active in their own care. The patient is discharged home under the care of the Community Intervention Team, usually for a period of 72 hours or as long as medically warranted. When ready to exit the service, the patient's medical file is sent electronically to their general practitioner for continued follow-up as needed, completing the information loop and ensuring continuity of care. The patient is referred back to the hospital if their condition deteriorates.

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

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?

Before	After
Selecting services	
Hospital-facing acute services; no community-based acute care services.	Wide range of acute care services available in home settings for patients eligible for referral to Community Intervention Team.
Designing care	
Patients receive uniform acute care in hospitals; no standards or protocols in place for community-based acute care.	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.
Organizing providers	
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.	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.
Managing services	
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.	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.
Improving performance	
Caredoc nurses not trained to provide community-based acute care.	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.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Caredoc contracted by and accountable to the Health Services Executive.
Competencies	• New nursing position created within Caredoc organization.
Information	• Caredoc electronic medical records system enables data collection and performance monitoring of the initiative.
Innovation	• E-referral system designed and embedded in existing Caredoc electronic medical records system.

activity. The leadership team specifically sought to employ experienced, capable nurses with a history of working in acute care; community-based experience and management skills were other desirable competencies. While Caredoc staff and hospital professionals participated in ad hoc training to equp them with the necessary skills, a wider culture of collaboration and teamwork built strong inter-professional relationships and enabled effective functioning of the service.

To help ensure a streamlined service and connect to hospitals and general practitioners in the region, Caredoc established an organization-wide electronic medical records system for its services prior to the initiative. Leveraging this system, adaptations were made to incorporate specific applications for the Community Intervention Team service, such as the new e-referral function. Furthermore, this electronic system enables data collection for monitoring and evaluation purposes.

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 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”.

Change management

Key actors

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 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.

- **Health Services Executive.** Granted approval and funding for initiative; contracts Caredoc to provide Community Intervention Team service.
- **Working group**. Divided into two subgroups: clinical governance and operational; helped design and implement the initiative; provide ongoing oversight and guidance for activities.
- **Community Intervention Teams.** The Carlow-Kilkenny team is composed of nine acute-care nurses; nurses work as a team to deliver acute care services in patients' homes.

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.

1 Collier-Hannon, D., Curran, M., Kearns, M., & McCarron, P. (2014). Integrated care in the Caredoc Community Intervention Team. *International Journal of Integrated Care; Annual Conference Supplement.*