

Title: A national strategy is urgently needed for integrated care to reduce the load on emergency departments

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In complex health systems, the highest quality of care occurs when different elements of the system are joined up in a transparent way in order to meet patients' needs. In a primary-care focused system such as in the UK, the majority of care for children and young people (CYP) is provided in primary care whilst most specialist expertise resides in secondary care organisations. Pathways for both acute care and long-term conditions must therefore necessarily cross institutional borders, often multiple times. This can be a source of adverse outcomes and poor patient experience.

In England, health system changes over the past 30 years have acted to fragment the system into multiple smaller institutions and strengthen barriers. The 2012 Health and Social Care Act contributed to fragmentation of the health system for children(1). Breaking down these barriers through better integration of care across the primary–secondary care interface has therefore become a key aim for the NHS in England(2) and the focus of much quality improvement work by paediatricians across the UK.(3)

There's been a dramatic take-off of interest in 'integrated care' over the past 5 years across many countries.(4) Integration may be across institutional borders/barriers in the health system or across life-course barriers, such as the transition from CYP health to adult health systems. There has also been growing interest in system integration, across borders/barriers between health and other systems such as social care and education.

Much has been written, including in this journal, on the benefits of integrated care.(3-5) The benefits of more integrated care include the potential to improve safety, outcomes and patient experience and the potential also to reduce costs. One potential benefit of greater integration for CYP and families and for the system is a reduction in unnecessary hospital and ED attendances. Increases in ED attendances and emergency hospital admissions by CYP in the UK are a source of significant concern. ED attendances by the under 5s in England increased by nearly 30% over the past 10 years, with an overall increase for all CYP of 14%. (6) Population growth accounts for only some of this increase, and the notable increase in

presentations for febrile illnesses in young children suggests many of these attendances could be managed safely in-out of hospital settings. Unnecessary ED attendances are costly for families and for the state, result in poor patient experience, divert resources from hard-pressed EDs and may result in unnecessary and potentially harmful admissions. Unnecessary admissions may be a particular issue for the UK: a recent study comparing England with Ontario, Canada, found that twice as many infants were admitted after ED presentation in England compared with Ontario.(7)

There is evidence in adults that integrated care reduces ED admissions.(8) In England, 'vanguard' pilots operating new models of care as Primary and Acute Care Systems (PACS) and Multispeciality Community Providers (MCPs) have seen lower growth in emergency hospital admissions and emergency inpatient bed days than the rest of England.(9) Data on CYP are sparse, although pilot evidence suggests GP practice hubs and greater accessibility of GPs can reduce ED attendances.(10, 11)

High and rising ED attendances for CYP are a particular issue in London, which has remarkably diverse and often fragmented healthcare for its 2 million CYP who form 25% of the population of this strangely youthful city. Healthy London Partnerships (HLP), a partnership of NHS England and the 32 London Clinical Commissioning Groups (CCGs) identified over 40 sites providing inpatient paediatric care across the city, together with the 26 acute paediatric services and 32 community paediatric services.(12) HLP therefore has placed a strong focus on supporting better integration of care and improved out of hospital services.

In a paper in this month's journal,[insert reference] we summarize findings from HLP work that prospectively collected data on over 3000 CYP attending 6 EDs in London to estimate the proportions of ED attendances that have the potential to be managed in a range of out-of-hospital (OOH) models. This work was undertaken by HLP to inform commissioners looking to develop new out of hospital services. We studied a range of OOH models including nurse-led acute illness services, enhancements to primary care including wider access and better integration with paediatric services, plus models taken from the NHS England 2015 *Five Year Forward View*(2) such as multispeciality community provider (MCP) or primary and acute care system (PACS) models. We used a supernumerary clinician based in the ED to collect data on the clinical needs of each patient, including necessary assessment and management skills, clinical severity, diagnosis and investigation and treatments required. We then used algorithms using these data to assign CYP as being potentially appropriate or not for each of the OOH models.

Key findings were that innovative new models such as a CYP service delivered across a GP Federation could potentially reduce ED burden by nearly 50%, but that relatively simple expansion of access to primary care and better integration of paediatric expertise with primary care could potentially reduce ED burden by nearly one-third. Nurse-led acute illness teams had less potential to reduce ED attendances (only 14% overall, although nearly 20% of under 5 year olds) whilst a walk-in nurse-led service or an MCP could potentially manage one-quarter of presentations. More comprehensive models, such as a comprehensive community walk-in centre for CYP managing both injury and illness or a PACS could potentially manage over 70% of ED presentations.

Our data merely provide estimates of potential for reduction of ED presentations, and do not take account of family preferences and behaviour or workforce availability. Yet they show that widespread adoption of integrated out-of-hospital models have the potential to transform ED attendances, if implemented in ways that local populations will use.

Our data are illustrative of the potential of new models to transform health care for CYP. System-level support and robust evaluations of large-scale integrated care pilots will be essential to empower clinicians and health service managers to dissolve the sclerotic boundaries of care in England. However system-level support is currently limited in England as CYP have little priority within the health system outside of mental health. The *NHS Five Year Forward View* mentioned children only in relationship to prevention and to mental health.⁽²⁾ Similarly, children have been largely neglected in thinking about larger scale developments in primary care, such as General Practice Federations; NHS England's 2016 *General Practice Forward View* mentions children once.⁽¹³⁾ More concerningly, the 44 regional partnerships recently formed to transform healthcare in England, the Sustainability and Transformation Partnerships (STPs), are consistent only in their inadequate focus on CYP outside of mental health.⁽¹⁴⁾ This is somewhat puzzling as many STP financial plans are reliant on reducing ED attendances,⁽¹⁴⁾ a potential output of better integrated CYP care. Notably, this is in contrast to Scotland and Wales, where CYP have remained a priority, health systems are less fragmented and where new child health strategies have been recently announced in both countries.

Conclusions

Evidence that integration of care improves outcomes and patient experience whilst reducing health service burden is growing. Integrated care has many benefits aside from reducing ED burden, although this is one of the major drivers for commissioners of services. However developing structures and pathways that cross health system borders and shifting resources from hospitals into the community is challenging. There are many barriers that need to be overcome, key amongst them being our natural tribal tendencies within organisations we work for,⁽¹⁵⁾ governance issues and perverse incentives in market-oriented health systems. System-level support is necessary to help overcome these barriers. In England, there are real opportunities for regional devolution to drive greater integration, such as in Manchester. STPs in other areas have the potential to provide strategic and financial support necessary to drive integration, although this potential is currently rarely being realised. A more strategic approach to planning and delivery of CYP health services in England is required.

A 'Forward View for Child and Adolescent Health' is needed for England, making CYP a priority within the NHS and offering a comprehensive framework for planning and delivery of future paediatric services within STPs. It must ensure future care for CYP is integrated across the health system and is recognised as an essential element of planned changes in primary and urgent and emergency care. This framework should enable the development of comprehensive children's networks across STPs or groups of STPs that will reverse the fragmentation of care for CYP in England and improve health outcomes and patient experience.

Conflicts/Disclosure

Russell Viner is clinical director for CYP at Healthy London Partnerships.

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