



Oxford Health 
NHS Foundation Trust

Taking care of the patient data journey: success for Oxford Health NHS Foundation Trust in first step towards regional-wide interoperability.

Oxford Health NHS Foundation Trust, a forward-thinking Global Digital Exemplar, has embarked on a high-impact interoperability roadmap with international integration provider Enovacom that empowers NHS staff to create in-house interfaces with potential to deliver significant benefits across the health service.

Project scope.

Oxford Health NHS Foundation Trust is a digitally advanced mental health, community and learning disability trust. It is a mental health Global Digital Exemplar (GDE). It provides physical, mental health and social care for people of all ages across Oxfordshire, Buckinghamshire, Swindon, Wiltshire, Bath and North East Somerset.

Services are delivered at multiple locations including community bases, hospitals, clinics and people's homes. Interoperability - the ability to share and use information seamlessly across a patient journey - is vital in supporting the trust's aim of delivering care as close to home as possible.

The interoperability challenge.

Historically, interoperability has been an expensive and complicated challenge for the NHS to solve. The Five Year Forward View and its subsequent digital strategy, Personalised Health and Care 2020 set the vision for fully interoperable patient records, but Health Secretary Matt Hancock's Tech Vision and the NHS Long Term Plan has propelled interoperability up the healthcare agenda.

The bigger picture for interoperability goes beyond integrating hospital-wide systems into developing regional shared care records through Local Health and Care Regional Exemplar (LHCRE) programmes for improving and

coordinating individual care.

Oxford Health NHS Foundation Trust, facing these common integration challenges, embarked on a strategy to implement Enovacom's user-friendly and scalable technology that will release immediate patient safety and efficiency benefits, but importantly lay the foundations for regional-wide interoperability.

The two organisations have ambitious plans to help transform healthcare on a global scale. As a Global Digital Exemplar the trust appointed Enovacom as its international partner supporting healthcare organisations across the world with learnings and best practice from their interoperability successes.

Project success:

- **Improved patient journey** : integrated information across children's services, documents, pharmacy systems;
- **Empowering in-house staff** : interfaces built in-house with minimal training required;
- **Early efficiency savings** : 408 hours saved annually on unnecessary data entry duplication;
- **Fit for the future** : foundations in place to scale up to a clinical portal;
- **Lessons for NHS trusts** : Enovacom appointed as Oxford Health International GDE partner to share interoperability knowledge and experience with NHS.

Tackling the initial challenges around interoperability.

Scoping the project.

Oxford Health NHS Foundation Trust prioritised three key areas for an initial proof-of-concept using the Enovacom Integration Engine.

1

Sharing of clinical information from CareNotes electronic patient record (EPR) with external NHS organisations.

Clinicians will save up to four clicks per patient case when transferring validated clinical documents and discharge summaries to GPs.

2

Clinical information exchange from the trust's EPR to external Child Health Information Services (CHIS).

The Enovacom Integration Engine automatically sends clinical information such as New Birth Notifications to the local CHIS removing the need for manual creations, consolidation and uploads of CVS files, saving staff time.

3

Transferring data between CareNotes EPR and Ascribe pharmacy stock and dispensing system.

The Enovacom Integration Engine will use HL7 messages* to transfer data between two disparate systems: the EPR and pharmacy dispensing, and stock control system. It is arguably the biggest opportunity for immediate realisation of benefits, which are:

- Eliminating duplication of data entry - covering patient ward transfers, change in consultant or hospital discharges - on both systems;
- Improving discharge process with efficient medicines management (which will follow the initial proof of concept stage);
- Patient safety, care quality and outcomes enhancements;
- Reducing human error of incorrect data entry.

Delivering benefits.

Early benefits around pharmacy integration.

Research into potential efficiency savings from the CareNotes and Ascribe system integration through the Enovacom Integration Engine highlights positive results. The table below shows that a total of 34 hours was spent by trust staff replicating data from CareNotes to Ascribe over one calendar month. This equates to 408 staff hours and just over £9,000 in salaries annually.

Duplication of patient information covers :

- Demographics - Patient first and last name, date of birth, address, GP practice and address, gender and NHS number.
- Episodic - current ward location of patient, consultant.

*Health Level-7 or HL7 refers to a set of international standards for transfer of clinical and administrative data between software applications used by various healthcare providers

Number of Admissions, transfers and discharge from Carenotes Mental Health and Community Health during November.

	Manual entry in Ascribe during November (Number)	Average Time taken to replicate 1 record in Ascribe	Total in Hours
Number of Admissions	274	2 minutes	9 hours
Number of Transfers	337	3 minutes	17 hours
Number of Discharges	250	2 minutes	8 hours

Research conducted in November 2018 has been shared courtesy of Rachel Hanks of Oxford Health NHS FT.

Data sharing for blood tests efficiency.

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“We discovered that we could potentially improve patient outcomes and deliver efficiencies between organisations. For example, one area we will be exploring is that if a patient is being treated by one of our clinicians here and had a blood test with another NHS organisation, we would not need to request another blood test when the result is safe enough to use. So we would save precious NHS time, effort and money from ordering an unnecessary blood test, plus the clinician has all information in front of them to make a quick analysis and outcome.”

Dr Fathi Saad, EHR Systems Integration Manager, at Oxford Health NHS Foundation Trust.

How will interoperability affect Oxford’s patients?

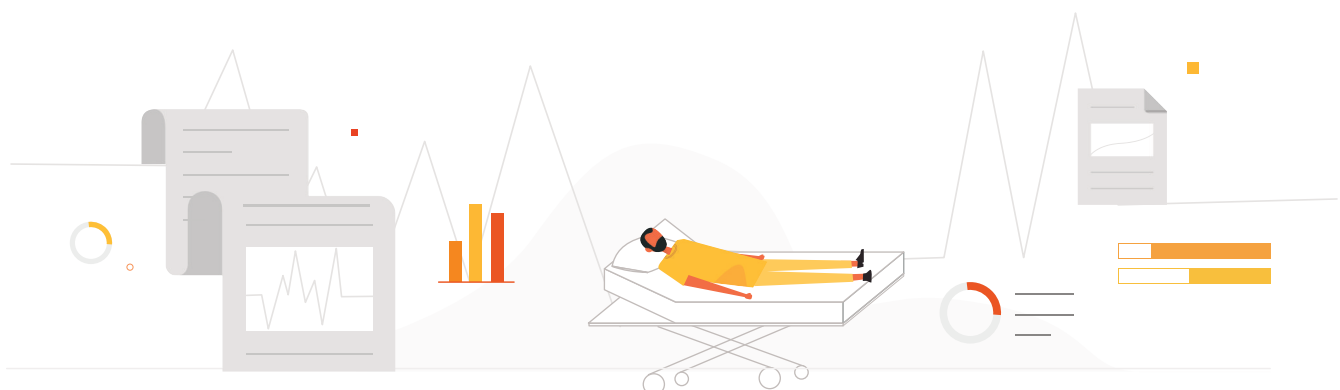
Rachel Hanks, EHR Technical Project Manager at Oxford Health NHS Foundation Trust.

On delayed discharges:

“Patients could get their medications quicker because staff do not have to spend their time entering information onto the pharmacy system. The faster automated data transfer reduces the likelihood of delayed discharges because medications are not being dispensed on time.”

On better outcomes:

“There will be more opportunities to improve diagnosis and treatment because the information that clinicians need to make informed decisions will be available rather than having to call up other organisations to find out about a patient’s care.”



Going further by partnering with Enovacom.

To enable their interoperability strategy, Oxford Health NHS Foundation Trust selected Enovacom's Integration Engine solution.

This technology is unique in its ability to be used by non-technical staff, being optimised to transform data between standards and create interfaces without programming. By comparison, traditional proprietary integration engines require a team of integration architects to manage the creation of interfaces and the day-to-day management of these.

Fast deployment times.

Just 15 days were provided by Enovacom to deliver the project, four days for training on the interoperability platform, and a further 11 days to support the Oxford team in designing all of the interfaces by themselves.

**Just 15 days
support to deliver
the project.**



Why did you choose to work with Enovacom?



“ We chose a solution that could give us control over the project and future strategy without having to rely on the competing priorities or resources of IT suppliers. The Enovacom system empowers our internal teams who do not have technical integration skills to make updates and changes quickly.”

Rachel Hanks, EHR Technical Project Manager at Oxford Health NHS Foundation Trust.



“ Our criteria was simple: choose user-friendly technology that meets our needs and work with an IT partner to empower our in-house teams to implement the system. Enovacom's vision to help NHS organisations become self-sufficient in building interfaces and integrating systems was unique and matched our thinking.”

Dr Fathi Saad, EHR Systems Integration Manager at Oxford Health NHS Foundation Trust.



“ Whilst parts of the NHS have found it difficult to work with some IT companies due to inflexibility or a siloed approach to technology, Enovacom has been refreshingly open and engaging with us, taking a partnership approach to working with us.”

Michael Marven, Chief Pharmacist at Oxford Health NHS Foundation Trust.

Enovacom: Oxford Health NHS Foundation Trust's International GDE partner.

As just one of six mental health global digital exemplars, Oxford Health NHS Foundation Trust is committed to sharing how it is delivering improvements in the quality of care for its patients through deploying world-class interoperability technology. Enovacom will work closely with the trust to create blueprints that outline learning and experiences from this project for other NHS trusts to digitise patient journeys at pace.

Next steps for Oxford Health NHS Foundation Trust's digital maturity.

The future evolution of the partnership with Enovacom holds substantial potential for healthcare staff and patients across Oxfordshire, neighbouring regions and the wider NHS.

Access to vital clinical information is a digital priority for the trust who plan to use the Enovacom Integration Engine to integrate data from the organisation's various systems to build a clinical portal. Clinicians will be able to search for patient information in one place, by logging in to just one system.

Furthermore, future interoperability developments will enable the trust to view regional shared care records including acute, GP and social care information from the LHCRE. Patient information will be accessible through any system such as CareNotes and e-prescribing whilst documents can be managed in a dedicated Document Management Solution for easy identification and access to the required document.

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“Our clinicians are asking for the capability to see patient data from other systems within the trust so now we are designing the Enovacom platform so it can integrate all the clinical systems into one and then build a clinical portal so that clinicians can see all the patient activity from all the systems, before extending that reach to data within the local acute trust, Oxford University Hospitals NHS Foundation Trust. We will be integrating all internal and external systems in one user interface.”

Dr Fathi Saad, EHR Systems Integration Manager, at Oxford Health NHS Foundation Trust.

A 'game-changer' for medicines optimisation.

Integrating Carenotes and Ascribe clinical systems is just the start of the trust's journey around medicines optimisation. The trust plans to extend interoperability to outpatient services where medications are required to be dispensed for patients, allowing the pharmacy team to spend more of their time clinically rather than duplicating data to be able to enter medications. The trust has started to look at electronic Prescribing and Medications Administration (ePMA) solutions.

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“Interoperability improves medicines optimisation at a clinical level by having accurate, consolidated and contemporaneous information about patients' medicines, rather than this all being on different systems, thereby reducing inefficiencies and risks. But the really exciting part is how we can build and use rich data sets in our local system to shift our focus from the costs of medicines to the value of medicines in the context of patient outcomes, and how medicines contribute to someone's care. This is potentially a real 'game-changer' for us and complements the digital medicines element of the national Medicines Value Programme.”

Michael Marven, Chief Pharmacist, at Oxford Health NHS Foundation Trust.

Following the success of the first milestones, Oxford Health NHS Foundation Trust appointed Enovacom as its International Global Digital Exemplar partner with both organisations committed to sharing knowledge and experience with other NHS trusts building interoperability maturity.



About Enovacom.

As a software editor dedicated to health IT systems, Enovacom was founded in 2002 to enable exchanging and sharing patient data easier and more reliable.

Enovacom has established and matured a unique software suite on interoperability and security dedicated to healthcare, with the focus to enable:

- Exchanging and sharing health data between establishments;
- Medical information confidentiality;
- Using Healthcare Big Data.

15

years experience in
health.

1500

health organisations
equipped.

97%

satisfaction rate.

5

different countries.

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