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Review

Heart failure services in the United Kingdom: Rethinking the machine bureaucracy

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ABSTRACT

Poor outcomes and poor uptake of evidence based therapies persist for patients with heart failure in the United Kingdom. We offer a strategic analysis of services, defining the context, organization and objectives of the service, before focusing on implementation and performance. Critical flaws in past service development and performance are apparent, a consequence of failed performance management, policy and political initiative. The barriers to change and potential solutions are common to many health care systems. Integration, information, financing, incentives, innovation and values: all must be challenged and improved if heart failure services are to succeed. Modern healthcare requires open adaptive systems, continually learning and improving. The system also needs controls. Performance indicators should be simple, clinically relevant, and outcome focused. Heart failure presents one of the greatest opportunities to improve symptoms and survival with existing technology. To do so, heart failure services require radical reorganization.

1. Introduction

It's crunch time for heart failure care [1]. The results of the third UK National Heart Failure Audit for inpatient care make disturbing reading [2]. Within one year of hospitalization for heart failure (HF) 32% of patients die — survival rates worse than most cancers. Patients are twice as likely to die when admitted to non-cardiology as opposed to cardiology wards (12% vs 6%). Furthermore, two of the three survival enhancing medications are under prescribed [2]. Here we offer a strategic analysis of HF services, defining the context, organization and objectives of the service, before focusing on implementation and performance. The challenges exposed and solutions proposed are common to many health care systems.

2. Why is the heart failure service important?

Heart failure is common, disabling and deadly. The disease presents a spiraling public health problem in industrialized countries with ageing populations. The prevalence of 1% in the adult population rises sharply with age to 7% of those over 75 years [3]. The direct cost of managing patients is approximately 2% of total healthcare expenditure in the UK [4], two thirds attributable to hospitalizations [4]. Heart failure is the commonest cause of cardiovascular hospitalization and accounts for 5% of all emergency medical admissions. Couple the rising demands of an ageing population with health care spending cuts and the problem is clear.

3. What is the heart failure system?

Heart failure services form a subsystem within the wider healthcare system. A system is an organized collection of interrelated parts creating a complex functioning whole. The classic systems model defines inputs, processes, outputs, and outcomes which exist within and interact with their environment (Fig. 1). Controls govern processes and continually interact with system components. Organizations in complex environments such as healthcare need to be open adaptive systems, continually learning and in discourse with the environment [5]. Heart failure services are emerging from archetypal 'machine bureaucracies', formed during an era of limited effective therapies and predominantly acute care [5]. Services were delivered by hierarchical secondary care systems with authority and power vested at the top of the organization. Patients were hospitalized, treated, followed-up in hospital outpatient departments, and discharged back to primary care once stable. Multidisciplinary care has gradually evolved, reducing mortality, hospitalizations and costs [6,7].

Multidisciplinary care is not however integrated care. Healthcare integration is traditionally considered in binary terms: horizontal or vertical. Each has opponents and proponents, strengths and weaknesses (Table 1). In practice the components of this narrow dichotomy are relative and vary between programs [8]. Horizontal integration consolidates services at similar levels within a single

Abbreviations: ACEI, angiotensin enzyme converting inhibitor; ARB, angiotensin receptor blocker; HF, heart failure; NHS, National Health Service; QOF, Quality and Outcomes Framework.

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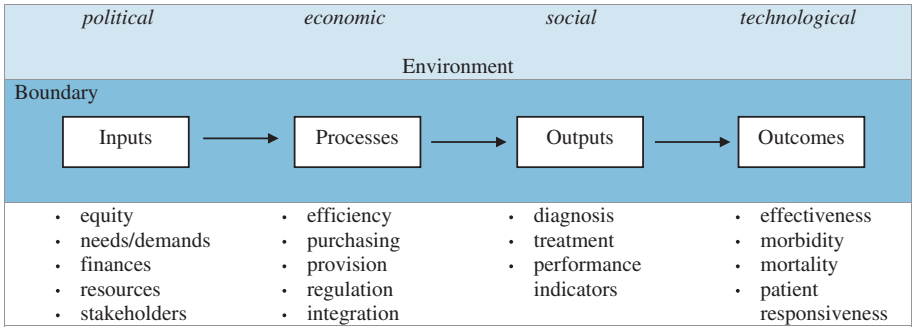

Fig. 1. Core components of the health system.

care sector, for example uniting primary, community and social care. Vertical integration unites organizations with differing functions under common ownership, creating a single provider system for all services to a group of consumers. The former is common in the UK, the latter rare. Existing 'integrated' HF programs bridge the gap between primary and secondary care using virtual systems [9].

4. Where are we going?

The fundamental goals of a health system are threefold: ensuring equity, effectiveness, and efficiency [10]. These broadly equate with the classic management 'iron triangle': access, quality and costs. The first two elements are intrinsic goals. Efficiency is an instrumental rather than intrinsic goal, although finite resources and opportunity costs blur the distinction. All three are essential and form the basis of numerous taxonomies describing the goals of health care. Maxwell proposed 6 dimensions of health care quality: equity, efficiency, effectiveness, accessibility, acceptability, appropriateness [11]. The World Health Organization simply considers effectiveness in terms of outcomes (mortality and morbidity) and responsiveness (respecting persons and client orientation) [10]. Improving health means increasing the average level and reducing the distribution or inequalities. These principles underpin health policies throughout the world.

5. Where have we been?

This vision should translate readily to HF services. Shared vision is the cornerstone of successful organizations. It engenders communication, trust, collaboration, and ultimately performance. The first critical flaw in HF service development was lack of vision. In 2000, the UK government outlined a strategy to reduce cardiovascular mortality, including standards, interventions, and service models specific to HF [12]. However, this shared few of the universal goals of health care [12]. The seven milestones requested local audit, protocols, and organization of records in primary care and hospitals. The subsequent introduction of the Quality and Outcomes Framework (QOF) in 2004 should have remedied these deficiencies — 'Quality' and 'Outcomes' being the priority. Heart failure, the poor relation of coronary heart disease, was not even included until the 2006–07 revision.

Table 1
Strengths and weaknesses of horizontal and vertical organizational models.

Vertical	Horizontal
Advantages	Advantages
• Encourages specialized management.	• Shares expertise within level.
• Efficient use of specialized resources.	• Focuses on project.
• Control, responsibility and authority clear.	• Strong networks and horizontal communication.
• Good vertical communication.	
Disadvantages	Disadvantages
• Narrow perspective.	• Duplication of effort.
• Limited innovation.	• Poor vertical communication.
• Poor networks and horizontal communication.	• Confuses lines of responsibility.
• Rivalry between organizations.	• Encourages power struggles.

6. Where are we now?

Open systems must understand and continually interact with their environment to succeed. PEST analysis defines external forces in political, economic, social and technological terms (Table 2). The political landscape is shaped by economic and social challenges. The prevalence of HF is increasing with increased life expectancy. Simultaneously a paradigm shift is occurring, from provision based on need toward demand (expressed perceived needs). The 'third way' moves citizens to consumers. This dominant discourse was embedded by previous governments and cannot be retrenched.

Two further facts are inescapable. The global economic recession has forced unprecedented spending cuts across society. Meanwhile technological advances continually expand the need for expensive pharmaceuticals and device therapy [13,14]. The system must therefore improve the ratio of outputs to inputs i.e. efficiency. The 'process' subunits of a healthcare system are purchasing, provision, and their controls [10,15]. Past and present governments have promoted market values at the purchaser–provider interface to achieve efficiency [16]. The current organization of HF services must be considered within this context (Table 3).

7. How and why are we assessing performance?

'We can only be sure to improve what we can actually measure' [17]. The question is not 'should we measure' but 'what should we measure'? The answer returns to the goals of a health system: equity and effectiveness backed by efficiency. For a decade, numerous performance assessment frameworks have outlined domains, indicators and benchmarks based on the balanced scorecard architecture. All

Table 2
PEST analysis of heart failure services.

Political	Economic
• Shift to outcomes and patient responsiveness.	• Global economic recession.
• Expansion of markets and quasi markets.	• Competing demands on limited resources, particularly chronic diseases.
Social	Technological
• Ageing population.	• Pharmaceutical advances
• Consumerism.	• Devices therapy — defibrillators and cardiac resynchronization.
• Customer demands vs needs.	• Cardiovascular imaging.