# THE *FORWARD VIEW* INTO ACTION:
## Paper-free at the Point of Care – Completing the Digital Maturity Self-assessment

# Contents

# Executive summary

Using digital technology more effectively and ensuring providers are operating paper-free at the point of care is critically important to dissolving the artificial barriers between care settings and professionals required to deliver the Five Year Forward View. It is essential to securing safe and sustainable health and care that supports healthier lives, delivering practical benefits for professionals and patients within local health and care economies. Where professionals continue to manage care in the face of unknown risks, patient experience, safety and effectiveness suffer.

In digitally mature health and care economies, professionals are able to operate paper-free at the point of care, enabling new workflows to support collaboration and continuity of care. Through accessing the best current clinical knowledge, spotting signs of early deterioration and intervening proactively, professionals recognise and reduce unwarranted variation. Digital record systems increasingly incorporate patient recorded data and preferences. Professionals and patients make more informed decisions and better choices, improving outcomes and efficiency.

Providers are being invited to complete a Digital Maturity Self-assessment in order to establish the baseline position regarding the effective use of information, technology and systems by health and care professionals at the point-of-care. Chief Executives of NHS provider organisations will receive letters between 6th and 23rd November as a formal request for this information, and outlining the steps to be taken in order to access the assessment via a dedicated online tool. The assessment should be completed and returned by 15th January 2016.

This document is intended to provide guidance to providers on the completion of their Digital Maturity Self-assessment. It will also inform other organisations in the health and care system that will have an interest in the outputs of the exercise, either from an individual provider perspective or through a regional or national Digital Maturity Index. The document sets out the purpose and objectives for the Digital Maturity Self-assessment, provides an overview of the structure of the assessment and the online tool that will support the process, and details how the self-assessment will work in practice.

Commissioners and providers, working together in local footprints, will benefit from understanding the baseline position upon which local digital roadmaps must build. This in turn will support local planning including sustainability and transformation plans, prioritisation and investment decisions. Completion of common assessments will also facilitate the benchmarking of progress, and the sharing of learning and collaboration between providers.

# 1 Introduction and context

1.1 The [Five Year Forward View](#) made a commitment to paperless patient records. This was supported by a Government commitment in ['Personalised Health and Care 2020'](#) that 'all patient and care records will be digital, interoperable and real-time by 2020'. Information flowing more effectively across health and care to support the delivery of direct patient care underpins sustainability and plans to secure service transformation.

1.2 An essential building block of interoperable records is the effort of individual providers to initially reduce and then eliminate the use of paper at the bedside, in the pharmacy and in the laboratory. Increasingly, health and care professionals will exploit digital information to undertake complex care co-ordination and access knowledge consistent with practicing to the highest standards in the world.

1.3 Local design and delivery is key to securing the support of clinicians, nurses and other frontline professionals for the introduction of new care models and workflows. A national framework of information standards and open interfaces underpinning local solutions will help ensure that information can be shared without undue effort to support integrated and continuous care.

1.4 Progress towards a fully interoperable digital way of working will be a key component of commissioner assurance and provider continuous improvement, performance and inspection.

1.5 To stimulate progress towards paper-free at the point of care, a three-step process has been set out. In guidance published at the start of September, local health and care economies, led by commissioners, were invited to confirm their footprint for the production of local digital roadmaps. Confirming the partners within local footprints and the governance arrangements was step one in this process.

1.6 The completion of a Digital Maturity Self-assessment by the principal providers delivering care within a local footprint represents step two in the process.

1.7 Producing a local digital roadmap, linked to a local operational delivery plan and sustainability and transformation plan, will be step three. An effective roadmap requires a clear and consistent baseline against which local partners can demonstrate how far they have progressed towards the goal of being paper-free at the point of care. Such a baseline does not currently exist - it will be provided through the Digital Maturity Self-assessments. Further detail on the content and format of high quality local digital roadmaps to deliver paper-free at the point of care will follow with the forthcoming planning guidance.

## 2 What are the objectives behind the assessment of digital maturity?

2.1 For 2015/16, the following five objectives for the Digital Maturity Self-assessment process have been identified:

- To identify key strengths and gaps in providers' ability to operate paper-free at the point of care
- To support internal planning, prioritisation and investment decisions within providers towards operating paper-free
- To support planning and prioritising of investment decisions within commissioner-led footprints to move local health and care economies towards operating paper-free
- To provide a means of baselining / benchmarking nationally the current ability of providers to operate paper-free
- To identify the capacity and capability gaps in local economies to transform services and operate paper-free

2.2 Further objectives will be added in subsequent iterations as the assessment model evolves. For example, we expect the assessment of digital maturity to play a role in the CQC's inspection regime from March 2018 onwards. Adopting a phased approach gives us an opportunity to learn from the experience of the first round, listen to feedback and identify the changes needed to support these additional objectives from 2016/17 onwards.

## 3 How will the completion of a Digital Maturity Self-assessment support these objectives?

3.1 By completing a Digital Maturity Self-assessment, providers will have a comprehensive baseline understanding as to progress made to date towards operating paper-free at the point of care. This will give a firm basis for planning, prioritisation and delivery within the organisation. It will support providers to confirm a clear trajectory and monitor their progress towards operating paper-free at the point of care. An illustrative output from an assessment is available to download.

3.2 By looking across the assessments of the providers within a footprint, the stakeholders within the footprint, including CCGs and Health and Wellbeing Boards, will have a comprehensive baseline understanding as to progress made to date towards operating paper-free at the point of care within the local health economy. This will give a firm basis for planning and prioritisation within local digital roadmaps. It will support commissioners and providers within a local

footprint to confirm a clear trajectory within their local digital roadmap and monitor their progress towards operating paper-free at the point of care.

3.3 The aggregation of individual self-assessments into a Digital Maturity Index will enable a clear picture to emerge of the relative progress of one organisation against peers. An example extract of a set of comparison data is provided in Annex B. This presents substantial opportunities for shared learning and co-ordinated progress. It will assist organisations in neighbouring footprints, or setting out on common journeys, to explore whether common technical solutions or a consistent approach, for example to delivering an interoperability strategy, will pay dividends.

3.4 Organisations can understand and learn from those who have optimised and exploited what is often the same core technology to deliver a higher level of benefit.

3.5 The publication of an overall Digital Maturity Index will also enable year by year progress towards the ambition of being paper-free at the point of care to be demonstrated.

# 4 Beyond local health economies, how will the outputs from Digital Maturity Self-assessments be used?

4.1 To support transparency and openness, an overall Digital Maturity Index will be published, created from the individual Digital Maturity Self-assessments. This will allow progress at a national level towards the goal of paper-free at the point of care to be monitored

4.2 As the detail of future technology funding is expected to emerge in early 2016, analysis of the Digital Maturity Index at a 'macro' level may inform the principles of allocation. Assessments of digital maturity at a provider or local health economy level within a footprint may inform local decisions to target and prioritise funding.

4.3 The CCG assurance process will utilise the digital maturity assessments in monitoring sustained progress towards the delivery of paper-free at the point of care within a local health economy.

4.4 The information captured will also assist NHS Improvement (the organisation that will align the work of the NHS Trust Development Authority and Monitor), in its role as the regulator of provider performance, and in discharging its responsibilities to support those providers and local health and care systems that are not making sure and steady progress towards delivering paper-free at the point of care.

4.5 The results recorded in the Digital Maturity Index will also inform key lines of enquiry and the determination of overall ratings within the revised CQC inspection regime.

# 5 What are the key dates in the process?

5.1 We anticipate local progress on roadmap development to pick up significantly in January 2016, driven by the publication of the 2016/17 planning guidance. Consequently we expect **Digital Maturity Self-assessments to be completed by providers by Friday 15th January 2016**.

5.2 The key dates to note are set out below:

| 6th November to 23rd November 2015 | NHS Providers individually invited to complete a Digital Maturity Self-assessment |
|---|---|
| Within 10 working days of receiving the above invitation | Name and contact details confirmed for the individual who will be responsible for completion |
| 15th January 2016 | Digital Maturity Self-assessment completed |
| December 2015 or January 2016 (estimated) | Mainstream Planning Guidance issued, incorporating templates and further guidance for local digital roadmaps |
| March 2016 | Digital Maturity Index published |
| January to April 2016 | Main development period for local digital roadmaps |

5.3 Local health and care economies who already have made strides to develop their local digital roadmaps should continue to press ahead. The completion of the Digital Maturity Self-assessment by providers will enable partners within the local footprint to validate their emergent thinking regarding the scale of the challenge, resources required and relative priorities.

# 6 How has the assessment framework and associated tool been developed?

6.1 The content of the digital maturity assessment has been co-developed with the NHS and social care and with academic partners in Imperial College and University College of London Partners. It has drawn upon the best international evidence to identify the critical factors that support frontline professionals to operate paper-free at the point of care.

6.2 Other maturity models were considered before this framework was developed, but were not sufficiently aligned with our requirements.

## 7 How will the information reported in the Digital Maturity Self-assessment process be validated?

7.1 To further validate the tool and to ensure that the self-assessment undertaken by individual providers is sufficiently robust, an external audit of a sample of completed self-assessments will take place between the submission deadline (15th January 2016) and the publication of the Digital Maturity Index (March 2016).

7.2 Going forward we intend to explore the potential for a peer led validation process to complement the self-assessment and external audit.

## 8 How often will the Digital Maturity Self-assessment process be repeated?

8.1 It is intended that provider organisations complete the assessment on an annual basis as progress is made towards delivery of the paper-free at the point of care ambition.

## 9 How will the digital maturity framework be developed in the future?

9.1 Whilst retaining a consistent understanding of progress against the original baseline, the tool will be developed over time as the operating environment, models of care and capability of information technology to support direct care processes is enhanced and deepened. For example patients are increasingly becoming more engaged and active in decision-making through accessing and contributing directly to the care record. Genomic information is also providing a window into the process of disease progression that is directly informing decision-making.

# 10 How is the assessment framework structured?

10.1 The framework is structured as below. The questionnaire element of the tool is structured around these sections and sun-sections.

| Section | Sub-sections | Description |
| --- | --- | --- |
| Readiness | • Strategic alignment<br>• Leadership<br>• Resourcing<br>• Governance<br>• Information governance | An assessment of the organisation's ability to plan, deliver and optimise the digital systems it needs to operate paper-free at the point of care |
| Capabilities | • Records, assessments and plans<br>• Transfers of care<br>• Orders and results management<br>• Medicines management and optimisation<br>• Decision support<br>• Remote and assistive care<br>• Asset and resource optimisation<br>• Standards | An assessment of the digital capabilities available to that organisation and the extent to which those capabilities are available and being optimised across the organisation as a whole |
| Enabling Infrastructure | | An assessment of the extent to which the underpinning infrastructure is in place to support delivery of these capabilities |

10.2 Different types of provider will complete an assessment based on the same framework. The focus on capabilities is intended to ensure that the majority of sections are relevant (at least in part) to most organisations, whether providing acute, community, mental health or ambulance services.

10.3 However, we recognise that significant parts of some sections will not apply to all providers. Where this is the case, respondents should select N/A to the relevant questions and continue moving through the assessment. Over time, we will use the responses to refine the assessment by identifying where particular questions can be omitted for specific service providers.

# 11 When is a Digital Maturity Self-assessment required?

11.1 All NHS organisations providing acute, mental health, community and ambulance services in England will be invited to complete a Digital Maturity Self-assessment.

11.2 Other organisations, including private sector and not-for-profit providers, identified in one or more local digital roadmap footprints as providing significant levels of NHS-funded services in that area will also be asked to complete an assessment. This is to ensure each footprint across the country has access to a comprehensive baseline of their key providers' current digital maturity.

11.3 Most providers will complete a single assessment. However, where a single organisation provides services across multiple settings, e.g. both acute and community, they may wish to complete a separate assessment for each element. Where two previously distinct organisations have recently merged, we would anticipate separate assessments providing the greatest insight. Conversely, where the multiple settings have a single accountable Chief Clinical Information Officer / Chief Nursing Information Officer / Chief Information Officer and share common infrastructure and systems, then a single assessment would be sufficient. By default, all providers will receive a single account for their self-assessment. Those wishing to complete an additional assessment should request an additional account from england.digitalmaturity@nhs.net.

11.4 In scenarios where providers are members of multiple local digital roadmap footprints, multiple assessments are not expected. The self-assessment should be completed against the totality of service provision, independent of the commissioning arrangements.

# 12 How is a Digital Maturity Self-assessment completed?

12.1 The assessment is completed via a dedicated online tool. A username and password will be sent to the nominated contact from each provider.

12.2 Respondents can choose whether or not to complete the assessment in one go or in stages, and can 'delegate' specific sections to colleagues with particular knowledge or expertise as required.

12.3 The questionnaire element of the tool is structured around the sections and sub-sections set out above.

12.4 The majority of the questions ask providers to assess themselves on a five-point scale against a range of statements that represent 'good practice'. These are supplemented by a relatively small number of quantitative questions,

typically around the adoption and use of standards. These questions require a response against a numeric range.

12.5 The initial version of the self-assessment has been designed to produce a comprehensive view of providers' digital maturity without requiring an extensive and overly-burdensome data collection exercise. The tool does not require evidence or justification to be recorded against each question.

12.6 The self-assessment should not be completed by just one provider representative in isolation. Before recording a response to a qualitative question in the tool, it is expected that a wide range of evidence from across the provider will be reviewed and opinions canvassed from a range of stakeholders (see section below). Providers are expected to be able to justify a response when challenged, and may wish to maintain a record of their own rationale to support this. Indicative evidence sources are provided in Annex A.

12.7 Having completed and submitted a self-assessment, providers will be able to view a copy of their responses in full, along with a visual summary of their answers in each sub-section. Once an assessment has been submitted, responses cannot be changed, although the results will continue to be accessible.

# 13 Who should be involved in a Digital Maturity Self-assessment?

13.1 Providers should look to gather views from a wide range of clinical and non-clinical stakeholders when completing the self-assessment. Different sections of the framework lend themselves to different engagement approaches. While the enabling infrastructure section may be the preserve of the informatics professionals, the assessment of the capabilities section should have significant clinical input, and the readiness section should have significant input from the executive team.

13.2 Where a range of views are expressed initially in response to a question, it is expected that steps will be taken to reach a consensus between senior clinicians and non-clinicians.

# 14 What support will be available for completing the Digital Maturity Self-assessment?

14.1 Respondents will have access to technical and non-technical support via a range of channels, and further details will be provided with the tool login details:
- Online support from within the tool
- Offline email support
- Telephone support

14.2 For general queries on the digital maturity programme, please contact england.digitalmaturity@nhs.net.

# Annex A - Indicative Evidence Sources

The table below contains examples of evidence sources that may inform a Digital Maturity Self-assessment or a follow-up audit following completion of the assessment:

| Digital Maturity Tool Section - Sub-section | Indicative evidence |
|---|---|
| Readiness - Strategic alignment | 1. Digital vision strategy document and road map.<br>2. Service transformation programme document and clinical strategy to evidence alignment with digital vision and strategy.<br>3. Terms of reference for Design Authority / equivalent group. Project pipelines and minutes evidencing prioritisation, time to implementation and feedback to users regarding the process to support evidencing 'effectiveness' of the group. Project pipeline supports evidencing of clinical innovation.<br>4. Evidence service improvement projects supported by technology, including deliverables and outcomes.<br>5. Service desk metrics and user satisfaction surveys. |
| Readiness - Leadership | 1. Annual board agenda and plan indicating frequency of board profile.<br>2. Board minutes evidencing discussion and agreed actions.<br>3. Role profile / job description of relevant Executive Director responsible for the digital agenda.<br>4. Career history and relevant experience of non-executive director with responsibility for technology.<br>5. Role profile / job description of CCIO(s) / CNIO(s), and/or clinical leads.<br>6. Job plan of relevant clinician(s) with CCIO / CNIO roles to indicate time available for the role.<br>6. Documented updates to digital strategy, including those reported to the Board of Directors. |
| Readiness - Resourcing | 1. Procurement strategy and the alignment with the digital vision.<br>2. Contract management plan and governance arrangements for large (£1m+) suppliers. Latest copy of service performance metrics where appropriate. |

| Digital Maturity Tool Section - Sub-section | Indicative evidence |
|---|---|
| | 3. Benefits realisation performance matrix:  benefit type with phased financial delivery trajectory. Worked example of a benefits line, identifying the operational process to realise the cash benefits. |
| | 4. Whole Time Equivalent (WTE) employed in the services described to provide a headline understanding the capacity. |
| | 5. Name and qualifications of the clinical safety officer at the Trust, and the most recent clinical safety case submitted to HSCIC. |
| | 6. Organisation chart, including roles and responsibilities for technology and transformation functions. |
| | 7. Training profiles by staff type. |
| | 8. Ratio of devices to users, average system log-on times, and user satisfaction feedback or surveys. |
| | 9. Three year workforce plan for technology capability: evidencing scope of skills sets required: technical, change management, programme management, clinical and communications skill sets. |
| Readiness - Governance | 1. Digital programme summary document. |
| | 2. Programme governance structure, board membership, and minutes to evidence attendance. |
| | 3. Business cases to support digital programme(s). |
| | 4. Benefits realisation plan and transformation / cost improvement plan, supported by evidence to demonstrate no double counting. |
| | 5. Evidence to support the adoption of technology and use of standards. Expectation to be evidenced through policies.  Adoption and use to be evidenced through 2/3 key processes: e.g. requesting an x-ray from fracture clinic, reporting of a Full Business Case, use of standard discharge summary. |
| | 6. Information and clinical risk management strategies, assessments and resulting action plans. |
| | 7. Examples of the application of best practice guidelines in practice. |
| Readiness - Information governance | 1. Cyber security strategy, and work plan to implement strategy, including evidence of resourcing. |
| | 2. Cyber security work plan to evidence how the organisation engages with cyber security industry intelligence, achieves penetration testing evidence, and promote staff awareness. |

| Digital Maturity Tool Section - Sub-section | Indicative evidence |
| --- | --- |
| | 3. Staff training records, evidenced through IG Toolkit framework. Evidence should also exist in regular reporting to a Board subcommittee. <br> 4. Digital asset register in line with IG Toolkit requirements. <br> 5. Sample of Disaster Recovery plan and Business Continuity Plans by information asset. <br> 6. Evidence of 3rd party policies and audit of compliance with data destruction processes. <br> 7. Third party contracts from suppliers, such as hardware suppliers, to evidence compliance with IG requirements. |
| Capabilities - Records, assessments and plans | 1. Percentage of historic records scanned in relation to the whole archive. Evidence to show how these records are made available and are integrated with the contemporaneous records (on paper or electronic). <br> 2. Clinical functionality to enable clinicians to access systems and data while off site. <br> 3. Evidence to demonstrate the volume and usage of pre-populated order sets, template discharge summaries and letters. <br> 4. Point of care information capture: Percentage of inpatient spells where clinical documentation is captured digitally, and the percentage of outpatient (new and follow-up) visits were clinical documentation is captured digitally. <br> 5. Evidence to demonstrate ease of use, e.g. average log-on times, single sign-on, and the ability to enter data into native systems through a single portal. Use of voice recognition technologies or digital dictation to support data entry. <br> 6. Percentage of patients treated without reference to their paper notes for inpatients and outpatients, to be evidence by the notes being requested for relevant admission or attendance. Where possible, evidence for specific capabilities e.g. prescribing, radiology and pathology test ordering etc. <br> 7. Information received and sent digitally to external providers. |
| Capabilities - Transfers of care | 1. Discharge summary template, and evidence of transmission format i.e. electronic. <br> 2. Evidence to demonstrate compliance with Academy of Medical Royal Colleges documentation standards, in terms of discharge summary lay out and content. <br> 3. Output from audits of clinical content by primary and secondary care clinicians. |

| Digital Maturity Tool Section - Sub-section | Indicative evidence |
|---|---|
| Capabilities – Orders and results management | 1. Key focus areas for radiology and pathology.  Process for the generation of orders.<br>2. Clinical functionality in respect of alerting on previous orders and results to reduce usage, and clinical decision support functionality.<br>3. Evidence to demonstrate whether order sets are tailored to clinical conditions, pathways, specialties or settings (inpatient/outpatient).<br>4. Policies and procedures regarding patient identification and specimen labelling and the use of barcoded technology.<br>5. Clinical functionality to enable doctors and nurses to track the status of the specimen or test through the laboratory process.<br>6. List of diagnostic tests available digitally, and the pipeline for further development.<br>7. Clinical functionality to alert and escalate abnormal results.<br>8. List of results and images that are shared across the hospital and with other care settings.<br>9. Clinical functionality to alert of pending tests or results prior to discharge.<br>10. Policies and procedure relating to formal sign off or action of results and procedure for managing results which have not been reviewed. |
| Capabilities - Medicines management and optimisation | 1. Percentage of medicines reconciliation undertaken on admission, and the process for inpatient, discharge and outpatient medication prescribing.<br>2. Range of medicines prescribed electronically, including consideration for infusions, sliding scale, variable dose and rate regimens, paediatric dose checking, chemotherapy.<br>3. Order sets in place for common conditions and the use of reference sources like the British National Formulary.<br>4. Process for the completion of medication-related patient risk assessments are completed – e.g. VTE assessments – and associated alerting.<br>5. Process for administration, patient identification and monitoring of doses, interactions, timings, including process for alerting of missed medications.  Evidence to demonstrate compliance monitoring of alerts. |

| Digital Maturity Tool Section - Sub-section | Indicative evidence |
|---|---|
| | 6. Process for monitoring antibiotic practice and stewardship. |
| | 7. Description of Adverse Drug Event (ADE) monitoring and yellow card reporting to the MHRA. |
| Capabilities - Decision support | 1. Existing functionality to enable clinical decision support. |
| | 2. Extent to which functionality alerts for patient preferences (e.g. end of life care), allergies, and deterioration in patients. |
| | 3. Documented task lists and pathways, and evidence of monitoring of pathway compliance. |
| | 4. Documented audits / monitoring of overruling of best practice advisories. |
| | 5. Functionality to prompt questions about public health actions like vaccination and smoking cessation. |
| | 6. Digital system support for the completion of statutory and organisational discharge planning processes, including communications with social care agencies. |
| Capabilities - Remote and assistive Care | 1. Availability and use of videoconferencing tools for consultations and collaborative working. |
| | 2. Clinical governance processes around the remote monitoring of patients. |
| Capabilities - Asset and resource optimisation | 1. Bed management system functionality, including the extent of coverage across the organisation, and whether it interfaces with the Patient Administration System and / or the clinical record or RFID tracking |
| | 2. The use of Radio Frequency Identification (RFID) tags on equipment and evidence of analysis performed e.g. utilisation, location etc. |
| | 3. Rostering functionality, including coverage across the organisation, evidence of monitoring the effectiveness of rostering, and documented management action to improve. |

# Annex B – Example Comparison Data

**Provider 1 –Scores for the Capability section**
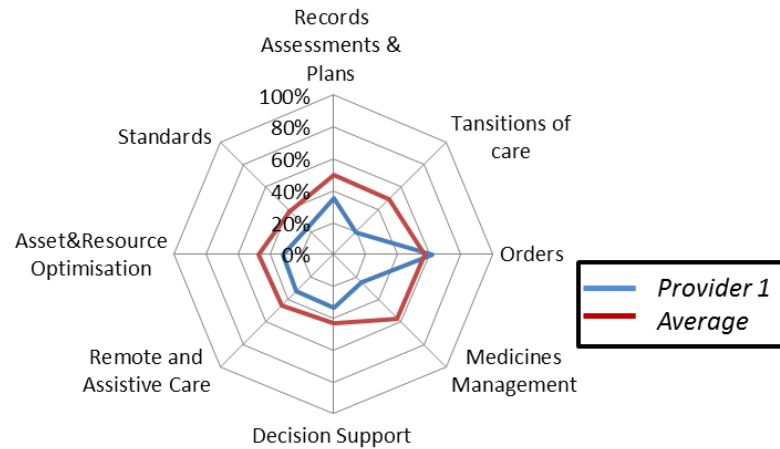


**Conclusion:**

- The provider lags behind the average for other providers in the sample across all but one of capabilities

- It is likely to require significant internal investment in most areas to bring them up to the same level as the others

**Provider 2 –Scores for the Capability section**
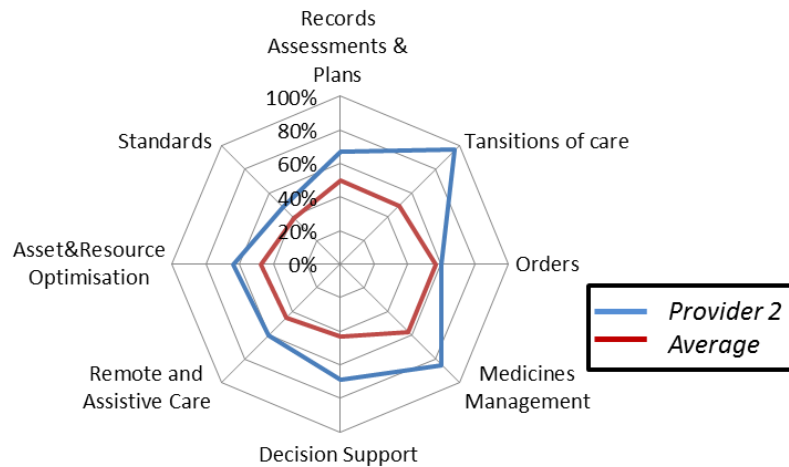


**Conclusion:**

- This provider outperforms the average in all areas

- Additional investment in their internal capabilities may not be as high a priority as other members of the footprint

- However, there are still gaps to address and they are likely to require support for capabilities focused on information sharing amongst the footprint

The NHS Five Year Forward View sets out a vision for the future of the NHS. It was been developed by the partner organisations that deliver and oversee health and care services including:

- NHS England
- Care Quality Commission
- Health Education England
- Monitor
- The National Institute for Health and Care Excellence
- NHS Trust Development Authority
- Public Health England

**Five Year Forward View**