



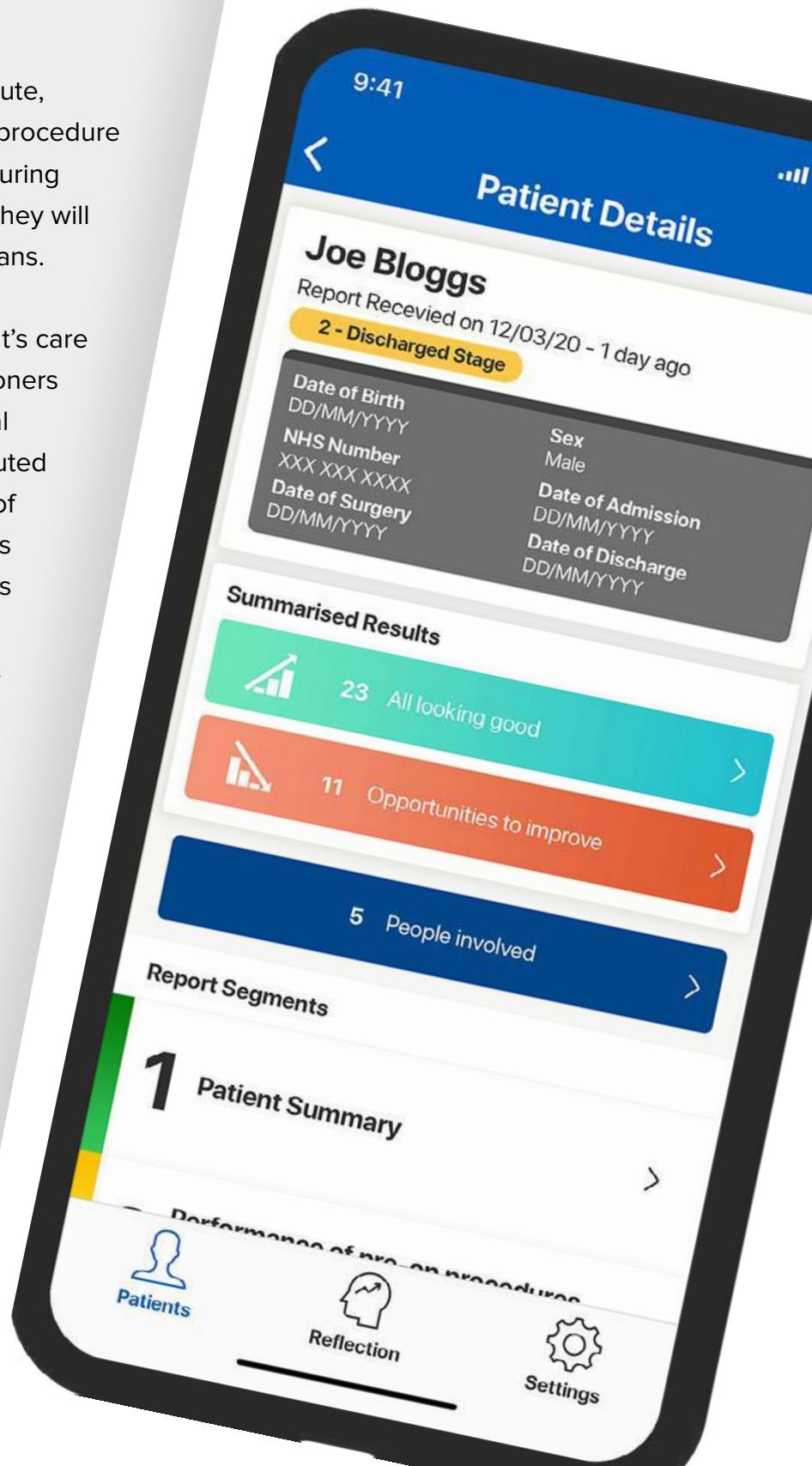
QI Notify EmLap Quality Improvement App

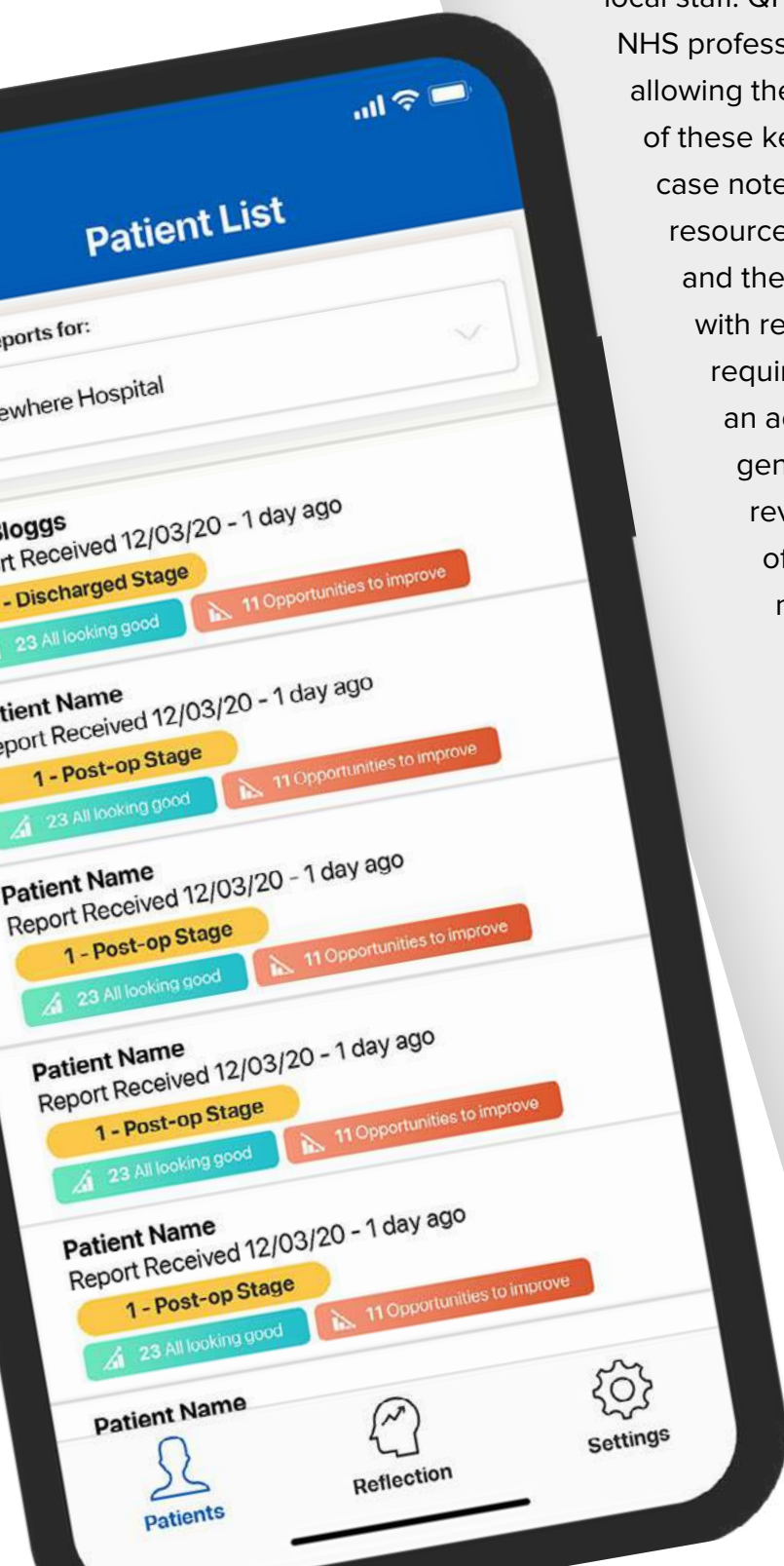
Extended Case Study

A patient presenting to hospital with acute, abdominal pain may require a surgical procedure known as an emergency laparotomy. During the patient’s journey through hospital, they will receive care from many different clinicians.

Each clinician is focussed on the patient’s care at a particular point in time, but practitioners rarely receive feedback on the eventual outcome and how their actions contributed to the case. The lack of a holistic view of the ‘care pathway’ inhibits the clinician’s ability to contextualise the effectiveness of their intervention and reduces the organisation’s ability to learn from what works well and hence further improve outcomes for future patients.

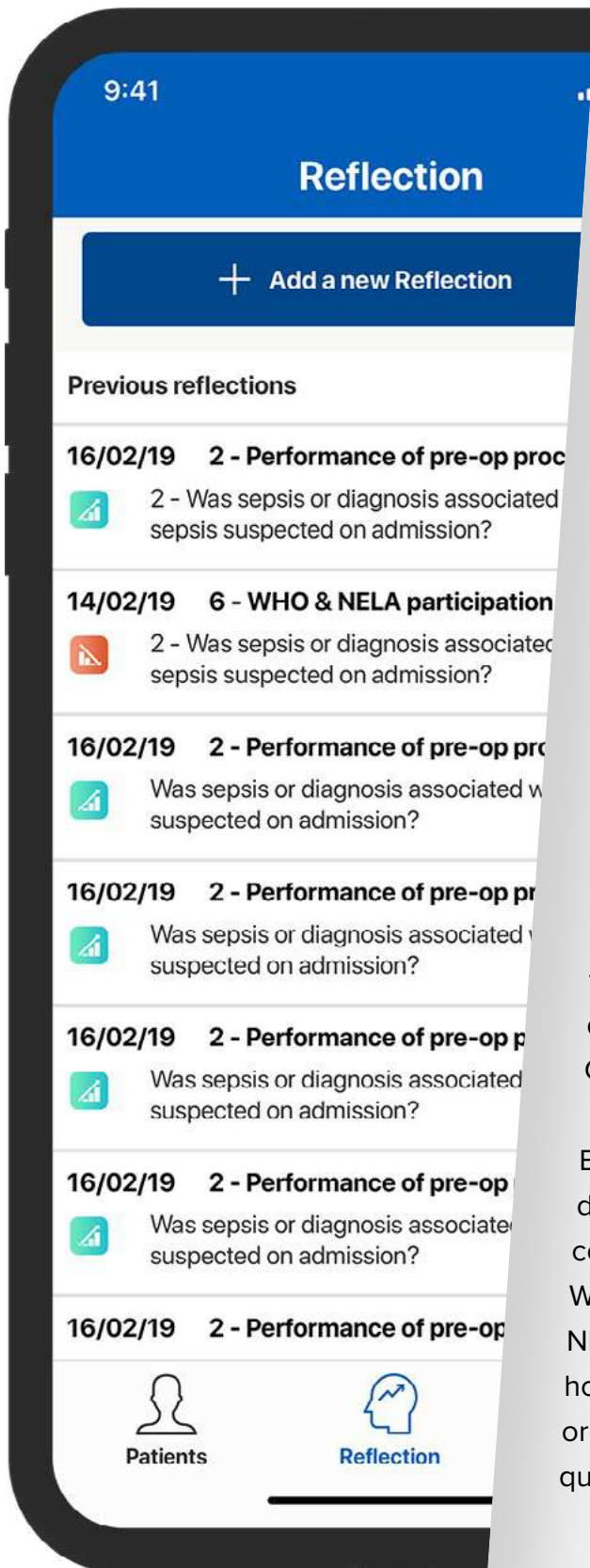
Dudley Group NHSFT, supported by the West Midlands Academic Health Science Network (WMAHSN) have worked with exploding phone to create a digitally assisted solution: QI Notify.





The National Emergency Laparotomy Audit contains coded information recording many of these key elements within the patient journey, but the data is not readily interpretable for local staff. QI Notify-EmLap transforms this data to provide NHS professionals with a narrative and pictorial 'timeline' allowing them to rapidly assess the provision and timeliness of these key steps, in a way that is similar to a traditional case note review. Traditional 'case note reviews' are resource heavy, typically consuming hours of clinical time and therefore only performed rarely. NHS professionals with responsibility for the care of patients who have required an emergency laparotomy, can be given an account which allows them to view the QI Notify generated timelines of care. They can therefore review every case, enhancing their understanding of what works well and ensuring this is replicated more often in the future. Users can also view the National or local standards of care related to each key element from within the app and provide reflection and feedback to ensure learning from best practice is shared. The solution also delivers automated notifications when new data pertinent to the clinician's involvement in the patient's journey becomes available.

The QI Notify app enables clinicians to reflect and document privately on their adherence to clinical best practice and facilitates a feedback loop whereby clinicians have the ability to submit suggestions for enhancing the experience and care of future patients.



Transformation of coded data to produce a 'near real time' summary of a patient's journey presented in a clinically meaningful and readily understandable format. Other challenges include the safeguarding of patient data, utilising the best available security practices for mobile devices, and complying with local NHS IT and governance requirements. The QI Notify system is built to adapt to the ever-changing demands put upon the medical profession. It does this by employing a behind-the-scenes "templating system", where predefined data structures drive the output seen within the apps. Virtually every part of the Patient Case Record is generated dynamically based upon these templates, allowing sections and patient outcome items to be modified more rapidly without there being the need to issue client app updates. This allows rapid deployment of new Case Record structures with new or updated Outcomes when required by the changing Clinical needs of the client. These templates are then used to create pre-cached Patient Case Record data ahead-of-time, reducing the workload the QI Notify system needs to accommodate compared to a more traditional dynamic, on-demand data driven system whenever a Case Record is retrieved from the system.

Enhancements to the system are already being defined in terms of generic applicability and compliance with evolving regulatory requirements. With this second stage complete The Dudley Group NHS FT, the WMAHSN and their partners would hope to be able offer the solution to other NHS organisations, to support their emergency laparotomy quality improvement work.