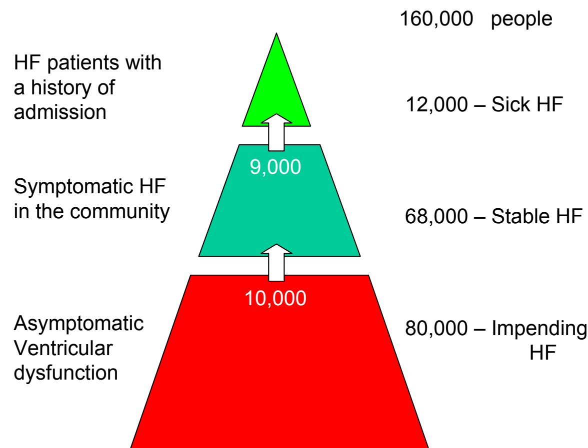
# From Crisis to Control: A cohesive strategy for hospital management of Heart Failure in Ireland

*A position document prepared by the Irish Heart Foundation Council on Heart Failure.*

## Introduction:

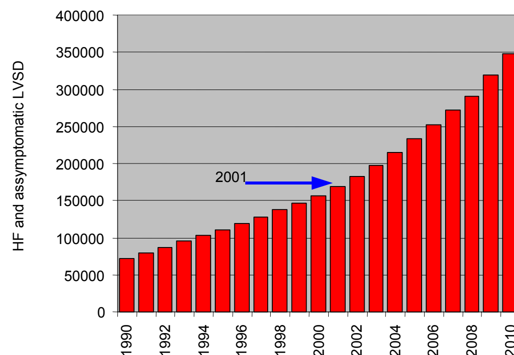
Heart failure is a deadly and disabling cardiovascular disease with high rates of hospital admission and mortality rates worse than some cancers. There is an evolving heart failure crisis in Ireland, which currently affects up to 80,000 people. At least a further 80,000 people are estimated to have impaired left ventricular dysfunction or impending heart failure. There are more than 10,000new cases each year and heart failure is rapidly becoming one of the most common reasons for emergency admission to Irish hospitals, affecting an estimated 12,000 Irish people each year (Figure 1).

**Figure 1.** Schematic representation of three types of Heart Failure (HF) in Ireland. Annual numbers moving into each type is shown.




The numbers of Irish people affected by heart failure is set to increase dramatically this decade. It is a disease that generally affects older people and with an ageing population, poor control of diseases such as hypertension and better rates of survival from acute coronary events, the prevalence is set to increase. Population growth and disease prevalence projections mean that by 2010, the Irish Heart Foundation projects that more than 300,000 Irish people, half having no symptoms, will be directly affected by this illness (Figure 2).

**Figure 2 –** Profile of population in Ireland affected by heart failure and impending heart failure



In certain European countries, such as Portugal, this illness is already at epidemic proportions with an estimated prevalence twice that of Ireland. Ireland looks set to follow this trend.

**Hope for the future**

The positive message is that, with the advent of a structured approach to heart failure care, much can be done to improve the care of this growing proportion of Irish people. Furthermore, with the appropriate organization and political will, they could be up and running relatively quickly.

Recent research, which includes work carried out here in Ireland, and is outlined in this document, has shown that organized heart failure services in hospitals can improve quality of life for people with overt heart failure and help them stay well longer. In line with the spirit of the Government's new Health Strategy, the Irish Heart Foundation believes that no longer should these services be only available to people near selected hospitals – equality of access to these services is a priority for all. As a first step we need a cohesive strategy for hospital heart failure management in Ireland.

**Why we need a Cohesive Strategy on hospital management**

In the Council's view, for many years now, heart failure care has not been given the priority it deserves within health management and Governmental arenas. The Council wishes to effect a new and constructive approach to the management of heart failure in hospitals with the support of all stakeholders. The objectives are:

- to put the heart failure crisis on the agenda for healthcare managers
- to enable regional units to have government support for adequate resourcing
- to implement structured care strategies for heart failure in Irish hospitals and thereby improve patient care and reduce costs
- to provide the initial building block for the development of shared-care and prevention programmes which form the longer term strategic goals of the Council

**Six guiding principles on a cohesive strategy for the hospital management of heart failure in Ireland**

The Council has formulated, in accordance with Irish and International research, six principles of hospital heart failure care, which should guide the development of services nationally.

## Principle 1 - *Hospital admitted patients are at risk*

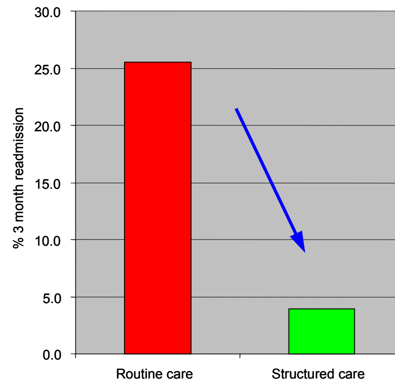
We know that previous hospital admission is the most reliable indicator of further morbidity. This is highlighted by the fact that more than half of patients who are admitted into hospital will be re-admitted within six months. Therefore, in order to have the biggest impact on the cycle of admission and readmission in this disease, we should start by focusing on the patients presenting as hospital admissions.

As well as creating serious clinical and quality of life problems for patients, the cycle of admission and readmission is creating an economic and bed crisis for the DoHC. Irish research has shown the average number of days in hospital (length of stay) for Heart Failure admission is 12 days and for a re-admission is 17 days. On the basis or research from the UK, the Council estimates that the number of readmissions for heart failure has exceeded 19,000 in 2001 alone, occupying more than quarter of a million bed-days in our hospitals. The projections for the current decade show that, if we do nothing to address the emerging crisis, more than half a million bed-days occupancy will be taken up by emergency admissions for heart failure annually (Figure 3).
While we will not be able to prevent all of these admissions, we know from research that there are deficiencies in medical management of heart failure in Ireland: these include the use of proven therapies; ensuring patients are really stable at discharge; having a structured approach to improving the knowledge of patients and carers about heart failure; helping patients understand how they can best help manage themselves and improve compliance with therapy.

## Principle 2 – *Readmissions can be reduced*

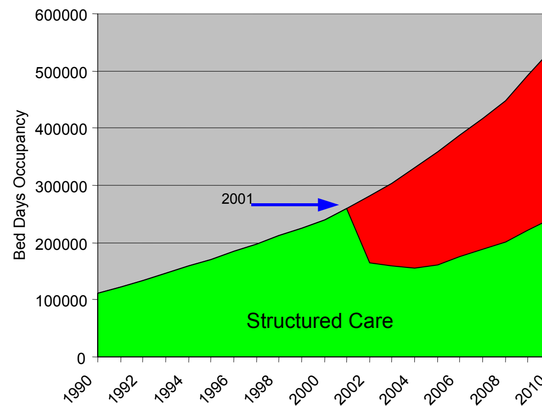
We know from major clinical studies that application of proven pharmacological therapies, such as ACE inhibition at higher dosages, can improve readmission. We also know that a structured form of care (also known as Multidisciplinary care) will dramatically reduce re-admissions (Figure 4). Structured care may be defined as a physician-directed, nurse-led approach encompassing many allied health care skills aimed at providing better care of the patient with heart failure. From Irish research, we know that the combination of patient and carer education, ensuring that defined criteria for clinical stability are met at discharge and close clinical follow up are important components of this structured care. Most importantly this impact on the readmission rates at 3 months is achieved in addition to the benefits possible with optimal medical therapy.

**Figure 4** - Impact of structured care on 3 mth readmissions for heart failure




From a national perspective, the application of this approach in 2002 in all acute admission hospitals in Ireland would lead to significant savings in bed-days and DoHC costs in the first full year of application. The Council has calculated the cost savings of the implemented approach over the rest of the decade and the impact is represented graphically in Figure 5.

**Figure 5** - Probable impact of structured care in terms of annual bed days occupancy




The health-economic benefits are summarised in Table 1. Not only would this approach improve the health and quality of life of the sufferers and their carers – it would free up critical DoHC resources and hospital beds to allow other emergency admissions quicker access to proper care. Because of the long in-hospital stays of heart failure patients, this approach would significantly improve hospital waiting lists.

**Table 1** – Implications of National Employment of structured care in heart failure

- Saving of almost 110,000 bed days in the first year alone
- Cumulative saving of 2 Million Bed Days from 2002 to 2010
- DoHC cost saving of 27 million euro in first year
- 500 Million euro DoHC savings by 2010

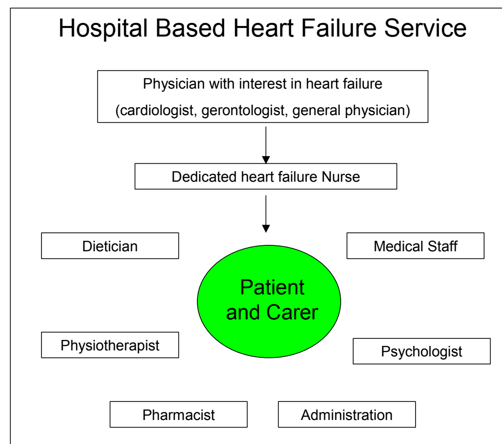
**Principle 3 –** ***The structured approach requires a physician with an interest in heart failure and a dedicated heart failure nurse***

Many Physicians working in the care of patients with acute heart failure now recognise that this condition should be treated much like an acute coronary case and be cared for in specialised units. In order to coordinate the better use of investigations, drugs and discharge planning, heart failure care should be the responsibility of a physician with a specialist interest in heart failure.

To support the physician in the critical patient and carer education about self-management, the dedicated heart failure nurse can address the knowledge gap that certainly exists among patients with heart failure. The dedicated heart failure nurse should have time and the critical mix of clinical and patient education skills to prepare the patient for life in the community with heart failure in a structured way. This nurse should receive defined training in the practical issues of management of heart failure.

Other allied healthcare professionals should be deployed as required to supplement this education and all care should be coordinated through the specialist physician and dedicated heart failure nurse. Multidisciplinary teams are well established in other areas of medicine such as diabetes and care of the elderly, providing day-hospital care and rapid assessment/treatment units. The healthcare professionals who can be involved in a hospital based heart failure service are outlined in Figure 6.

**Figure 6** - The components of an ideal hospital based heart failure service




**Principle 4 –** ***Structured care should start in hospital***

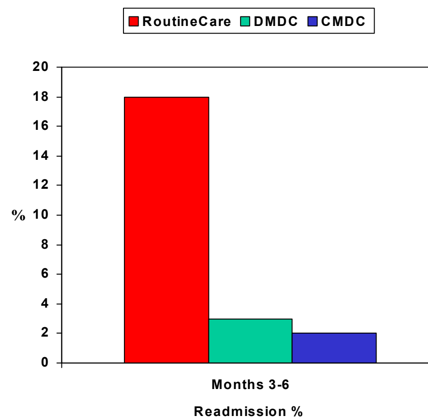
The majority of structured care programmes studied internationally have begun the programme following discharge. However the most rapid decline in symptom control occurs in the first few weeks following discharge. Not surprisingly, therefore the readmission rates at 1 month in these studies ranges from 10-20%.

The programme studied in Ireland attempted to address this issue by initiating the programme as soon after admission as possible. The complete elimination of re-admission at 1 month suggests that this approach may have some significant additional value. In fact, follow up of 121 patients admitted to the programme shows that the event rates at of 0%, 7% and 13% at 1,3 and 12 months respectively are the lowest reported by any study in this type of patient.

**Principle 5 – *Structured hospital based care should continue for three months***

Since we know that readmission rates are concentrated in the first three months, it may seem logical that the benefits of hospital care, continued post discharge in special outpatient clinics, are best achieved during this period. While the hospital service will always be available for review of patients should difficulties arise, we know that the best clinical and economic impact of the structured heart failure service is in the first three months. There appears to be little benefit of extending the service from 3 to 6 months (Figure 7). Readmission rates are not significantly different between three and six month treatment periods, and yet remain significantly better than readmission rates in people discharges from hospital without structured follow-up. Furthermore, it is not feasible or desirable to have the routine care of heart failure maintained in hospitals when the stable patient can be well managed by the local GP and community healthcare team.

**Figure 7** readmission rates for heart failure from 3-6 months




**Principle 6 – *Devolve care to the community after three months***

The management of stable heart failure patients after three months hospital follow up should be carried out in the community. This allows GP to resume care of most patient problems. The hospital heart failure service will be a support to the community team and help equip GPs better to manage heart failure beyond the initial 3 month period.

There should be a constant interface between hospital and primary care so that unstable or difficult heart failure patients can be reassessed quickly in a heart failure clinic helping to prevent acute admissions. Shared-care approaches between hospital and community teams will benefit the majority of heart failure patients who are not as ill and who have

not yet had emergency admissions for heart failure. In the longer term, the Irish Heart Foundation believes that the hospital heart failure service will need to develop a shared-care approach to the management of all patients with heart failure. Since the identification and diagnosis of the largest group of patients, those with impending heart failure,F will depend on such a shared approach, only then can we effectively hope to prevent heart failure in this at-risk group of people.

**National structured care of heart failure is achievable now.**

In summary, this approach to the management of a deadly and disabling disease offers the most impressive effect on morbidity ever reported. Irish research has shown that it is the most cost-effective approach to the management of heart failure. There is little capital investment required, the main components being a re-deployment and a reorganization of existing resources.

The Council on heart failure believes that at a minimum, 60 dedicated heart failure nurses and 12 heart failure dieticians nationwide working in reorganized units could provide the required standard of care to all 12,000 people who are admitted to Irish Hospitals each year with acute heart failure. The cost-benefits to the DoHC in terms of savings in money and bed space will repay the investment ten-fold, even within the first year. The Council is engaging with the admitting hospitals to define the specific needs of each hospital. Thereafter the Council will move to address the needs of the stable heart failure population and those people with impending heart failure using a shared care approach.

The implementation of structured care of heart failure in Irish Hospitals is the essential first step in controlling the evolving heart failure crisis and providing a longer term, complete approach to heart failure care in Ireland.