Case study

Interoperability review and recommendation for NHS Dorset ICB

Synopsis

Ethical Healthcare, 6B and their integration partner worked with NHS Dorset ICB to review the existing integration and interoperability landscape across the Dorset ICS and to recommend improvements utilising modern technologies and open standards.

Background

NHS Dorset Integrated Care Board (ICB) undertakes the statutory responsibilities for planning and commissioning health and care services in Dorset.

NHS Dorset ICB works closely with its NHS partners, its two local authorities social care providers and many others across the Dorset integrated care system to improve outcomes in population health and healthcare, tackle inequalities in outcome and access, enhance productivity and value for money, and help the NHS deliver broader social and economic development.

NHS Dorset aims to listen to people and communities across Dorset, and to see things from their perspective, in order to co-design the services that people really need, so they can support people to live healthy and happy lives across Dorset.

The need

The data integration architecture across the Dorset Integrated Care System (ICS) had grown and evolved organically in each organisation within the ICS over the past 20+ years. Each organisation had implemented its own systems, standards, data models, and protocols, leading to the overall system architecture to be fragmented and inconsistent, often requiring duplicated effort to develop and maintain.

The consequences of this led to poor data quality, multiple versions of records, information silos, poor governance, inconsistent semantics, complex over-engineered solutions and security and access issues.

NHS Dorset ICB understood that in the modern age, integration between ICS organisations and with other local, regional and national partners has become more and more critical to support essential initiatives such as population health management, sharing of health records, care pathway management and referrals, advanced analytics, and exploiting the potential opportunities of machine learning and artificial intelligence (AI).

NHS Dorset ICB sought to partner with a technology and engineering consultancy to explore an alternative interoperability approach - using modern technologies and emerging industry standards, to support its local system ambitions and address the various integration architecture issues across the system, whilst architecting a robust platform that is fit for the future.

The solution

Ethical Healthcare, 6B and their integration partner worked with NHS Dorset ICB to review the existing integration and interoperability landscape across the Dorset ICS and to recommend improvements utilising modern technologies and open standards.

Working closely with key stakeholders and steering groups across Dorset, we explored the existing integration technologies, like the Dorset Data Platform (DDP) and the Dorset Intelligence and Insight Service (DiiS), whilst seeking to understand technologies and integrations across all care settings. The aim was to understand the existing landscape in detail, whilst looking for opportunities to transform the landscape of data integration and interoperability architectures within the Dorset ICS.

Following an in-depth review in collaboration with system partners, we outlined our recommendations for the interoperability and integration architecture moving forwards. Our recommendations were geared towards facilitating the smooth exchange of vital information crucial for direct care provision, operational management, planning, and research. By adopting a comprehensive approach that centred around the needs of patients and carers alongside those of health and care professionals, we aimed to address existing challenges such as data quality issues, governance discrepancies, and limited access to information.

The proposed target interoperability and integration architecture aimed to establish an ICS-wide data platform at its core, to enable real-time integration of data streams, and to offer valuable insights to care services in the region. Using open data standards like openEHR for persistence and HL7 FHIR for communications, and modern secure cloud-based technologies, the proposed architecture was designed to facilitate better interoperability across the county and to enable the effective delivery of patient-centred care.
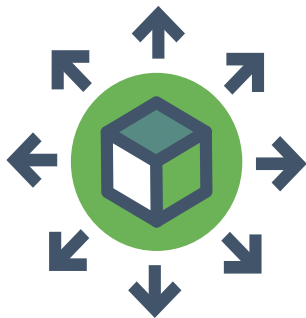
Impact

The review and recommendations we presented provided NHS Dorset ICB with a transformative roadmap toward modern data integration and interoperability capabilities across the whole ICS.

By focusing on user needs – bot patient and professionals – the proposed platform-based open data architecture provides a model fit for the health and care systems of the 21st century.

This strategic shift towards a unified, semantic, and federated integration architecture was a pivotal step forward in achieving the shared goal of delivering patient-centred healthcare across Dorset.

Contact us

Contact Matthew Roberts at **matthew@ethicalhealthcare.org.uk** to discuss how we can help you to review your digital healthcare systems.