Development of the Patient Safety Incident Management System (DPSIMS) project

Alpha phase update

December 2017
We support providers to give patients safe, high quality, compassionate care within local health systems that are financially sustainable.
Introduction

NHS Improvement’s ambition is for the NHS to be the safest healthcare system in the world. We will achieve this by enabling and encouraging the NHS to become devoted to continuous learning and improvement in its efforts to reduce the risk of harm to people while they use healthcare.

A major project helping us to achieve this vision is the Development of the Patient Safety Incident Management System (DPSIMS) to upgrade the systems we use to collect and analyse information about things that go wrong. When they do, we want to learn more about why and how, to better inform what we need to do to improve nationally and in individual NHS organisations.

The current system – the National Reporting and Learning System (NRLS), along with related systems such as STEIS (the Strategic Executive Information System; used for the management of Serious Incident investigations) – is 12 years old. Technology has advanced in the interim and the NRLS is now considered difficult to use and limited in its capability. You can read more about the NRLS and how we use it on our website.

A new system using modern technology will improve the service for patients and carers, healthcare staff, NHS organisations and decision-makers, releasing more of their time and energy to work to reduce patient harm.

What are we aiming for?

We need a system that:

1. **Is easier for both staff and patients to use:** for example, better central sharing of information across the organisations that need it reduces the number of systems a single incident needs to be reported to. For patients, recording a patient safety incident should be simple, and they should be able to do this with a clear understanding of how their information will be used to support national learning and improvement.

2. **Works across the whole of healthcare.** Currently, only larger organisations that have purchased a local risk management system,
mostly hospitals and large community and mental health services, can batch-upload their incidents. Others have to submit them individually on e-forms. This discourages them from sharing their information and has resulted in very low participation from primary care, for example.

3. **Allows and encourages people to do more with safety data, both locally and nationally.** By making the data more accessible and transparent, NHS healthcare providers can access and analyse raw data, and work together to solve problems that affect them all. Public data should be shared in places patients can find and make sense of it.

4. **Provides better feedback to those recording incidents, so taking the time to do this feels worthwhile.** Many current users have told us they feel they “report into a black hole”. By improving the types and quantity of feedback we can provide, people recording incidents can see how they are helping to improve patient safety.

5. **Allows the NHS to learn more from incidents and share improvements to help reduce harm.** By using modern software we hope to make better and faster use of the data we receive, and to help providers share their improvement work, reducing the need to keep ‘re-inventing the wheel’.

We are using the Government Digital Service (GDS) agile methodology to develop a new system in phases: in each of these we build parts of the system and then test them to inform what needs to be changed and what is needed from the next phase, keeping the focus on what users need. This means we can develop a system that does exactly what those who use it need it to do. However, it does mean that at the start we do not know exactly what we will end up with.
Phases of the DPSIMS project

The individual phases are:

- **Discovery Phase**: Complete ✓
- **Information Model**: Summer 2017; Complete ✓
- **Alpha phase**: What questions should the system ask? How can data be structured to support the best analysis?
  - Nov 2017 – Mar 2018
- **Beta phase**: Building prototypes, proof of concept, what to try next
  - 2018
- **Live phase**: Expansion, testing, development.
  - 2019 onwards
- **Roll out**

Government Digital Services
"Agile Development Process"
Discovery phase and information model

Over the last three years we have asked hundreds of NHS and independent sector healthcare staff and organisations, patients, carers, IT specialists, policymakers and academics what they consider to be the shortfalls of the current patient safety incident recording and learning system, and what they want a new system to do.

You can read about what we found out during site visits to different provider types in DPSIMS site visits – key findings; and the user stories we developed from conversations with frontline and risk management staff are on our website.

Over summer 2017 we rethought what data the system should capture and how it is best organised to support analysis and learning. We spoke to many users of patient safety data, including national organisations such as the Care Quality Commission and the Medicines and Healthcare products Regulatory Agency, as well as people who routinely report incidents, to understand what this would mean for them.

The result is a refreshed information model that we can use to do a wider range of analyses because it separates concepts that were previously tied together, and applies up-to-date thinking about the science of safety and the nature of errors and risks. An important new facility, for example, is the ability to distinguish three different kinds of events and record them accordingly: as either Patient Safety Incidents; as unexpected poor patient outcomes where a Patient Safety Incident may or may not have contributed but more information is needed to clarify this; or as risks for the future. This helps us better understand the nature of the problem being reported to us and guides what kind of response is appropriate.

What will happen in the Alpha phase?

The Alpha phase will test what we have learnt so far. We will build prototypes that users can trial and comment on, and assess the technology underpinning the proposed new system. We will also continue to test and develop the information model and its component parts, including the patient safety incident taxonomy, as we build it into the service prototypes.

Our work in this phase has six main themes:
• **Two-way integration with local risk management systems (LRMS):** how data flows into and out of the systems in which NHS organisations keep relevant safety information.

• **Online incident recording:** how patients, organisations without LRMS and mobile users let others know about things that have gone wrong.

• **Investigation management:** how the new system supports detailed local reviews of things that have gone wrong, in line with best practice.

• **Data access, exploration and analysis:** how people can view what has been recorded, together with tools to help them use the data.

• **Interface with other systems:** making sure the new PSIMS can ‘talk to’ other IT systems or information stores where helpful.

• **Communications:** keeping people informed about progress during the Alpha phase.

Once the Alpha phase is complete, we will seek approval from the GDS team for what we have done and to proceed to the Beta phase.

**Want to get involved?**

We always need people to trial what we are building. If you would like to volunteer, please register your interest by emailing us at DPSIMS-stakeholders@NHS.net. Other opportunities to get involved include:

- a survey for frontline staff (closes on 27 December 2017)
- a survey for patients, carers and the public (live until 15 January 2018)
- webexes building on what we learn from the surveys (starting on 17 January 2018)
- fortnightly 'show and tell' sessions (until March 2018).

We will send you details if you register as above, or you can follow @LucieNHSSafety on twitter.