

**Leeds Community Healthcare NHS Trust**

**Detailed Job Description**

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| **Post Details**  **Post title**: Principal Data Warehouse Developer  **Band:** 7  **Speciality/Department:** Business Intelligence and Performance |
| **Service Description:**  The Business Intelligence and Performance Team works closely together to provide a full business intelligence service to the Trust and supports the Trust with monitoring and understanding performance.  The team manages all processes relating to the data we extract from our clinical information systems and its transition to insight and intelligence.  There are three teams within Business Intelligence and Performance.  The Warehousing Team design, develop and maintain the organisation’s SQL data warehouse solutions. They ensure appropriate structures are in place to enable easy access to high quality data and processing of those data into dynamic reporting solutions. They are responsible for the development and submission of the national data sets.  The Business Intelligence Team develop and maintain reports for presentation in the Performance Information Portal (PIP). This is the online tool that provides information to the organisation. The reports are currently delivered via SSRS and PowerBI. They work with customers to ensure that the reports present information to managers and services in a format that is easily understood and relevant to decision-making processes.  This team is also responsible for ensuring that all regular manual reports are generated and submitted on time. Wherever possible this team will work to minimise manual processes.  This team also includes the Data Quality Lead. They are responsible for ensuring that processes to monitor and improve data quality are embedded in all our products.  The Performance Team provide the first point of contact for queries from our clinical services supporting them by monitoring their performance, highlighting areas of interest and monitoring recovery plans. They work with services to help them understand and interpret their data. They create analytical models to support with areas such as capacity and demand or waiting list management. They also work alongside the Head of Business Intelligence and Performance to develop the list of KPIs used by the organisation to monitor and drive improvement. |

**Job Purpose**

The SQL Principal Data Warehouse Developer will play a lead role in designing, developing, implementing, and maintaining the organization's data warehouse solutions. With a primary focus on leveraging SQL expertise, this role will utilise highly developed specialist knowledge with the aims of optimizing data storage, retrieval, and processing capabilities, ensuring efficient and accurate data management across various business units. The developer will collaborate closely with cross-functional teams to understand data requirements, design effective data models, and develop robust ETL processes. By adhering to best practices in database design, query optimization, and data integration, the SQL Principal Data Warehouse Developer will contribute to the organization's strategic goals by providing timely and actionable insights derived from structured and unstructured data sources. Additionally, the role will oversee the creation of comprehensive business intelligence and performance management reporting services, catering to all levels of the organization's reporting needs, including statutory, internal, and external requirements. This includes facilitating timely reporting on achievement against targets and supporting measurement for improvement principles. Moreover, the developer will ensure the discharge of statutory reporting responsibilities held by the Trust through established reporting services, such as those required by the Department of Health, NHS England, or NHS Improvement returns.

**Key result areas**

1. **Responsibility for communication and relationships**

* Actively works towards developing and maintaining effective working relationships both within and outside the Trust including other agencies.
* Responsible for communicating information to the team, providing advice and support as necessary. This can be challenging and complex in its content i.e. Implementing organisational and/or services changes.
* Explores the potential for collaborative working and takes opportunities to initiate and sustain such relationships.
* Responsible for investigation of complaints within own area if necessary. Working with internal and external service users in line with Trust policy and guidelines.
* Actively contributes to the multi-disciplinary team supporting the service user including communication with external providers and other agencies; acting as a credible source of information for other agencies/professionals involved as required.
* Work in partnership with BI developers and stakeholders to translate data into actionable information.
* Responsible for engaging with the stakeholders to develop business requirements and translating requirements into a technical solution that meets the specification of customers.
* Liaise with managerial staff from the Trust to establish specifications of information requirements.
* Work alongside Business Unit General Managers, service managers and other key stakeholders in assessing key activity and performance reporting requirements.
* Provide expert professional advice, support, and guidance to all levels within the Trust on the creation, development, and maintenance of all aspects of the Data Warehouse
* Represent the Trust on local and national Information development groups where required.
* Liaise with external organisations to source new clinical and administrative data and improve best practice. Monitor data quality to ensure it is continually improved.
* Establish and take part in user groups and forums within Leeds Community Healthcare NHS Trust to react to user demands for information and to aid in the proactive development of the reporting systems.
* Form working partnerships with information system and service suppliers.

1. **Responsibility for analysis and judgement**

* Using expert knowledge develop any required data feeds for SUS and other central data repositories e.g. CDS, CSDS, MHSDS, IAPT, FDF and in a variety of formats (CSV, XML, etc).
* Interpreting national technical guidance develop and produce reports and datasets from clinical and other systems to meet the central, statutory, and local reporting requirements of the organisation.
* Acting as a technical expert to users both within the department and to other departments around the Trust in the following key areas: Microsoft SQL Server (T-SQL, SSIS), Data Warehousing Architectures and Scripting
* Monitoring, identification and investigating a range of data quality issues and escalate to the relevant parties.
* Monitor information systems usage to provide feedback to colleagues and senior management on the performance of systems across the Trust.
* Develop robust reporting services to meet changing user requirements.
* Support clinical system implementation and operation when required.
* Utilises highly developed technical knowledge covering the range of analytical techniques, underpinned by relevant broad-based knowledge, experience and competence to devise solutions to support the provision of information to the whole of Leeds Community Trust.
* Provide guidance, advice, and support to the Trust on matters relating to the collection, storage and dissemination of health care activity data and other information sources.
* Makes complex judgements requiring analysis, interpretation, and comparison of options by integrating highly complex knowledge sources in new and/or unfamiliar contexts.
* Using own judgement, develop and implement organisation-wide initiatives and methodologies in a highly complex system, formulating and adjusting implementation plans where necessary. Many decisions will be unique and without precedent. Judgments will have to be taken at risk and without formal supporting infrastructure.

1. **Responsibility for planning and organisation.**

* Maintenance and improvement of the data warehouse as a system, including relevant system documentation. The warehouse itself should be maintained and monitored so that it is dependable, reliable, timely and has a robust disaster recovery mechanism in place. Co-ordinating the logging of key data quality problems and oversee the resolution of the issues by working together with internal and external parties. This would involve activities such as configuration, security, improving and maintaining performance, resolving issues and disaster recovery.
* Lead the development of bespoke in-house data architectures (dimensional data model) this will involve setting standards for others in how the model is structured, populated, and used.
* Responsible for continued data validation and maintenance and development of the BI infrastructure including the design and implementation of automated Data Extract, Transformation and Load processes (ETL) using variety of tools (e.g. SSIS, API, Python) to meet new and changing requirements.
* Design and implement appropriate data models, taking a lead role in specifying user requirements, data preparation, validation, design, implementation, and user training. The requirements, structure and implementation of these models will be highly complex and will require expert knowledge.
* Maintain, support, enhance and develop the business intelligence systems and associated technologies, dealing with any issues that may arise. This will include the investigation of software faults, support and troubleshooting of the interfaces and monitoring the databases.
* Manage the application and system maintenance activities performed by the development team to ensure that application availability is maximised, systems are robust and data integrity is maintained and that systems can be recovered in the event of failure quickly and efficiently.
* Ensure that database resources are routinely monitored and managed. This will require the post holder to engage with the IT technical teams on a regular basis to ensure system resilience is maintained.
* Introduce and manage automated data feeds from clinical and non-clinical systems to the data warehouse (API, FTP)
* Leading the development of business intelligence and performance management reporting solution within and across the Trust, introducing new systems, techniques, and processes as appropriate within a highly complex infrastructure.
* Produce rigorous security, backup and disaster recovery policies and ensure that these polices are adhered to by the IT service provider by liaising with the IT manager.
* Ensure that Business Intelligence has appropriate procedures and systems in place to maintain and safeguard existing information systems and computer databases. This will involve producing system documentation and establishing appropriate system recover and backup procedures.
* Take an integral role in the specification, procurement, design and build of a new Business Intelligence System, capable of supporting the Trust’s corporate information and knowledge management aspirations.
* Plan and organise a broad range of complex activities and projects which impact across clinical and non-clinical areas, e.g. the delivery of new systems, information products, technical infrastructure, or information flows.
* Contribute to disaster recovery and business continuity planning and processes and from time to time be required to test these policies
* Create standard operating procedures, documenting routine working practices.
* Supervise or allocate work to team members for co-ordinated activities within a project.
* Continually review information requirements, adapting information production in response to changes both within the department and within the organisation. Identify the need for new and additional information in the line with these changes.

**4. Responsibility for policy and service improvement and development**

* Work closely with the IT Manager, IT engineers and Informatics Manager to ensure that the hardware and software required to support data warehouse activities and wider Business Intelligence systems are adequately specified, delivered, and supported.
* Plan and develop bespoke web and non-web applications to support business continuity and data capture.
* Demonstrate potential solutions to customers, identifying additional requirements and changes as required.
* Use in depth knowledge and technical expertise to identify issues, good practice, trends, and exceptions to solve highly complex problems, provide advice, make recommendations, and propose solutions based on findings to influence changes in operations and improve performance.
* Ensure that a documentation library of all developments is maintained on an on-going basis so that any member of the development team can support and maintain these systems if necessary.
* Manage user expectations of information systems including the design and provision of on-going support and training.
* Tailor information reporting services to the changing business needs of the Trust in line with National NHS requirements.
* Provide expertise in the analysis of requirements, design of solutions, and development of new products and systems.

1. **Responsibility for human resources**

* Ensures that a professional service and image is always maintained, thereby acting as a role model to all staff.
* Provides a leadership style which is underpinned by strongly held values around equality, diversity, and openness; effectively builds and maintains relationships with direct reportee(s) and other key individuals across the organisation.
* Promotes diversity and equality by example through all aspects of their behaviour.
* Demonstrates leadership in everyday practice through identifying creative and innovative solutions, engaging in leadership development appropriate to level and encouraging development as part of the team.
* In the absence of senior managers, the postholder will be able to delegate, organise and prioritise to ensure safe delivery of the service.
* Inspires others to be positive in their support of continuous improvement.
* Ensures that individual objectives are clearly defined within the wider Directorate framework and in line with Trust’s objectives, using the appraisal process as a vehicle for this.
* Takes responsibility for their own and others’ health and safety in the working environment.

**6. Responsibility for information resources**

* Maintain confidentiality in relation to personal data held for colleagues and patients, ensuring that it is processed lawfully; for no purpose other than that for which it was obtained; is relevant to that purpose; is retained for no longer than is necessary; is processed in accordance with the rights of the subject to access and accuracy; and is protected from accidental loss or damage in accordance with the requirements of the Data Protection Act and records management guidance.
* Maintain confidentiality of patient-identifiable personal data using a non-identifiable alternative, where practicable and limiting access on a strictly need to know basis in accordance with the responsibilities of the Trust’s Caldicott Guardian.
* Ensure best practices are implemented in respect of data integrity and confidentiality to meet legal requirements on sensitive data as well the Trust’s Information Governance procedures.
* Develop security policies which adhere to the principles of Caldicott guidance, the Data Protection Act as well as security and confidentiality standards for the protection of sensitive patient data and information.
* Authorise and control user access to data and reporting systems at appropriate staff group levels to avoid security breaches.
* Ensure copyright and licensing requirements are determined and adhered to.
* Rectify data quality issues within and between internal information systems.
* Ensure nationally agreed NHS data standards are applied and adhered to.
* Ensure all patient care data is extracted, processed, and submitted within required national and local deadlines.

**7. Learning and Development**

* Undertakes any training required to develop or maintain their proficiency within the service area and demonstrates competence within professional requirements.
* Evaluates own practice and identifies areas of development by setting appropriate objectives via the appraisal process.
* Is committed to delivering and sharing learning opportunities with students, team members and other agencies in order to develop self and others.
* Ensure high standards of personal performance.
* Maintain an up-to-date knowledge of developments in National NHS data standards and future data flows as well as a thorough understanding of the NHS Data Model & Dictionary.
* Maintain an up-to-date knowledge of Information Standards Notices (ISNs).
* Maintain a clear understanding of current NHS policy particularly IT and Information related programmes.
* Develop a thorough understanding of all the Trust’s information systems.
* Keep up to date with advances in Health Informatics.
* Provide supervision, technical training, advice, and guidance for junior members of staff.
* Line manages Data Warehouse Analysts and assists in development of their skill base.
* To maintain and extend technical knowledge and expertise, learning new skills as required and staying abreast of technological development and researching current best practice.
* Responsible for own time management of BI projects.

**8. Freedom to Act**

* Be guided by policy and strategy to make decisions in own area of specialisation.
* Attend organisation-wide meetings on behalf of the team in order to represent the business area.
* Escalate potential breaches of Service Level Agreements promptly to senior management.
* Act as escalation point for highly complex business and operational delivery business as usual issues.

**9. Responsibility for health, safety and security**

Responsibilities of ALL staff in relation to Health and Safety:

* Take reasonable care of your own health and safety
* Take reasonable care not to put other people - fellow employees and members of the public - at risk by what you do or don't do in the course of your work
* Co-operate with Trust, making sure you understand and follow the health and safety policies and procedures
* Attend all required training on Health and Safety related policies and procedure.
* Do not interfere with or misuse anything that has been provided for your health, safety or welfare
* Report and record any injuries, strains or illnesses suffered as a result of doing your job
* Inform your manager if something happens that might affect your ability to work safely such as suffering an injury or a new medical condition.

Additional for those with management responsibilities:

* Identify through documented risk assessment any risks that exists within the department or during the delivery of the service
* Investigate and manage incidents and near misses, ensuring actions are taken to prevent recurrence
* Support the Risk and Safety Team in ensuring suitable and sufficient up to date Health and Safety information and guidance is available to all staff at all levels and disciplines across the organisation.

**10. Responsibility for equality, diversity and rights**

* LCH has a vision to provide the best possible care to every community that we serve.  To help us realise the vision each of us must be open and honest and do what we say we will, treat everyone as an individual and continuously listen, learn and improve

**11. Responsibility for quality**

* Works with managers and colleagues to continually improve the quality of service delivery within the overall organisational governance frameworks and corporate objectives.
* Works with managers and colleagues to identify, manage and minimise risks within the overall organisational risk management frameworks. This includes understanding and applying knowledge of support role in safeguarding and incident management. Reporting and investigation of incidents using the Datix system within agreed service area.
* Acts as an advocate for service users recognising the boundaries of their knowledge; liaising and signposting on to other services/agencies as required.
* Ensures that service user experience is core to all service development gaining support from the appropriate teams as required.

**Flexibility**

This job description is not exhaustive and may change as the post or the needs of the service develop. Such changes will be subject to consultation between the post holder and their assignment manager and, if necessary, further job matching or evaluation.

**TERMS AND CONDITIONS OF SERVICE**

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| **Band:** | 7 |
| **Hours:** | 37.5 |
| **Contract:** | Fixed Term – 10 months |
| **Salary:** | £46,148 to £52,809 per annum |
|  | New staff will normally be appointed to the minimum of the pay band. Staff transferring from one post to another in the same pay band within the NHS will enter the band at the same point that they were previously on. Staff promoted within the NHS will enter the new pay band at the minimum or the first point of the new pay band that gives them an increase in salary. Any previous NHS service will be subject to confirmation by the Payroll Department. |
| **Annual Leave:** | The annual leave year runs from 1 April to 31 March following.  The full entitlement being 27 days for a full year and pro rata  for an incomplete year's service. An additional 2 days will be  awarded after 5 years service plus a further 4 days after 10  years service. This is in addition to 8 public and statutory days  holiday. |
| **NHS Pension:** | The post is pensionable unless you opt out of the scheme or  are ineligible to join and your remuneration will be subject to  deduction of contributions in accordance with the National  Health Service Pension Scheme. In the event of you not  wishing to join the scheme you should complete form SD502  on your commencement date. |
| **Medical:** | The appointment maybe subject to you completing a declaration of health form, which may lead to a full medical examination upon request. |
| **Notice:** | Giving notice – you are required to give the Trust 8  weeks written notice of termination of your employment.  Receiving notice – with the exception of ‘Summary Dismissal’ you will be entitled to receive notice of 8 weeks or your statutory notice entitlement whichever is the greater.    Statutory entitlement is:  For staff with more than 4 weeks continuous service, entitlement to notice is 1 week for each year of completed service up to a maximum of 12 weeks. |
| **PROFESSIONAL REGISTRATION**  Where it is a requirement as part of this job role to be registered with a Professional Body, you are required to maintain and update your registration in line with the Trust’s Professional Registration Policy. You are required to provide proof of your registration status on your appointment, at renewal of registration or at any other time as requested by the Trust. It is also a requirement for you to comply with any Codes of Professional Conduct and to update/satisfy any Continuous Professional Development conditions.  It would also be a requirement for you to comply with any Codes of Professional Conduct and to update/satisfy any Continuous Professional Development conditions.  **REHABILITATION OF OFFENDERS ACT 1974**  Because of the nature of the work for which you are applying, this post is exempt from the provisions of Section 4(2) of the Rehabilitation of Offenders Act 1974. Applicants are, therefore, not entitled to withhold information about convictions which for other purposes are 'spent' under the provisions of the Act, and, in the event of employment any failure to disclose such convictions could result in dismissal or disciplinary action by the Trust. Any information given will be completely confidential and will be considered only in relation to an application for positions to which the Order applies.  **DBS CHECK (Formerly CRB)**  This post is subject to the Rehabilitation of Offenders Act (Exceptions Order) 1975 and as such it will be necessary for a submission for Disclosure to be made to the Disclosure & Barring Service to check for any previous criminal convictions.  The Trust is compliant with the Disclosure & Barring Service ‘Code of Practice’, a copy of which is available on request.  The Trust welcomes applications from a wide range of candidates including those with a criminal record. It undertakes not to discriminate unfairly against any subject of a Disclosure on the basis of a conviction or other information revealed. A full Trust policy on the Recruitment of Ex-offenders is available on request.  **SECTION 11 COMPLIANCE**  **Safeguarding Children and Vulnerable Adults**  All employees are required to act in such a way that at all times safeguards the health and well being of children and vulnerable adults. Familiarisation with and the adherence to the Trust’s Safeguarding policies is an essential requirement of all employees as is participation in related mandatory/statutory training.  **ORGANISATIONAL AND STATUTORY REQUIREMENTS**  All employees should understand that it is their personal responsibility to comply with all organisational and statutory requirements, e.g. Health and Safety; Equal Treatment and Diversity; Confidentiality; Infection Prevention and Control.  **MENTAL CAPACITY ACT (MCA 2005 CODE OF PRACTICE)**  This Act applies to all persons over the age of 16 who are judged to lack capacity to consent or withhold consent to acts which are considered by health and social care professionals to be in the best interests of their welfare and health.  The Mental Capacity Act 2005 imposes a legal requirement on health and social care professionals to ‘have regard to’ relevant guidance within the Code of Practice when acting or making decisions on behalf of someone who lacks capacity to make the decision for themselves. Furthermore, they should be able to explain how they had regard to the Code when acting or making decisions.  Detailed guidance is available in the Mental Capacity Act 2005 Code of Practice http://www.dca.gov.uk/legal-policy/mental-capacity/mca-cp.pdf  **NOTE**  This job description does form a part of the contract of employment and indicates how that contract should be performed. The job description will be subject to amendment in the light of experience and in consultation with the postholder.  **JOB SHARE**  This post is suitable for job sharing and when filled on this basis will attract all normal terms and conditions of service outlined above, but on a pro rata basis if appropriate.  **SMOKING**  The Trust operates a no smoking policy and is smoke free. | |

**Personal specification: Principal Data Warehouse Developer**

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| **Attributes** | **Essential** | **Desirable** | **How identified?** |
| **Experience** | Significant demonstrable experience working with database technologies such as Microsoft SQL Server, Oracle, or PostgreSQL.  Significant experience in optimising data warehouse performance and scalability to ensure efficient data processing and retrieval.  Previous involvement in monitoring data quality and integrity within a data warehouse environment, including implementing data cleansing and validation procedures.  Remote extraction of data from information systems.  Experience of facilitating change in practice to improve services. | Thorough knowledge and understanding of data standards and definitions preferably NHS Standards and definitions.  Evidence of working in a data warehouse environment within the NHS or other complex environment. | Application  Interview |
| **Qualifications** | Educated to degree level in a relevant subject or equivalent knowledge acquired by previous experience in a relevant role.  Post graduate learning to Masters Level or equivalent level of experience.  Evidence of continued professional development. | Additional certificates in relevant technologies or methodologies. | Application  Interview |
| **Knowledge & Understanding** | Strong understanding of data warehousing concepts, methodologies, and best practices.  Highly developed specialist knowledge of SQL Server programming and administration tasks relevant to data processing and transformation.  Highly proficient database management, development, and querying skills with a proven ability to write complex stored procedures, functions and triggers.  Proficient in Python/PowerShell/VBA scripting for automation and data manipulation tasks as well as designing software applications.  Knowledge of data privacy laws and in particular NHS IM&T policies and procedures. | Knowledge of data visualisation tools such as Power BI, Tableau or QlikView  Familiarity with cloud-based data warehousing solutions  Understanding of healthcare data and familiarity with NHS data structures and standards.  Experience of developing web and Windows based applications with tolls such as C#.NET, VB.NET or ASP.NET. | Application  Interview |
| **Personal Skills** | Excellent analytical and problem-solving skills, with the ability to translate business requirements into technical solutions.  Effective communication skills with the ability to collaborate with stakeholders at all levels of the organisation.  Ability to work independently and as part of a team with a proactive and self-motivated approach.  Strong organisation skills and attention to detail with the ability to manage multiple tasks and priorities effectively.  Demonstrates a strong desire to improve performance. | Commitment to continuous learning and professional development in the field of data warehousing and analytics.  Stakeholder or project management. | Application  Interview |