


PERSPECTIVE

The forgotten dimension of integrated care: barriers to implementing integrated clinical care in English NHS hospitals

Michele Castelli^{1*} , Jonathan Erskine², David Hunter³ and Amritpal Hungin⁴

¹Population Health Science Institute, Newcastle University, Newcastle upon Tyne, UK, ²The Bartlett School of Sustainable Construction, UCL, London, UK, ³Population Health Science Institute, Newcastle University, Newcastle upon Tyne, UK and ⁴Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK

*Corresponding author. Email: michele.castelli@ncl.ac.uk

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Abstract

Multimorbid patients who enter English NHS hospitals are frequently subject to care pathways designed to assess, diagnose and treat single medical conditions. Opportunities are thereby lost to offer patients more holistic, person-centred care. Hospital organisations elsewhere are known to use in-hospital, multi-specialty, integrated clinical care (ICC) to overcome this problem. This perspective piece aims to critically discuss barriers to implementing this form of ICC in the English NHS focusing on six key areas: information technologies, the primary–secondary care interface, internal hospital processes, finance, workload, professional roles and behaviours. Integrated care programmes currently underway are largely focused on macro (system) and meso (organisational) levels. A micro (clinical) level ICC, offering highly coordinated multispecialty expertise to multimorbid hospital patients could fill an important gap in the current care pathways.

Key words: English NHS hospitals; integrated clinical care; multi-specialty; NHS reform

1. Introduction

In English NHS hospitals, multimorbid patients, often with chronic illnesses, are still largely assessed, diagnosed and treated using a single condition model. That is, they are referred [usually by a general practitioner (GP), or via presentation at an in-hospital assessment unit] for diagnosis and treatment by a particular specialty and, unless there is an obvious and pressing need to involve a different specialist, they usually remain within a tightly defined care pathway for that episode of care. Opportunities to offer a more holistic approach to patient care, coordinating specialist physician expertise across a range of medical disciplines, are therefore frequently missed. This is unsatisfactory for patients and for staff, as patients frequently return within a short time-frame due to an acute episode of a different illness or condition, sometimes unsure as to which physician has overall responsibility for their care. At the same time, English NHS policy has introduced a range of integrated care (IC) programmes to improve patient care through increased collaboration between health, public health and social care organisations (NHS England, 2017a, 2017b). Current proposals to put integrated care systems (ICs) on a statutory footing are predicated on making IC, in the sense of better coordination and information sharing between and among the spectra of health and care organisations, an obligatory element in health and social care whole system, place-based planning. However, while these forms of IC may eventually

improve the coordination of care between different sectors, they do not necessarily meet patient needs for less fragmented and episodic care within hospital environments.

We know that some hospital organisations in other jurisdictions make effective use of in-hospital, integrated clinical care (ICC), reportedly with positive impacts on clinical outcomes and the patient experience. Mayo Clinic in the USA is one such hospital organisation and, in this perspective piece, we refer to it as an exemplar of ICC, in order to discuss the potential barriers to implementing this form of multi-specialty ICC in English NHS hospitals.

1.1 Challenges for current models of IC in the English NHS

In the context of the English NHS, IC has been central to reforms in provision of health care services for many years, and the characterisation of ‘integrated care’ has changed and evolved with each such initiative.

The Health and Care Bill, published by the Government in July 2021, intends to achieve these aims through implementation of ICSs (UK Parliament, 2021). At present, these are intended to be ‘place-based’, regional partnerships comprising an NHS Integrated Care Board and an ICS Partnership. The former will focus on prioritisation of service delivery, and allocation of resources, among relevant NHS organisations, using ‘provider collaboratives’ and regional and sub-regional clinical networks. The latter has a broader focus as a forum to bring together local authorities, social care agencies, the voluntary and third sector, primary care representatives and NHS hospital, ambulance and mental health trusts (NHS England, 2018, 2019a, 2019b, 2021). In relation to integration of services and the different actors in health and social care, ICSs have built on the experiences of 50 ‘Vanguard’ projects, set up in 2015 to test and further develop a range of new care models (NCMs) in England. NHS England, the fund-holding body which sets the priorities for health services in England, viewed the Vanguard projects as blueprints for future redesign of locality-based health and care systems, and the key means by which improvements to IC are expected to take place in relation to health and social care provision in England.

Findings from a study of five NCMs in the northeast of England demonstrated the importance of understanding the multilevel nature of context if change is to succeed and become embedded (Maniatopoulos *et al.*, 2019, 2020). Tensions between relationship-building, expectations of national policy in delivering outcomes within a given timeframe and ensuring the requisite mix of capacity, capability and finance were all critical features of the wider context in which the NCMs were located. They shaped the extent to which policy and practice were aligned or, conversely, at risk of pushing and pulling against each other. A conclusion reached by the study was that the overall context in which complex and ambitious changes were being implemented remained fragile, febrile and fluid. Managing this would determine the success of the NCMs Vanguard programme.

To date there is no clear evidence that the models of IC, as adopted by the Vanguards and now by the ICSs, are universally or sustainably meeting the ambitions to improve population health, the patient experience, productivity and efficiency of health and social care services (Maniatopoulos *et al.*, 2017; NAO, 2018). This is unsurprising: the lack of robust evaluation of IC programmes, particularly those which target multimorbid patients, is widespread. In 2015 the EU-funded CHRODIS group, which conducted a comprehensive, case-study based analysis of Europe-wide IC pathways for multimorbid chronic patients, concluded that ‘Little is known about the outcomes or effectiveness of integrated care programmes for patients with multimorbidity’ (CHRODIS, 2017).

While the organisational structures which may permit IC to flourish in the English NHS are being developed, improving IC also requires a culture change from the professionals to shift from silo-based working to collaborative relationships. In addition to that, the urgent need for better coordinated patient care increases year on year, in part due to financial constraints and workforce

shortages but also because of increases in the complexity and acuity of many patients, including those who do not present as emergency cases (Charlesworth and Lafond, 2017; NIHR Dissemination Centre, 2017; Anandaciva *et al.*, 2018). This challenge has also been exacerbated by the current coronavirus pandemic, in which multimorbidity proved to be one of the main risk factors for hospitalisation and death.

In these circumstances, it is reasonable to question whether the IC programmes are really addressing fundamental patient needs, in particular within the hospital setting. For example, in the case of non-emergency, multimorbid, frail elderly patients, care in English NHS hospitals too often continues to be fragmented and episodic, with negative consequences for patient outcomes and staff and patient satisfaction (Erskine *et al.*, 2018). Within the hospital setting, it is not easy for specialist doctors to access the expertise of (and to internally refer to) colleagues working in other medical disciplines since the early 2000s, particularly since doctor-to-doctor ‘internal referrals’ are permitted only if non-immediate patient needs are directly related to the original referral (Goodman, 2006). In most cases, a patient who has entered a care pathway which involves a visit to hospital will be treated only for the immediate cause of the referral; the opportunity to address other clinical needs at the same time is lost.

1.2 Responses from the hospital sector

The continuing challenge for hospital organisations in the English NHS, even while attempts are made to implement IC through the establishment of ICSs, is that, broadly speaking, they operate care models designed to treat single conditions when, increasingly, they receive many patients who are multimorbid and who would benefit from a whole systems approach. Within the hospital sector there have been two key responses to this challenge.

First, in recent years many English hospital organisations have introduced multidisciplinary teams (MDTs) working for some cohorts of patients. NHS England offers guidance on the use of MDTs in clinical settings and as a means to cement the overall aims of IC which are at the heart of the emerging ICSs and integrated care providers (Ham *et al.*, 2015; Imison, 2015; NHS England, 2017a, 2017b). However, the literature on MDT approaches suggests that these are frequently focused on particular disease groups, such as cancer, heart failure, pulmonary disease or dementia (Prades *et al.*, 2014; Hickman *et al.*, 2015).

Second, the English NHS has seen a modest rise in the number of specialists in acute medicine, mirroring the significant increase in the number of ‘hospitalists’ in the USA. While it is generally recognised that hospitals in the English NHS would benefit from the availability of many more doctors with generalist skills (in addition to their specialty training), to oversee and coordinate patient care within the hospital environment, in practice the education and training programmes for hospital-based doctors have not provided this kind of physician in sufficient numbers (Dixon, 2011; Amer and Joseph, 2017; Rimmer, 2017a, 2017b). However, a recent report from NHS Health Education England has highlighted the importance of having a higher number of doctors trained with generalists skills to improve IC and to better address patients’ needs (NHS Health Education England, 2020)

2. A potential role for multi-specialist, ICC within English NHS hospitals

Mayo Clinic could be regarded as preeminent in the use of multi-specialist ICC (Erskine *et al.*, 2018) with a care model characterised by use of a coordinating physician who focuses on not only the primary cause of the patient’s attendance but also the full spectrum of other care needs, by ensuring timely input from other hospital specialists (McCarthy *et al.*, 2009; Mayo Clinic, 2014).

Mayo Clinic summarises its care model as follows (Mayo Clinic, 2014):

- Collegial, cooperative, staff teamwork with true multi-speciality integration,
- An unhurried examination with time to listen to the patient,
- Physicians taking personal responsibility for directing patient care over time in a partnership with the local physician,
- Highest quality patient care provided with compassion and trust,
- Respect for the patient, family and the patient's local physician,
- Comprehensive evaluation with timely, efficient assessment and treatment,
- Availability of the most advanced, innovative diagnostic and therapeutic technology and techniques,
- Short waiting times between assessment, diagnostic tests, treatment and provision of a comprehensive care plan.

On the basis of this care model, and evidence that Mayo Clinic is frequently cited as one of the highest performing hospital organisations in the USA (Kodner and Spreeuwenberg, 2002; NHS England, 2015), we use this example of ICC to reflect on whether clinical and non-clinical hospital staff could benefit from this form of ICC and what the barriers to its implementation might be.

Our starting point is that multi-specialty ICC could provide benefits to patients, in terms of taking a more proactively holistic approach, while existing care pathways are frequently characterised as failing satisfactorily to address other multiple underlying morbidities during the episode of care. To achieve this aim, however, we foresee a number of key barriers that would need to be addressed. The literature on IC has identified several barriers that could affect its implementation (i.e. Ling *et al.*, 2012; Auschra, 2018; Kozłowska *et al.*, 2018): while it is beyond the scope of this perspective paper to provide a comprehensive review of this literature and while most of it relates to the integration between primary and secondary care and to the integration between different organisations, we feel that addressing the barriers within the following areas identified by this literature would also be critical to the successful deployment of a form of hospital-based, multi-specialty ICC in the English NHS:

- Information technology,
- Inter-organisational barriers (primary–secondary care interface),
- Organisational barriers (internal hospital processes),
- Finance,
- Resources (workload),
- Professional roles and behaviours.

2.1 Information technology

Mayo Clinic has invested, over many decades, in information and communication technologies which are chosen and tailored to support their ICC model. Test results, scans and the full patient record are rapidly available to any suitably authorised health care professional. Capital investment in technologies for diagnosis, treatment and staff training have a similar focus: how they will contribute to timely and efficient patient care and multi-specialty integration. Mayo Clinic's information systems also extend to referring primary and community organisations, to ensure that physicians, wherever they are located, are up-to-date with real-time patient information.

The English NHS, by contrast, is only now making advances towards similar interoperability of digital systems. Although specialist hospital doctors increasingly have access to primary care records, and vice versa (e.g. the 'Great North Care Record' in North East England), this is still far from commonplace, and even person-to-person communication between primary and secondary care is constrained by workload and the burden of administrative processes. NHS England/Improvement has established a digital maturity assessment framework, to allow hospital organisations to self-assess and benchmark their progress in procuring and implementing

information and communications, and while reports show some examples of hospital trusts with a high level of digital maturity, many are still a long way from the ambitions set out by NHS Digital.

2.2 Inter-organisational barriers (primary-secondary care interface)

As in the UK, Mayo Clinic patients may arrive via referral from a primary care physician, assuming they are covered by an insurance scheme or are self-funded. The link between referring physician and hospital specialist is maintained by direct communication and shared access to the patient record, but once in the hospital setting the specialist acts as the patient advocate, arranging diagnostic testing and other specialist opinion as required. The handover back to the patient's family physician includes a full account of the treatment received and recommended on-going care.

In theory, similar conditions apply in the interface between primary and secondary care doctors in the English NHS. However, in practice we know that the effectiveness of the gatekeeper role of the GP has been under stress in recent times (Sidhu *et al.*, 2020) and hospital specialists frequently question the variability in the responsiveness of GPs when receiving clinical opinion and other communications from hospital colleagues. For an ICC model to succeed in English NHS hospitals, senior managers and clinicians might have to consider a radical reframing of the relationship between hospital specialists and their primary care colleagues, at least in the case of multimorbid patients. This option could form part of the debate over the potential for vertically integrated health care models, in which primary care and specialist practice are merged, managed and financed within a single organisation (Sidhu *et al.*, 2020).

2.3 Organisational barriers (internal hospital processes)

Since the early 2000s, English NHS hospitals have made significant improvements to the processes for managing patients within the hospital environment. Patient flow through the hospital is a major focus of attention, and protocols for handovers between clinical teams are better established and supported by digital technologies. However, a lack of non-clinical 'ancillary' staff in clinics continues to make it difficult to guarantee patients a seamless, efficient service. In addition, the structure of clinics is often determined by existing practice and financial considerations, and it could be difficult to address this issue unless the relevant staff were given considerable latitude, and accompanying resources, to do so. This reflects a tendency in the NHS in which, despite a recognition of the need to innovate and change, well-intentioned but often highly bureaucratic barriers adversely affect patient-focused care, in an environment constrained by regulator-driven performance measures and targets (Aufegger *et al.*, 2020).

2.4 Finance

Hospital income in the English NHS is largely comprised of payments from Clinical Commissioning Groups (soon to be subsumed into ICS structures), which are based either on a complex tariff system or on block activity contracts.¹ In both cases, the overall effect is that hospitals are financially rewarded for providing individual and specific episodes of care. It is hardly surprising, therefore, that individual and specific episodes of care constitute the experience of many patients. The cross-specialism expertise required for holistic care of multimorbid patients, coupled with consistent physician advocacy for treatment of patients with high levels of frailty and dependency, is not properly recognised within hospital funding mechanisms. It could be argued that, in order to implement our proposal for ICC, an outcomes-based financial framework would be more appropriate, and could reward innovative service improvement.

¹Except for the recent period of the SARS-CoV-2 pandemic, when exceptional circumstances have applied.

2.5 Resources (workload)

In recent years, workload intensity and complexity has increased significantly in English NHS hospitals, with impacts on time for specialist doctors to communicate with colleagues in hospital settings, and with primary and community care staff (BMA, 2016; Rimmer, 2017a, 2017b). During the COVID pandemic, workload pressures have reportedly increased still further, and there is evidence of higher rates of sickness absence due to stress and anxiety, as well as COVID-related illness (Khorasane *et al.*, 2021). In these circumstances, and to achieve the Mayo Clinic ideal of ‘an unhurried examination with time to listen to the patient’, in-hospital ICC would require ring-fenced resources (staff and finance) to ensure that specialists would have the freedom to consult with each other, obtain the necessary diagnostic information and liaise with other hospital clinicians, GPs and social care staff.

2.6 Professional roles and behaviours

Mayo Clinic self-reports that specialist doctors with responsibility for patient care act as patient advocates, bringing their own expertise, but also that of a broad range of other health care professionals, to bear on the generality of the patient’s health and well-being. Support staff are available to organise the patient journey in an efficient and timely manner, and to ensure near real-time availability of all patient information. In contrast, recent trends in the English NHS, including under-investment in provision of specialist physicians, the increasing specialisation and sub-specialisation of clinical practice, the contemporary absence of generalists and the relatively late adoption of professional roles such as physician associates, continue to act as a barrier to genuinely holistic integrated in-hospital care.

3. Conclusions

Our overall view is that current IC initiatives do not necessarily address the issue of fragmented care of patients within English NHS hospitals, and thus leave patients and physicians alike unsatisfied with the care on offer. While the NHS in England continues to attempt to improve integration between different areas of health care and between the differently funded health, public health and social care sectors, it is possible that this ambition leaves unresolved a central cause of frustration for patients and clinicians. Patients with multiple conditions who experience a deterioration or an acute episode are usually referred by a GP to see a particular specialist, who, even if they suspect that other conditions merit investigation, may not have the time, permission or resources to bring other specialist expertise to bear on the situation. The chain of care is essentially episodic, which is likely to impact on patient outcomes and the patient experience.

In-hospital ICC, however, coordinated by a specialist who can easily and rapidly call on other specialist opinion, and rely on focused administrative and ICT support in the service of holistic care, could offer a much improved patient experience. However, the barriers to achieving this form of ICC in the English NHS are numerous and indicative of a long period of underinvestment in health system resources, namely, people and technologies.

Inadequacies and failures in the ICT systems used by the NHS are widely acknowledged (Sutton, 2011; Clarke *et al.*, 2017). The differing perspectives, motivations and training of primary and secondary care doctors have been widely studied, and improving the interface between these professional groups is often cited as a means to benefit patient care (Sampson *et al.*, 2016). Furthermore, the burdens of increasing workload, the lack of doctors who are trained as generalists and the financing mechanisms of English NHS hospitals might suggest that a move towards something akin to the Mayo Model to the context of English NHS hospitals would be a daunting task.

In this respect, it is clear that the organisational differences between the US and the English health care systems (in terms of financing, role of the government, organisation of services delivery, access to health services, etc.) and their role in facilitating or hindering the implementation of this ICC model should not be underestimated. However, since the publication of the Five Years Forward View, the NHS has embarked on a journey towards greater integration, trying to

facilitate synergies and collaborations between different organisations involved in providing care for a given population, similarly to the model of the Accountable Care Organisations in the USA (Ahmed *et al.*, 2015). More recently, the 2019 NHS Long Term Plan champions integrated, personalised care and a population health care model, alongside the Interim People Plan, which addresses the development of a workforce fit to support new models of care (NHS Improvement, 2019; NHS England, 2019a, 2019b). Moreover, if the Health and Care Bill will be approved, ICs will add regulatory muscle to these ambitions; albeit still with most focus on IC within and between health and social care agencies, rather than on in-hospital ICC.

Much of the current debate about the state of the NHS focuses on concerns about recovery from the COVID-19 pandemic, capacity in primary and secondary care, growing waiting lists for elective conditions, the increasing proportion of frail, elderly and high-dependency patients, and workload pressures on frequently stressed and burnt-out staff. In one sense these significant challenges suggest that any change in clinical practice which could reduce multiple episodes of fragmented care, would benefit patients, staff and the overall system.

Since policy makers and senior staff in the English NHS frequently promote patient or person-centred care as a means to achieve health system improvement more widely, a trial of multispecialty ICC in an English NHS hospital could provide a radical, bottom-up opportunity to identify a fundamental need for change in relation to multimorbid, chronic patients who find themselves in a hospital environment, to truly improve clinical outcomes and patient experience, and have a positive effect on staff morale and satisfaction.

Such a trial is already underway in England, albeit not within the publicly funded NHS. Mayo Clinic has recently opened a facility in London, offering rapid diagnostics and testing across a range of clinical specialties, and technology-enabled consultations with specialists in the UK and the USA (<https://www.mayoclinichealthcare.co.uk/>). The core values of the ‘Mayo Model’ are very much to the fore: English NHS hospitals may wish to consider if they should follow this path.

Conflict of interest. The authors declare none.

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