Hampshire Healthy Families

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Southern Health

NHS Foundation Trust

A Practical Guide to Engaging Health Visiting Services in Improving Analytical Capability

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IHV Institute of Health Visiting

Excellence in Practice

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- Victoria Jackson, Project Coordinator, Institute of Health Visiting

Introduction

Health visiting continues to face difficulties articulating causal impact, and the current data collection systems and analytics have been widely criticised for providing limited information to support quality improvement. This has led to a call for changes to maximise the opportunities afforded by better data and analytics.

In response, with support and funding from The Health Foundation, Southern Health NHS Foundation Trust ('Southern Health') formed an innovative partnership with the Institute of Health Visiting (iHV) to carry out a project on improving analytical capability within health visiting, using national insight, local application, and testing.

By bringing together the iHV - the national centre of excellence for health visiting - and the local intelligence and data expertise in Southern Health, the test and learn project aimed to:

1. Gain a greater understanding of the challenges and opportunities faced by managers and clinicians within the field of health visiting data and analytics
2. Fill a gap in knowledge, providing much needed information on the national analytical capability in health visiting and the identification of user stories as a baseline for quality improvement
3. Provide an opportunity to pilot a new Digital Lead post to support digital transformation in health visiting across Southern Health's health visiting teams
4. Develop an analytical tool to support the identification and clinical management of "hidden vulnerable children" within health visiting caseloads
5. To share findings through a national communications plan and iHV's established networks to influence health visiting policy and practice.

As a 'discovery' phase project, we have taken a user needs led approach to address a 'gap' in knowledge and understand more about the current national analytical capability in health visiting which formed phase 1 of this project. Phase 2 of the project builds on these findings which were used to inform their local application and further development in Southern Health NHS Foundation Trust. Two reports were produced which provide detail on how the project was delivered and the objectives achieved, please access the "Discovery phase AIMS Insight Report"[1] and "Local Application" End of Project Report[2].

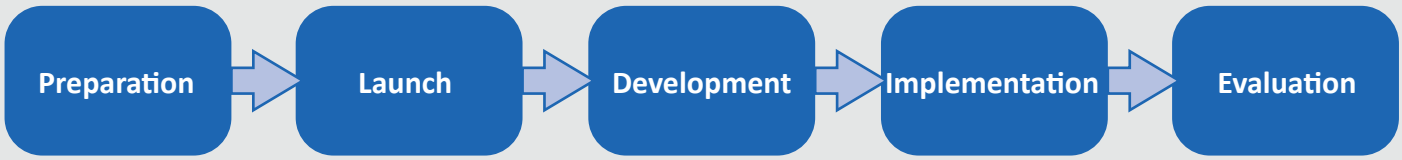
The final objective of the project focused on sharing learning through national networks. To support national dissemination, this practical guide has been produced covering the key principles of delivering a test and learn project and the development of a tool to improving analytics in the health visiting service. It is hoped that this guide will provide a useful starting point for other health visiting services embarking on a similar journey to improve the use of data and analytical capability within their service. The guide also contains considerable transferable learning for other services working with children.

This guide presents a stepped process to implementing a local analytics improvement project. It draws on the learning from this project which set out to develop a digital tool and data visualisation to support clinical decision making, "My Digital Caseload Tool".

1. Developing your project plan - the key ingredients of a successful improvement project

It is important to recognise that there is significant variation in service delivery models, including IT systems and local arrangements for data collection in health visiting. Therefore, we have presented this guide as a series of key steps and areas for consideration that you can explore when planning your analytic improvement project, rather than a detailed implementation guide related to a particular electronic patient record or visualisation software. NHS Innovation recommends a five-step process to service improvement which we have drawn upon to structure this guide (Figure 1).

Figure 1: A five steps process to service improvement



Each step is outlined below with considerations and key learning points from the Southern Health test and learn project:

2. Step one: Preparation and project inception

Project planning is a crucial first step in any project delivery. Key considerations need to include:

- The current need and shared objectives – What's the problem? Why does it matter? What are we hoping to achieve?
- Strategic support for the project
- Capacity – of the project team, frontline staff, and systems to deliver the project
- Key stakeholders - Who are the "key stakeholders" who will be impacted by this project? Who needs to be involved in the co-production of the proposed solution? How do we ensure "buy-in"/ engagement?
- Time frames supported by a structured project plan

These may sound logical, however, learning demonstrated that each of these areas needs full and detailed consideration at the inception of the project.

A clear project proposal was submitted to the Health Foundation with outcomes and funding to support the delivery of the project. Locally, it will be important to develop your project proposal with key stakeholders. Successful implementation relies on people working together with full engagement throughout the project, from its inception, to build a shared understanding of the "need", aims, objectives, and expected benefits that you are hoping to achieve.

Scoping the current need, within Southern Health, it was recognised that the current health visiting electronic patient record contained data which was often hidden from sight and poorly utilised to inform clinical decision making. This reflected the national picture reported in phase 1 of this project, which highlighted that most health visiting data was used to monitor performance and the delivery of process outcome measures. The team in Southern Health were keen to "Move beyond bean counting", recognising the potential to present data to frontline health visitors in a more meaningful and easily accessible format to inform their clinical decision making. It was hoped that, by improving data visualisation in this way, health visitors' use and application of data would be improved.

The following questions may help you to scope your current needs and identify similar potential:

- In your area, what is the need or "gap" you are trying to address?
- Who are the "key stakeholders" who will be impacted by this project? Who needs to be engaged in the co-production of the proposed solution?
- What would success look like? What difference are you hoping that your service improvement will make?

- Do you have the information sharing agreements in place to support the development, or a willingness to consider these?
- Consider developing a Theory of Change to guide your improvement process[3]

In our test and learn project, we did not formally complete a Theory of Change. These can be helpful to identify the key ingredients needed to make the change, as well as support a more robust evaluation of the project outcomes.

Involving all the key stakeholders in the project at the start was essential, these should include Information Technology, health visitor leads, frontline practitioners, board level and director agreement. Also, wider services that may be impacted by any changes the service improvement may lead to. It is also recommended that consideration is given to the impact on families' experiences and potential use of their data.

Establishment of a project steering group

This was key to the successful delivery of the project and should be established at the start of any improvement journey. It is important to consider the roles of the steering group and ensure at the start that they have capacity to support and engage fully. We attach some draft terms of reference for a steering group for your adaptation, Appendix A.

Learning from the test and learn project

To support the implementation process, one of the key points of learning from our project was the importance of getting full "buy-in" from the start from all stakeholders, including frontline practitioners. This should include clearly outlining the responsibilities and commitments expected of the co-production team, supported by a communications plan to help promote the values, benefits and importance of the digital tool. Unfortunately, workload pressures (and the unfortunate timing of the project during the COVID-19 pandemic) meant that some staff were not able to attend all the planned workshops or steering groups.

It is also important to be realistic about what is achievable during the project timeline and start by developing a minimal viable product (MVP).

- What are the "must haves" to include in the product? These can be elicited and prioritised by engaging with the end-user to clearly define their "user stories". This Southern Health project drew on the national "user stories" published in the Discovery Phase AIMS Report with local refinement.
- Do we have access to the data we want?
- Who is the product aimed at?

Capacity and leadership for the project

Consideration of the capacity to deliver the project and lead it effectively are essential to have in place at the start.

2.1 Recruitment of Digital Lead

The health visiting service, like all other parts of the health service, needs to maximise the opportunities afforded by data and analytics and it was important that the project considered how analysts and clinicians could work more closely. To support this, the project scope included the recruitment of a Digital Lead for health visitors and a Data Analyst whose main role was to work with the clinicians on this project; ensuring the MVP met the requirements of the discovery phase. We would recommend the Digital Lead for health visitors as a key post within the project supporting its success and embedding the improvement within practice.

The aim of the Digital Lead role within this project was to:

- Work with frontline health visitors and management to empower staff to engage in digital transformation
- Encourage and support practitioners to lead the way in service redesign and to view technology as an enabler
- Engage health visitors and optimise their time to help Southern Health procure systems that are fit for purpose
- Offer clinical expertise to improve the design of clinical systems to meet clinical need, ensuring ease of use and increased staff confidence
- Ensure that technology solves problems for users and does not create new ones
- Be a conduit of information and a link between technology, Data Analysts and frontline staff

- Help the workforce to understand that analytics and data aim to improve and inform practitioner decision making and prioritisation of patient care, whilst also ensuring data is collected in the least intrusive way so it interferes as little as possible with practitioner time
- Ensure that IT training supports staff so that they are educated in the use of data and analysis, and it becomes normalised within healthcare and integral to service delivery.

A job description and personal specification for the Digital Lead in health visiting can be found in Appendix B.

The Digital Lead post was advertised internally within Southern Health as a secondment, and a formal interview process followed with interview questions focused on the following knowledge and skills:

- Health visiting experience working with complex levels of vulnerability
- An understanding of Tableau (the analytical tool used in Southern Health)
- An ability to engage frontline staff
- Leadership skills
- A passion for analytics

The need to ensure that protected time and clear leadership and management is in place for the post is essential, and we would recommend that time is well spent establishing a clear infrastructure to support the post.

Key learning from the test and learn site

To support the implementation of digital transformation, it is important to ensure that, alongside digital skills, the Digital Lead has good leadership skills and experience of change management. These skills are essential to support practitioner engagement, develop a thorough understanding of their current experiences of data and their user needs, help promote the values, benefits and importance of the transformation, and drive forward culture change. To support business continuity, it is also important that the critical project leadership role does not rely solely on a single person and contingencies are in place, with leadership support and a backup plan if needed, to ensure that the project plan remains on track.

2.2 Recruitment of dedicated Data Analyst time

It was agreed that, to support the project, a dedicated Data Analyst resource was a key post to work with the health visiting Digital Lead. The Data Analyst needs to have good communication skills and be able to engage with health visitors to understand their needs around co-production of the digital tool. The following skill set is also crucial to enable completion of all aspects of the tool:

- Good knowledge of coding language such as Structured Query Language (SQL) and understanding of structuring information within a Data Warehouse
- The ability to quickly understand existing data process arrangements and augment these where required in relation to the information within the tool
- Business Intelligence authoring capability to display the data within a dashboard. Whilst our specific tool was Tableau, we were able to recruit an analyst with experience predominantly in other Business Intelligence software who quickly adapted and transferred their skills for development of the dashboard.

A job description and person specification for the Data Analyst can be found in Appendix C.

Key learning from the test and learn site

The Data Analyst role, like the Digital Lead post, proved to be essential for the project delivery. We encountered an early risk on this project as we were unable to recruit a successful candidate for the analyst post within our original project timescale. This is a helpful reminder that unexpected challenges are often faced by projects in the "real world" and require flexible and pragmatic project timeframes which can accommodate some changes as required.

2.3 Agreement of shared language at the start of the project

A key learning point that should be considered at the start of the project is the need for a shared and agreed use of terminology and language. Examples include agreement on what the tool would be called at different stages, such as prototype, minimum viable product (MVP), pilot, version 1, 2, 3, etc. Any accompanying documentation needs to be clearly defined and titled, such as the difference between the User Guide (the practical how to navigate the tool for staff) and the Service Guide which describes its development and implementation.

2.4 A clear and agreed project plan

Dedicated capacity to coordinate and manage the project should not be underestimated, we recommend this should be in place alongside the Digital Lead and Data Analyst posts. Within our project, Prince2Project management was drawn upon to manage timeframes, stages, and risks. This enabled us to manage the stages of the project effectively and mitigate where necessary.

3. Steps two and three: Development and launch

At the start of the project, engagement with the key stakeholders is vital and the Digital Lead role is essential to facilitate this.

The Digital Lead had several objectives which included the following:

- Identifying key stakeholders
- Relationship building with stakeholders including safeguarding, health visitors, families, and the Data Analyst
- Promotion of the project to health visiting teams to enable engagement with health visitors
- Organisation of a series of workshops which explored hidden children, understanding users' needs around the use of data and development of the digital tool
- Consideration of current data that health visitors collect from families and how this data is used to inform clinical decision making and then communicated with families

To support this, a series of local application workshops were held with frontline health visitors who would be testing the service improvement.

The workshops were structured to support engagement and scoping of the current use of data within the service.

Workshops 1 and 2 allowed the Digital Lead, Data Analyst and attendees the time and space to: capture the reality of health visiting, collate user stories and explore barriers to using data; consider what was required to shape change and what data health visitors felt would enhance their clinical decision making when reviewing records. This information enabled the analyst to explore what visualisation models were available and to build a digital tool that met users' needs.

When considering each workshop, it was important to agree what outcome was needed before delivery. In our project workshop 2, the project team worked with the practitioners to agree the core data set that would support their practice and the information to build a prototype which included the following:

- Demographic details
- Assessment details which are recorded within the electronic patient record using structured forms. This includes details such as mental health, drugs/alcohol, smoking and domestic abuse etc
- Information regarding the number of immunisations and other relevant assessments completed and those outstanding
- Ages & Stages outcome measures which are recorded at specific developmental stages such as 1-year and 2-year
- Details of Accident & Emergency attendances over a rolling 12-month period shared with the Trust by local acute providers under a sharing agreement based on direct patient care

Workshops 3 and 4 allowed for a cyclical process of refining and tweaking of the MVP.

A template for the workshops is provided in Appendix C.

A test and learn process was adopted throughout the workshops, this worked well and would be recommended to ensure continuous engagement in the process with frontline staff. Within the appendix we provide a guide to the questions that could be used to facilitate the workshops.

Key learning from the test and learn project

The project plan and workshop outcomes were clearly defined but in hindsight, to support the iterative cycle, it would have been useful to map out a structured requirement document based on the user stories, so that we could assure ourselves that requirements had been met when reviewing each iteration.

3.1 Building of the My Digital Caseload Tool

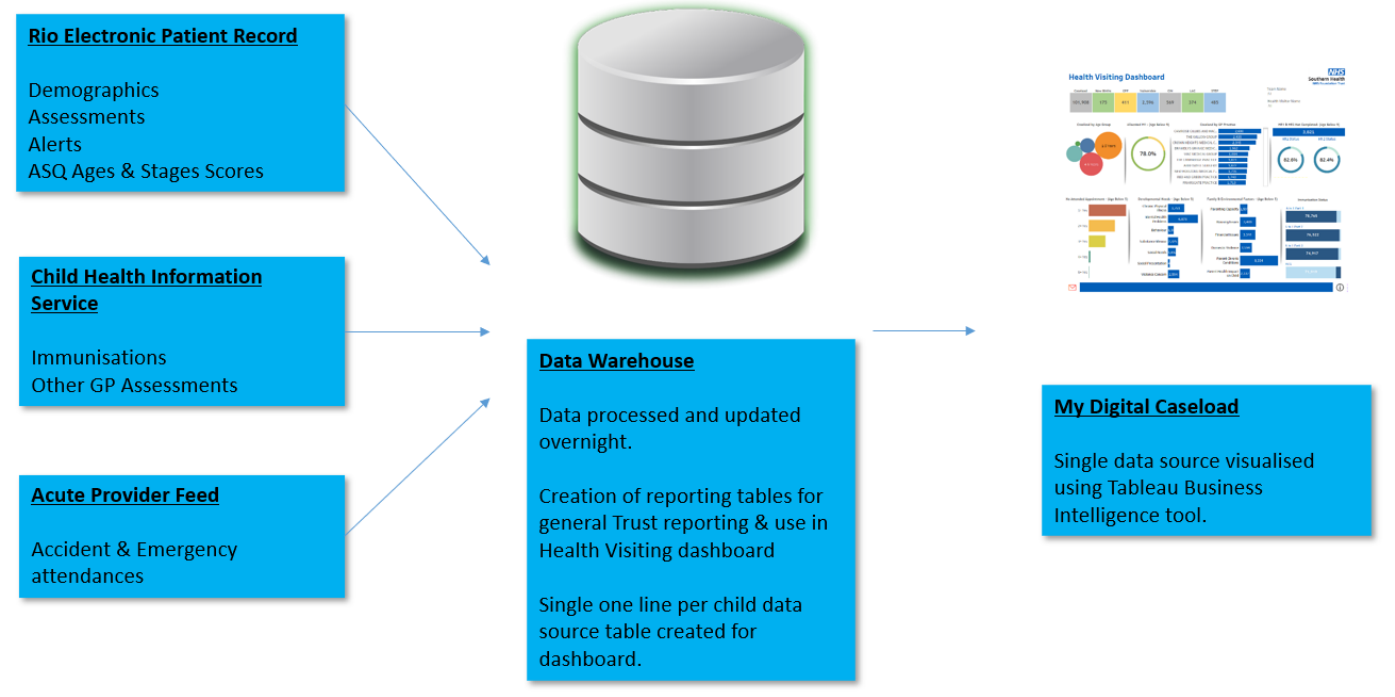
It must be noted that Southern Health are in a fortunate position of being both the Health Visiting and Child Health Information Service (CHIS) provider for the entire Hampshire local authority, hence being available on the same instance of Servelec RiO without the need for further data sharing processes and governance. Where this is not the case, it may be necessary to establish sharing agreements based upon direct clinical care. Whilst the Trust utilises RiO, it is understood it is possible to record and extract similar data content in electronic patient records supplied by a number of software providers.

3.2 Mapping what you currently have - The flowcharts on cleaning data and dataflow

It is important that each element of information regarding a family is available within the data warehouse in a simple way that is understood and relatable back to the original assessment completed by the practitioner. Without this, the data can often be considered out of context regarding the question that was actually asked.

In addition to this, it is important to plan the structure of the data upfront regarding eventual final uses within the dashboard. This can be tricky as you may not know in full what the final requirements are, but by building in a way that allows you to simply add items for each child allows flexibility. Southern Health dataset created one row of information for each child, however other data structures could be considered, see Figure 2.

Figure 2: Step-by-step/flow chart of how the My Digital Caseload Tool dashboard was produced



Data structure and data warehousing

Southern Health benefits from an existing mature and well-maintained data warehouse. A selection of the items identified for inclusion within the tool are utilised in existing areas of their internal or commissioner reporting, hence were already available for inclusion within the tool. Work has been completed to warehouse the remaining items for inclusion. These have generally been information contained within assessment forms that is more clinically rich. On each occasion, the most recent update to each assessment is utilised to ensure the most up-to-date information is provided, thus data is date stamped to allow the timeliness and potential relevance to be assessed. It is important that the analyst/developer takes time to understand existing data warehouse process and structures when importing new data to ensure that this is completed consistently for onward inclusion within the dashboard.

Figure 3: My Digital Caseload Tool dashboard

Data Visualisation

Southern Health utilises Tableau as a visualisation software tool for all clinical and operational data within the organisation. This is utilised by colleagues at all levels of the organisation for caseload and business management.

The tool has been created in Tableau desktop and is distributed to relevant health visiting colleagues through an on-premises Tableau server instance. Access permissions are controlled via a manually administered Tableau group, however the longer-term ambition is to link this directly to an existing Health Visiting Microsoft Account Domain group utilised for other purposes within the Trust to automate this process.

We acknowledge that a number of alternative business intelligence software suppliers and hosting solutions are available, and the key features of the tool should be replicable across the majority of these solutions.

Key learning when developing data visualisation:

- Allow time for staff to consider the best layout of information in user-friendly formats - do not underestimate the time needed to coproduce, test and refine this element of the tool
- Consider how presentation can, if not considered carefully, inadvertently put greater weight on some areas than others which may indirectly influence practice
- Avoid project drift - keep the purpose of the tool central as a visualisation of data at one point in time. This was important as our visualisation depicted a number of child and family vulnerability factors which require clinical skills to interpret the complex interrelationship between factors in an individual family's context, at a particular time, to support clinical decision making. There is currently no reliable "real world" vulnerability rating scale, it was therefore not possible to attribute any weight or rating to the presented vulnerability data. Without underpinning evidence, we were also unable to develop an artificial intelligence driven decision-making tool within the visualisation as doing so would introduce considerable risk

4. Step four: Implementation

A clear rollout plan should be developed and consider the following:

- To support implementation within local teams, designating key individuals as super users or champions of the digital tool at the start of the project would enable them to become local 'experts'. These individuals can provide invaluable support to their teams, troubleshooting and escalating early teething difficulties to the project team, and ultimately increasing engagement and use of the digital tool
- A clear communications plan for the launch of a digital tool needs to be developed drawing on your local networks and communication channels
- Plan in an engagement event at the start of the project to maximise the impact and launch of the tool
- Production of a short guide for how to use the tool to allow fidelity and audit of use in the future
- Consider if any change to current health visiting guidance is needed to ensure robust and consistent data collection into Electronic Personal Record (EPR) systems – poor data entry is the biggest cause for poor data output.

5. Step five: Evaluation

Evaluation should be considered at the start of your project - in this example, the Insights report and Final report provide a summary of our evaluation.

It is important to build in capacity to evaluate and agree the appropriate methods as part of your steering group. Our evaluation included a range of approaches including surveys, workshops, and case studies, please see the Final Project Report for more detail.

Case studies are one evaluative tool that may be drawn upon and we provide two examples for consideration. The following case studies demonstrate what may have happened prior to having access to the tool and how the tool has already started to have an impact. Please note, the names in both case studies have been changed for anonymity.

6. Health Visitor Case Study 1

This case study demonstrates the user journey prior to the implementation of the tool. This helpfully illustrates the need to improve the use of data and analytical capability in health visiting which was the key driver for this project. The example describes data use for children who transfer into a team and the barriers which make this data less accessible or "hidden", and the impact that this has on clinical decision-making.

Background:

Toby transferred into the team when he was 14 months old and lived with his mum and his 2 older siblings who were 6 and 8-years old. The siblings both attended school.

Toby was placed on the Monthly Team Planner (a work-planning tool within RiO) and due to capacity within the team neither Toby, nor his sibling's electronic records were reviewed. The team assumed that Toby had transferred in from out-of-area and the team had received no other information from the transferring team to suggest that he or his family required anything above a universal service.

The process for a family that transfers into the area with a child over 1-year old, not identified as vulnerable, would be to receive a letter of introduction from the health visiting team rather than a face-to-face contact. As part of the transfer, the Child Health Information Service would request the records from the previous team and, if further information indicated that an assessment was required, this would be completed. However, it could take weeks for information to be received from other health visiting teams.

How the tool helped?

When Toby was placed in the Monthly Team Planner, it was thought that he was a transfer in from outside of the Trust and that no further information was available to the team at that time. However, this turned out not to be the case.

Part of the role of the duty health visitor is to utilise the tool to assess the caseload within the team and to assist in the allocation of work. Toby was identified in the tool as having several factors which included missing his health review and not having had his full set of immunisations, which led the health visitor to review Toby's records. It transpired that Toby had been incorrectly processed as an external transfer out by the previous health visiting team when he actually required an internal transfer within Hampshire with a hand-over of need.

A face-to-face contact was arranged to complete Toby's health review and to encourage the family to make an appointment for his immunisations.

Other factors recorded for Toby and his family was that one of his older siblings had a complex health need and required additional care. Further support was offered to the family and a care plan was put in place.

7. Health Visitor Case Study 2

This case study demonstrates how important it is to link information which builds a visual picture; enabling identification of unmet need for children and families.

Background:

Sabrina is a 21-year-old single mum who lives with her two children in a council property. Abbie, her oldest child, is 4-years old and about to start school. Charlie her youngest child is 18-months old.

Sabrina had experienced low mood following the birth of Abbie and subsequently had input from the perinatal mental health team. Sabrina also had epilepsy, but this was generally well managed and when she last saw her health visitor she had reported that she saw her GP regularly.

After Charlie was born, her relationship with the children's father broke down and Sabrina had disclosed that he had been abusive throughout their relationship with coercive controlling behaviour – he had never been physically violent. Sabrina had worked with her health visitor and domestic abuse services at the time. The children had no contact with their father and Sabrina received no financial support from him. Sabrina did not work and was reliant on benefits for her income.

Abbie attended preschool and was taken and picked up by Sabrina's mum. Charlie did not go to nursery but was eligible for 2-year funding.

Charlie has had 2 admissions to hospital with bronchiolitis in his life but recovered well and hadn't needed further treatment. Sabrina smoked cigarettes but reported to the health visitor that she did not smoke around the children and did not want to quit, so no referral to a stop smoking services was made.

Abbie was seen by the health visitor for her 2-year developmental check and the developmental assessment tools (ASQ:3 and the ASQ:SE) were used to identify any development needs/areas to monitor. Abbie was progressing well in all areas of development and there were no actions to work on.

Charlie was seen at his New Birth visit and at the 8-week postnatal contact by a health visitor and no further interventions were identified, so the next universal assessment was offered at 9-12 months as per the Healthy Child Programme.

Following the last review and contact with the health visitor, the family had been receiving a universal service. No alert was attached to the record and the plan was for a community nursery nurse to see Charlie for his 1-year review.

The named health visitor that had been working with Sabrina left the team just after Charlie was 1-year old.

The team experienced a significant amount of staff shortages for several reasons and support was provided by other teams. Priority was given to families that needed initial assessments or where there were known safeguarding concerns.

The health visiting team had a large amount of information collated from previous assessments and intervention with this family, but all the information was fragmented in various parts of the electronic records. This meant there was not a complete picture and this information on the children remained "hidden".

How the tool helped?

When the health visitor left the team, her caseload was reallocated according to identified need. Sabrina and her children did not have a current alert, so were not highlighted as a family that needed immediate assessment. However, when reviewing the tool, Charlie was highlighted as 'Was not Brought' to 2 appointments for his Health Review at 1-year. He was also missing his 12-month immunisations. The benefit of the information being presented in one visual digital tool meant the health visitor was able to identify factors that indicated Sabrina and Charlie required a follow up for a review of their needs. A new health visitor was allocated and contacted Sabrina who reported that she had been experiencing low mood which prevented her from taking Charlie to his appointments. Sabrina also reported she was in a new relationship and was pregnant but had not yet seen the midwife. A home visit was arranged to complete a new assessment and agree a plan of care. The health visitor was able to encourage Sabrina to access important antenatal care and make an appointment with her midwife. To support Charlie's development, as he was eligible for the Government's free 2-year early years support, the health visitor was also able to support an application for 2-year funding so Charlie could obtain a nursery placement. This support also helped to improve Sabrina's low mood and she was subsequently able to take Charlie for his outstanding immunisations.

8. Conclusion and next steps

Implementation is an ongoing process to ensure that change is embedded in practice. This project provided much-needed dedicated time and resource to enable Southern Health to complete the initial scoping, build, test and refinement of the minimum viable product of the data visualisation tool. Southern Health recognise that this is just the start of their service improvement journey, and they are now working with the health visiting leads and analytic team to continue to further test, refine and embed the tool. The involvement of families to ensure shared understanding of the tool will be a crucial next step.

We hope that our insights in this practical guide have been helpful in supporting others to consider their digital developments.

References

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2. Hargeaves, S. (2021) “Moving Beyond Bean Counting” Improving Analytical Capability in Health Visiting - “Local Application” End of Project Report, Southern Health 2021.
3. Reinholz, D. L., & Andrews, T. C. (2020). Change theory and theory of change: What’s the difference anyway? International Journal of STEM Education, available at: https://doi.org/10.1186/s40594-020-0202-3 .

Appendix A - Example Terms of reference for the steering group

Project Steering Group - Terms of Reference

Purpose

- To provide the governance for the overall project and its deliverables
- To provide strategic guidance for the successful outcome of the project
- To provide scrutiny and challenge to enrich and enhance the project's rigour
- To contribute substantive expertise to the development of the project
- Act as a sounding board on specific issues that may impact on the success of the project, supporting leverage where possible
- To provide the connectivity for the project board and to the wider strategic learning

Membership

- Chair
- Deputy Chair
- Project Lead
- Project Coordinator
- Service Leads
- Analytics lead
- Digital lead
- Subject expert
- Co-opted members – may include partner agencies/organisations or parents/carers

Accountability

The group is accountable to the XXX for the delivery of the project.

The project lead will produce monthly highlight reports for the steering group.

- Agenda and papers will normally be circulated two weeks before each meeting. Any members may ask for items to be included on the agenda.
- GDPR- all members agree to XXX holding their data for the purpose of this meeting on XXX.
- Action notes of meetings will be produced and circulated within two weeks of the meeting to all members.
- Where a member is unable to attend a meeting, he/she will inform the project coordinator.

Conflict of interest

Members will declare any conflict of interest as these may arise the chair will determine if these should exclude the member from that or future meetings.

Meeting Schedule

Monthly initially for first 2 months then bi-monthly

Appendix B - Digital Lead Job Description

Job Title: Digital Lead – 0-19 Services Specialist Division

Grade: Band 7

Accountable to: Deputy Director Operations Children and Family Services??

1. ROLE PURPOSE

The overall purpose of the Digital Lead will be to:

Enable, promote, and support the effective use of data, information, knowledge and technology to facilitate and improve health and health-care delivery.

"It is no longer possible to think about digital literacy as either purely technical ability or as something done by a few experts. Everyone who works in health and social care must have sound digital capabilities grounded in the knowledge, skills, attitudes and behaviours that will enable them to provide the most effective and compassionate care for all." (Improving Digital Literacy NHS Health Education England)

Therefore, the role of the Digital Lead will be to ensure that Children's 0-19 services is able to utilise fully current cost-effective systems, information and technology services to provide excellent clinical care to its patients, in conjunction with its stakeholders throughout the wider health community.

They will be an integral member of the leadership team and responsibilities will include helping staff to build and improve excellent literacy capabilities including the uptake and adoption of new digital tools and technologies to help to transform the way they practise clinically and provide care.

The post holder will be a HV practitioner who will engage with front line staff and focus on the following:

- Human behaviours and attitudes around digital literacy
- Technical factors
- Collaboration and information exchange.

This will also include assessing the performance of clinical recording and data analysis systems, recommending areas for improvement, and applying these improvements; through staff testing of system upgrades, staff training and policy/ guidance updates.

2. DIMENSIONS

1. Working alongside the iHV and the Southern Health Analyst Team, the HV practitioner will provide clinical and digital leadership to the project "Moving beyond bean counting: Improving analytical capability in health visiting - national scoping and local application" which is funded by the Health Foundation
2. This will include promoting innovation and championing the development of an information culture that drives continuous clinical and business improvement across the 0-19 Children's Services and the organisation
3. Provide clinical overview and expertise to the design and development of informatics-enabled change programmes and development strategies, plans and activity to ensure they deliver safe, effective, evidence-based, and accessible services and systems to meet the health and care knowledge and information needs of patients and clinicians
4. Ensure that proposed service redesigns will be effective in improving clinical practice and patient care outcomes, whilst adhering to professional and informatics standards
5. Ensure that structures are in place to monitor effective and valid information flows within health care systems which are necessary for the delivery of clinical care
6. Ensure that all key stakeholders are consulted in the design, delivery, and evaluation of clinical informatics systems, including staff, analysts, research teams and iHV
7. Provide leadership for staff user groups, colleagues and subject matter experts and co-ordinate their views through focus groups to develop clinical effectiveness

8. Provide project updates to the senior management team including the implications of national and local informatics policy/strategy development from a clinical perspective
9. Strive to enhance others' contributions and to promote leadership, nurturing capability and continuing professional development

3. KEY RELATIONSHIPS

The Digital Lead will be expected to form excellent working relationships with representatives from all members of staff across the 0-19 service acting in a leadership role for clinicians and administrative staff.

The Digital Lead will also be expected to engage with staff across the wider organisation acting as an Interface between clinical and technology services, including the analyst and IT training team.

The Digital Lead will also be expected to work closely with the iHV throughout the time of the project.

4. STAFFING AND FINANCIAL RESPONSIBILITIES

Staff leadership and management

Leadership is vital and you will need to be able to clearly express the importance of digital literacy, to encourage all staff to develop their digital capabilities, and to ensure that there is appropriate access and resources to support that development.

You will need to actively work to encourage a 0-19 culture that is open and trusting and the project's success will be dependent on engaging staff and managers to play an active role in ensuring the analysis of data in seen as tool in effective service delivery.

You will be expected to:

- Understand the project's key priorities and how these link with the 0-19 digital strategy
- Support the development of a national survey and local scoping
- Design, develop and facilitate a series of local engagement and development workshops
- Communicate regularly through meetings with teams and individuals
- Provide opportunity for two-way feedback
- Ensure clarity and effectiveness in developing and designing roles
- Ensure staff have access to appropriate training and development
- Value and treat staff equally

PERSON SPECIFICATION

Criteria	Essential	Desirable
Qualification special/vocational training or equivalent experience	Health Visitor / Healthcare professional qualification (e.g., medical practitioner, nursing, allied healthcare professional).	
Experience (general/ specific)	Significant experience in clinical practice as a HV Practitioner or nurse. Experience of using Tableau. Proven ability to engage effectively with a broad range of stakeholders within and outside the organisation and in a multi-professional environment.	Change management experience related to the planning and delivery of work in a clinical setting with demonstrated success in overcoming resistance to a change in clinical working practice.

Criteria	Essential	Desirable
Skills / Values	Passionate about informatics as a tool to drive up clinical quality of care and support professional practice. Understands the business administration contribution to the delivery of excellent health services. Good understanding and demonstrable success in overcoming resistance to a change in clinical working practice. Have high level influencing skills: able to persuade clinicians to engage with, implement and embed change to achieve successful outcomes. Excellent communication skills: able to express complicated, multi-stranded concepts in an accessible way, both verbally and in writing and in a multi-professional environment High level presentation skills: able to confidently present information publicly using a variety of media in different settings in both 1:1 settings and to large gatherings of clinical professionals (conferences and workshops, etc.). Technical skills: competent in the use of IT and a good level of understanding of professional informatics standards and best practice. Overall, a good manager of people. Confident and self-motivated. Credible in a multi-professional environment. Resilient and energetic.	

Appendix C – Data Analyst Job Description

Job Title: Business Intelligence and Report Developer

Grade: Band 7

Accountable to: Systems Development Manager

1. ROLE PURPOSE

- Working with other members of the Systems Development Team and Information team, use specialist knowledge and experience to develop and maintain the data warehouse and associated environments for Southern Health.
- Working within the Business Intelligence area of the Development Team in the delivery of business intelligence, data warehouse environments and reporting solutions.
- Working within the Information team analyse and develop advanced Tableau reporting solutions
- Providing advice, instruction, and guidance in business intelligence solutions appropriate for the Trust.

2. DIMENSIONS

SCOPE AND AUTHORITY

The post holder is required to –

- Participate in the implementation and development of Trust data warehouse solutions.
- Work as part of the Development Team in the delivery of high-quality business intelligence solutions encompassing technical infrastructure, data bases, reporting, workflow, collaboration etc.
- Develop intuitive, web-based reporting, analysis and dash boarding based on specifications provided by senior developers or analysts.
- Provide solutions that incorporate not only information reporting but collaborative working, portals and workflow.
- Help to achieve interoperability of existing technologies producing a seamless user experience and to maximise return on investment, whilst working towards a convergence of solutions and technologies.
- Provide input to work on improvements to streamline and enhance existing processes and systems, promoting greater efficiency and effectiveness within the Information function.
- Commit to continual education through formal training, informal skills transfer and self-tuition. This post requires continual upgrading of skills to reflect rapid changes in technology.
- Provide advice for solutions based on own research as a technical specialist within the Trust.
- Work within this framework to deliver high quality solutions.

All development and support activity are performed to meet ITIL standards i.e. incident management, change control and software release.

KEY RESULT AREAS

- Participate in the establishment and on-going maintenance & development of data warehousing, liaising with suppliers and other key agencies as required. This includes participating in the developments under project controls to ensure the system is effectively deployed within agreed timescales and resources.
- Work as part of the Development Team in the delivery of high-quality business intelligence solutions encompassing technical infrastructure, data bases, reporting, workflow, collaboration etc.
- Develop intuitive, web-based reporting, analysis, and dash boarding for all levels of the Trust including clinicians, service managers and directors.
- Provide solutions that incorporate not only information reporting but collaborative working, portals, and workflow.
- Adhering to all data security standards and guidance regarding data access, data transfers, encryption etc.

- Monitor the technical performance of the information delivery to refine and further develop aggregate data views to achieve maximum performance.
- Assist in the development of a comprehensive maintenance plan for the data warehouses to ensure business continuity.
- Help to develop and maintain comprehensive documentation for the data warehouses including all processes, database schemas, relational diagrams, data dictionaries and system specific security policies etc.
- Maintain a good understanding of available new technologies/techniques and be able to apply as appropriate.
- Participate in the appraisal of suggested systems and techniques offering observations of benefits and making recommendations.
- Assist other Trust technical teams as required.
- Participate in information projects within the Trust as appropriate.
- Ensure compliance by self of the Services Standing Orders, Standing Financial Instructions, Policies, Procedures and Guidelines, including taking all reasonable steps to manage and promote a healthy working and anti-discrimination environment.

DATA ARCHITECTURE

- Assist in the data warehousing environments architecture, data source identification and assessment, data modelling, data imports, data quality, data storage and data security.
- Assist in the development of data warehouse sources, information processing, and web-based information deployment working closely with other Information, IT, and operational staff.
- Assist in the management of data and information flows from operational / departmental systems into the data warehouses, ensuring that all key data items are stored efficiently and in a way that is conducive to effective and efficient information reporting.
- Participate in the improvement and streamlining of existing processes and data feeds from systems to promote greater efficiency and effectiveness. Promote the automation of standard, regular reports.
- Assist in the design, coding, testing and implementation of efficient and robust database schemas plus SQL Queries, Views, Stored Procedures, and Triggers as part of data warehouse development.
- Assist in the information archive management where these are based on electronic systems.
- Assist in the proactive management of the integrity of data within the warehouses, investigating, raising and resolving issues with the appropriate Trust managers.
- Assist Information staff with database analysis and data interpretation, including problem solving using SQL programming, use of advanced functions and complex methodology.

INFORMATION DELIVERY

- Provide a ‘Customer’ focus for Information Services in service deployment, ensuring that customers can make best use of the data warehouse and performance reporting tools.
- Develop intuitive, web-based reporting, analysis, and dash boarding for all levels of the Trust including clinicians, service managers and directors.
- Provide solutions that incorporate not only information reporting but collaborative working, portals and workflow.
- Actively seek to integrate tools to provide a seamless experience for the user.
- Assist in the submission of information to external agencies as required e.g., CDS etc., undertaking required completeness & validity checks at agreed intervals, identifying likely causes of poor performance and working with other staff to resolve them.
- Assist in the data migration and archiving of electronic systems.

QUALIFICATIONS/TRAINING

Degree or equivalent and/or relevant technical experience, 1 year.

KNOWLEDGE AND EXPERIENCE

- Expert skills in:
  - » SQL server database construction and coding
  - » Transact-SQL
  - » All aspects of Tableau report development
  - » Microsoft BI Stack – SSIS, SSRS, SSAS (less essential)
  - » MS Office and MS Operating Systems,
  - » Database technologies XML, SQL.
- Good working knowledge of NHS data and data resources (e.g., National Tracing Service, CDS) for mental health and community activity and clinical data.
- A good working knowledge and understanding of the technical and data requirements of NHS organisations.
- Good knowledge of community and mental health systems, i.e., RiO, EMIS Community and TPP System One
- Excellent analytical skills including data transformation.
- Experience of working within a technical team to meet service and project targets.
- Occasional requirement for prolonged concentration to interpret complex requirements, assess solutions and in the production of project and technical documentation e.g., data mapping; report, cube, dashboard design; project plans; processes and procedures.
- Ability to work within a structured development environment.
- Ability to apply technical expertise within the processes and protocols of Trust, NHS and industry standards and best practice.
- Assist in the analysis of complex processes and technical options in order to advise on suitable solutions.
- Activities include technical design, coding, engagement with users, user training and project management.
- Occasional user training in small groups for the delivery of the system or solutions.

GENERAL REQUIREMENTS

Management and leadership

- Influence decision making through technical advice.
- Plan own workload and activities over short to medium periods to meet project deadlines and provide user support, this may involve some complex projects and support incidents.
- Ability to prioritise own workload to resolve conflicts between project and support tasks which involves re-planning and escalating to the Systems Development Manager when necessary.
- Ability to share technical knowledge with colleagues, through both informal and formal training/workshop sessions.
- Review, propose, develop, and assist in the implementation of processes within own work area. E.g., standards for warehouse development.
- In conjunction with other members of the Trust, take part in other projects related to information management and technology, commensurate with grade and experience.
- Keep abreast of and where appropriate action published Data Set Change Notices (DSCNs) that fall within the remit of the post.
- Comply with departmental policies and data management procedures and standards. Contribute to the review and development of services data management procedures and standards.

Communication

- Work positively with colleagues to maintain effective relationships
- Produce written reports of a high-quality complying with Trust standards where applicable.
- Receive complex information and rationalise to develop warehousing data and information delivery solutions.
- Recommendation of solutions based on own research.
- Communicate with staff at various levels from different organisations to understand system requirements, e.g., working with both clinical and admin staff at all levels to assess requirements for reporting solutions.
- Ability to present options and deliver user training including use of technical equipment.
- Occasional formal presentation.
- Ensure all processes and procedures are fully documented.

Information technology

- High level of IT skills, and responsibility for systems commensurate with this technical post. Please refer to principal duties and education section.
- Responsibility for adhering to data security of patient information.
- Expert use of keyboard for a variety of technical software.
- Attend relevant training days and Trust forums as required.
- Compliance with Trust arrangements for continuing professional development.

Research and Development

- Evaluation of system data to ensure data quality and correct system functionality.
- Investigation of new technologies and providing advice to line manager and projects team members on benefits and application within the business.

Environment/ location

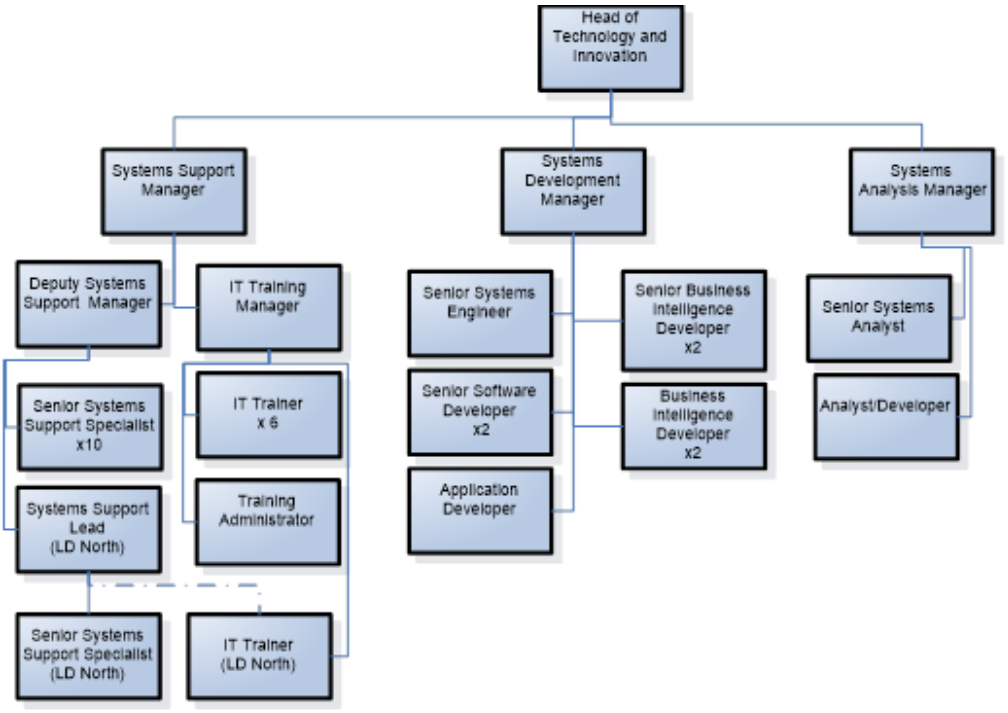
- Office based but able to attend regular meetings across Hampshire and surrounding areas to liaise with project team members and other stakeholders. Attend national IT events as required.
- Majority of time is spent using a PC.
- Prolonged periods of concentration required during development of systems.
- Occasionally stressful environment to meet project deadlines and during support of critical systems.
- Busy office environment with interruptions daily.

This job description is a summary of the main duties of the post and is, therefore, not exhaustive.

The duties of the post will be reviewed regularly in conjunction with the post holder, in accordance with the Trust's appraisal framework and as developments take place.

The post holder will be expected to work to any objectives and standards set within this framework.

3. KEY RELATIONSHIPS



4. STAFFING AND FINANCIAL RESPONSIBILITIES

This role has no staffing or financial responsibilities

HEALTH AND SAFETY

It is the responsibility of all employees to work with managers to achieve a healthy and safe environment, and to take reasonable care of themselves and others.

SUSTAINABLE DEVELOPMENT

It is the responsibility of all employees to support the Trusts' vision for sustainable development. To undertake their duties in a way that is not wasteful of environment, financial and social resources.

EQUALITY AND DIVERSITY

It is the responsibility of all employees to support the Trust's vision of promoting a positive approach to diversity and equality of opportunity, to eliminate discrimination and disadvantage in service delivery and employment, and to manage, support or comply through the implementation of Equality & Diversity Strategies and Policies.

INFORMATION GOVERNANCE

As an employee you will have access to information that is sensitive to either an individual or to the organisation and you are reminded that in accordance with the requirements of Information Governance, NHS Code of Confidentiality, Data Protection Act 1998 and the terms and conditions in your contract of employment, you have a duty to process this information judiciously and lawfully; failure to do so may result in disciplinary action.

PERFORMANCE APPRAISAL AND PROFESSIONAL DEVELOPMENT

The Trust is committed to providing a high-quality service through the effective management and development of its employees. The Performance Appraisal process ensures that the Trust can achieve its key aims of delivering cost effective, high quality and responsive healthcare, whilst enabling employees to understand how the outcome of their contribution fits within these overall aims.

All staff have the responsibility to support all learners and to keep their knowledge of supporting learners in practice up to date, according to appropriate governing bodies regulations.

STATUTORY AND MANDATORY TRAINING

The Trust will assess the requirements for Statutory and Mandatory training for all new staff prior to commencement and aims to ensure that all Statutory and Mandatory training requirements are completed before staff start their full duties.

All required Statutory and Mandatory training must be completed within the first three months of staff start date and refresher training must also be undertaken on a regular basis and in accordance with the Trust's policy.

SAFEGUARDING CHILDREN AND ADULTS AT RISK

The Trust is committed to safeguarding children, young people, and adults at risk within its care. As an employee you are accountable to ensure that you know how to respond when you are concerned for the safety of a child, young person, or adult at risk. The Trust will support you in this process by providing training, support, and advice. There is a Corporate Safeguarding Team who can be contacted for guidance, support, and safeguarding supervision. For children you should be aware of your responsibilities detailed in the '4 Local Safeguarding Children Boards Child Protection Procedures' and for adults as detailed in the Care and Support Statutory Guidance issued under the Care Act (2014).

INFECTION PREVENTION AND CONTROL

The Trust has designated the prevention and control of infection and the full implementation of the Code of Practice (2008) as a core component in the organisation's clinical governance, managing risk and patient safety programmes. All employees are expected to follow consistently high standards in the prevention and control of infection, especially with reference to hand hygiene, adherence to dress/uniform code and for clinical staff all procedures involving aseptic technique. Be aware of and follow all Trust Infection Control guidelines and procedures relevant to their work. Participate in mandatory training and annual updates. Protecting patients from infection is everyone's responsibility.

SMOKE-FREE POLICY

This Trust operates a Smoke-free policy. This means that smoking is not permitted anywhere within owned or leased premises, including within their grounds and within owned or leased vehicles. In the interests of promoting responsible healthcare all staff are to refrain from smoking when off-site in uniform or wearing an identifying NHS badge in any public place. The policy also applies to all staff employed by the Trust at any location they may work, whether within or external to the Trust's premises. The policy contains further details including support facilities; subsequent failure to comply with this policy may result in disciplinary action.

CONFIDENTIALITY

In the course of your employment, you will have access to confidential information of a personal and/or clinical nature, including information relating to the Trust, its clients, patients, employees, and other parties.

You must not use such information for your own benefit nor disclose it to other persons without the consent of the Trust and the party concerned unless required to do so by law. This applies both during and after the termination of your employment. Any breach of confidentiality during employment may be regarded as serious misconduct and could lead to summary dismissal

REHABILITATION OF OFFENDERS ACT 1974

This post is subject to an exception order under the provisions of the Rehabilitation of Offenders Act 1974. This stipulates that all previous convictions, including those that are 'spent' must be declared. Previous convictions will not necessarily preclude an individual from employment but must be declared in writing at the appropriate stage during the recruitment process.

DATA PROTECTION

As your employer, the Trust needs to keep information about you for purposes connected with your employment. The sort of information we will hold includes information for payroll purposes, references, contact names and addresses and records relating to your career with the Trust. These uses are covered by our notification with the Information Commissioners Office under the Data Protection Act 1998.

The information which we hold will be for our management and administrative use only, but we may need to disclose some information we hold about you to relevant third parties (e.g., Inland Revenue). We may also transfer information about you to the NHS Executive solely for purposes connected with the management of the NHS.

RECORDS MANAGEMENT AND QUALITY

As an employee, you are legally responsible for all records that you gather, create, or use as part of you work within the Trust and they remain the property of the Trust. This includes patient, financial, personal, and administrative records, whether paper based or on computer. All such records are considered public records and you have a legal duty of confidence to all service users. You should consult the Trust's Records Management Policy and ask for guidance from your manager if you have and doubt about the correct management of records with which you work. All staff have a responsibility to ensure information quality standards are achieved.

INFORMATION SECURITY

Under the provisions of the Data Protection act, it is the responsibility of each member of staff to ensure that all personal data relating to patients and members of staff, whether held in manual or electronic format, is kept secure at all times. Computer passwords must not be shared either between systems or users. The Trust may monitor e-mail messages, any files stored on the networks or on equipment and usage of the Internet, NHS.net and computer systems, irrespective of whether these relate to Trust or personal use.

Access and usage of the Trust's computers must be in accordance with the Trust's Policies. Safe haven procedures are to be used for all electronic transfers of personal data. This is in order to protect the Trust's patients and staff, and its reputation and to ensure that it complies with the law and other guidelines.

DATE:

PERSON SPECIFICATION

Criteria	Essential	Desirable
Qualification special/vocational training or equivalent experience	Degree or equivalent and/or relevant technical experience, 3 years Professional Qualification in an IT/ Information related discipline or equivalent experience.	Member of relevant professional group, e.g. ASSIST or BCS or registered with UKCHIP.
Experience (general/specific)	SQL data warehouse development. Working with and querying complex data bases. Providing DBA support for Enterprise database systems. Tableau report development Working with business users to analyse their reporting and information needs	IM&T Projects.

Criteria	Essential	Desirable
Skills / Values Patient and Person Centred Valuing Achievement Value through innovation Forging Relationships	Good understanding of Database and Data Warehousing platforms and technologies. Advanced knowledge and experience of Tableau report development. A good understanding of Information Governance, Security and Confidentiality Principles A good understanding of Data Architecture Principles and Practices. Advanced knowledge of the Microsoft Business Intelligence toolset including SQL Server, SSRS, SSIS and SSAS. Experience of other related technologies e.g., Microsoft SharePoint and Performance Point. Experience of working with SQL data sources Analytical skills. Problem-solving skills. Good presentation skills. Good communication skills, able to communicate complex technical issues to non-technical staff both verbally & in writing. Good time management & prioritisation skills. Excellent Microsoft Office skills. Ability to design and implement relational databases and reporting environments. Credible in a multi-professional environment. Resilient and energetic.	Current national policies relating to Information & ICT, including NPfIT, DPA and NHS Codes of Practice for Records Management and Information Sharing. NHS Data Dictionary. Advanced SQL programming skills used in a practical environment. Ability to construct data transformation processes and analytical toolsets.

Appendix D - Model for workshops

WORKSHOP 1

- An overview of the project
- Feedback from the national survey and the local Southern Health results
- Exploration of current practice, barriers/enablers of data use and analytical capability in health visiting including the use of the 5 Why's (NHS Improvement, 2018) to explore root cause analysis
- Open questions exploring what data health visitors would like to see visually that would help caseload management

WORKSHOP 2

- Exploration of the difference between a missing child and a hidden child
- The identification of factors that should be considered for a hidden child's data to be surfaced
- Thoughts on what the tool might look like
  - » What did staff want the tool to tell them?
  - » What was needed at a team level?
  - » What was needed at a practitioner level?
  - » What was needed at an individual/family level?

The agile iterative development of the tool encouraged user contributions and allowed for feedback and continuous improvements through workshops 3 and 4.

WORKSHOP 3

- Introduction of the digital tool
- Functionality testing of the digital tool through user stories
- Collaboration with health visitors and stakeholders to discuss objectives for next iteration
- Health visiting team engagement and feedback on the digital tool
  - » How did you use the tool? (caseload management, review a child, prepare for a meeting)
  - » How easy was it to find the information you wanted?
  - » Did the tool help direct your work with families?
  - » What worked well?
  - » What didn't work?
  - » What would you change?

WORKSHOP 4

- Functionality testing of the digital tool through user stories
- A cyclical process of refining and tweaking
- Consider next steps including what is needed to support rollout