

HEALTH AND CARE INTELLIGENCE SPECIALIST

Details of standard

Occupation summary

This occupation is found in a range of organisations throughout the health and social care sector. The sector includes organisations which study the health of populations, plan, commission, manage, deliver, monitor and evaluate health and social care policies and services. The organisational settings range from central government departments and arms-length bodies such as Public Health England, NHS England through to individual NHS organisations and local authorities. Community Interest Companies and Academic Health Science Networks may also employ people in this occupation.. The broad purpose of the occupation is to take data on individual or population health and use of services and other forms of evidence such as scientific publications and evidence reviews and turn it into health and care intelligence such that it has impact on decision makers across the health and care system and informs and influences their decisions, leading ultimately to improved population health and better patient outcomes and experiences. People in the occupation are involved in the planning, implementation and evaluation of health and care services. In order to do this, they have to collect specific health and care data or work with those that collect health and care data to ensure that they can be used for these purposes as well as for direct clinical care and service provision.

Health and Care Intelligence Specialists have an impact at both a strategic and operational level by building and maintaining strong collaborative relationships with key stakeholders and colleagues at all levels. Their work leads to better health and care policy decisions, both at national and local level and improved implementation of services across health and social care.. In their daily work, an employee in this occupation interacts with Their team members, organisational managers, internal and external stakeholders. Much of their output will take the form of reports for publication or pieces of analysis that they will present to senior managers and decision makers such as Boards and elected Councillors. Depending on their setting, they may also provide information to central government, other organisations or members of the public.

The Health and Care Intelligence Specialist will also have regular contact with colleagues who manage IT systems or provide specific data; have responsibility for the governance and security of data sources; or use data and information for specific purposes (for example finance or human resources colleagues). There is often substantial interaction between Health and Care Intelligence Specialists in different organisations and at different geographical levels. The organisational structures within which Health and Care Intelligence Specialists are located vary (for example, their team might report to a director of finance, commissioning, IT or public health).

Depending on their setting the Health and Care Intelligence Specialist will work with clinicians and service providers to support the management of departments and projects, evaluate care and support research. They will also work with planners and policymakers, including those with responsibility for public health functions. At national level interaction may be required with government ministers and members of parliament, national organisations inside and outside the health sector (e.g. charities and patients' groups) and the media. Locally, regular interaction is required with NHS and local authority managers, elected councillors, and representatives of local organisations.. An employee in this occupation will be responsible for leading the production of high-quality information and interpretation through tasks including defining information requirements and advising colleagues on appropriate data sources and analytical approaches; specifying or managing collection of data; analysing a wide range of data and producing informative reports and presentations. The exact nature of these responsibilities will vary depending on the organisational setting and specific role. Work to be

delivered will often be a mixture of routine activities such as annual reports, special projects and ad hoc/responsive outputs.

The Health and Care Intelligence Specialist will obtain and work with existing health and care data and will also have responsibility for designing or carrying out bespoke data collections when required. Health and Care Intelligence Specialists will be responsible for negotiation and drawing up of health and care data sharing agreements and compliance with the relevant legislation, procedures and health service guidance for handling confidential patient information.

Health and Care Intelligence Specialists are usually responsible for interpreting research findings and including them along with their analyses in their advice and outputs to inform the implementation of evidence-based interventions. They may also have a role in obtaining and reviewing research findings. They are responsible for communicating their outputs to non-technical audiences in both written and verbal formats.

At a senior level Health and Care Intelligence Specialists provide leadership within their organisation, promoting and advocating the use of high-quality intelligence outputs to inform decision making and improve population health and health and care services. At almost all levels they will have management, supervisory or coaching and training responsibilities for less experienced staff and, sometimes, external stakeholders. They are responsible for managing complex intelligence projects.

Depending on the setting the Health and Care Intelligence Specialist may focus on the activities of NHS and other care providers; working primarily at local level, although they could work at national level in organisations with central data management, planning and oversight functions. Alternatively, they may focus on the health of the population as a whole; working at national, regional or local level in organisations that have overall responsibility for the health and wellbeing of the population and for the protection of public health. In some settings, they may undertake specific public health/epidemiological functions such as surveillance of infectious diseases..

Typical job titles include:

Senior (or principal) information analyst, Senior cancer information analyst, Senior information scientist, Senior business intelligence analyst (often used for NHS roles), Insight and intelligence manager.

Entry requirements

Whilst any entry requirements will be a matter for individual employers, typically an apprentice might be expected to have already achieved a first degree in a relevant subject or have acquired relevant experience

Occupation duties

Duty

Duty 1 Lead on the linking, analysis and interpretation of complex health, care and population data* using the most appropriate specialist health analytical, epidemiological and biostatistical techniques; and draw meaningful conclusions to understand the factors that influence population health, inequalities and the planning and delivery of health and care services. Specialist health analytical techniques may include the use of modelling

KSBs

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K18 K19 K30

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and forecasting. *Examples of complex data include Hospital Episode Statistics, Read coded primary care data and global burden of disease data.

Duty 2 Lead, or advise expert colleagues, on the design requirements of the most appropriate information systems for holding, linking and analysis of sensitive health and care data and for population health surveillance. This may include advising on the ability of clinical information systems to facilitate secondary analysis of data.

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Duty 3 Lead the interpretation and presentation of health and care intelligence outputs to a variety of technical and non-technical audiences, including senior decision makers in the NHS and local government. This is likely to include the use of interactive visualisation tools and other related software.

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Duty 4 Lead and facilitate the transfer of highly complex health and care knowledge using evidence-based knowledge translation frameworks to policy and decision makers.

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Duty 5 Lead or advise on the investigation of patterns and variations in determinants, diseases, conditions influencing health and care outcomes and service evaluations. This will require the use of appropriate study designs and methodologies and appropriate liaison with specialist agencies.

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Duty 6 Lead the design and implementation of health and care surveys, disease surveillance tools and instruments, and service evaluation tools.

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Duty 7 Search for and critically appraise relevant evidence and scientific research on health and care intelligence, health determinants and interventions to improve population health or the delivery of care. Formulate specific recommendations based on the interpretation of both data and the appraised evidence

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Duty 8 Lead the establishment and development of excellent working relationships with health and care system partners, colleagues and the wider team. System partners are likely to be wide ranging and could include health and wellbeing boards, academics, private and third sector organisations as well as NHS and other public services.

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Duty 9 Lead the delivery of multiple complex health and care intelligence projects, reviewing and adjusting priorities to meet changing organisational needs.

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Duty 10 Lead or advise on compliance with health and care information governance standards and legislation and ensure the team and organisation are adhering to other relevant legislation, policies, procedures with respect to the handling of patient confidential data and information. This may also require seeking ethics or research governance approval when relevant.

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Duty 11 Contribute expertise to the preparation of technical documents such as analytical reports, national and organisational policy documents, audits and performance reports.

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Duty 12 Provide professional leadership for health and care intelligence, embedding and shaping an evidence-led culture and influencing organisational strategy and the organisation or structure of health and care analytical teams including making the case for appropriate resourcing and development of analytical functions and systems.

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Duty 13 Manage a health and care intelligence team and its associated resources, including allocation of work, supervision of team members, offering advice and providing specialist on the job support where required.

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Duty 14 Develop the analytical and the health and care intelligence skills and knowledge of others (including non-technical staff) in the health and care system through demonstration and promotion of best practice, effective coaching, mentoring, teaching and training.

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Duty 15 Identify and implement change management initiatives to meet technical and organisational requirements, ensuring that the delivery of health and care intelligence is not compromised.

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Duty 16 Make the economic case for investment in, and delivery of, health and care services within the context of

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organisational budgets and targets, always considering the wider financial implications in the local health and care economy.

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KSBs

Knowledge

K1: The application of advanced level applied statistics, epidemiology and analysis.

K2: The statistical, epidemiological, social and scientific concepts underpinning the interpretation of health data to produce intelligence and the impact of these on both people and organisations.

K3: The strengths and weaknesses of statistical and epidemiological methods, analytical tools and approaches.

K4: The principles of developing data-driven models to understand activity, financial impact or outcomes.

K5: Economic forecasting, economic evaluation and scenario modelling of population health needs, resource and the rationale for longer-term investment in health and care delivery.

K6: A wide range of health and care data sources (e.g. demographic, health, social care, economic, finance, local and national NHS and other relevant data sources) and their relative strengths, weaknesses and uses.

K7: Clinical terminologies in common use across the health and care sector.

K8: Health and care data standards, the Data Dictionary, and data flows across the NHS and social care system; including the latest developments in these areas.

K9: The design principles, and technical aspects of, systems for the input, storage and dissemination of health and care statistical and epidemiological information.

K10: Health and care systems and processes, operational structures and patient pathways (e.g. hospital activity systems).

K11: The context of NHS, central and local government intelligence, including organisational structures and responsibilities, planning cycles, common policy issues, purpose of different types of quantitative assessments, audits and plans.

K12: The major factors influencing health needs and inequalities, including health behaviours and the wider determinants of health.

K13: The principles of using effective written and oral communications to influence others.

K14: The information needs of decision-makers (e.g. in the NHS, central and local government) and how they use information to support decision-making and how the publication of health information may impact the wider population.

K15: The key principles of partnership working, the basics of negotiation and different organisational cultures.

K16: Sources of evidence and examples of best practice and how to access them.

K17: Key techniques for assessing evidence and examples of best practice (e.g. critical appraisal, systematic reviews, meta-analysis and economic evaluation).

K18: The requirements for responsible, legal and ethical access and use of health and care data, including data protection considerations, protection of identifiable personal healthcare data, and understanding and consideration of the risks of statistical disclosure issues especially when presenting and publishing health information.

K19: The legal implications of sharing data and data linkage across organisations and the associated requirements, such as data sharing agreements and data mapping audits.

K20: The role of effective leadership in an organisation and how leadership differs from management.

K21: The role of the analytical function within an organisational structure and the strengths and weaknesses of different models for organising analytical teams.

K22: Organisational theory and behaviour and theories of organisational change.

K23: The processes by which resources are effectively managed, including how to analyse and interpret budget reports, how costs for services are calculated, and how to prepare simple financial statements.

K24: The principles of effective project management and commonly used project management approaches.

K25: How adults learn and how to design effective training in areas of healthcare analysis and intelligence.

K26: How to identify gaps in the knowledge and skills required to fulfil analytical and intelligence roles in the health and care system.

K27: Coaching and mentoring techniques to support the effective learning and development of others.

K28: The importance of continuing professional development and how to maintain specialist knowledge and practice in an ever transforming environment.

K29: The key issues to be considered when balancing patient's rights versus the public interest, including the acceptability of access to NHS data by different public and private agencies, and how this is discussed in the public domain.

K30: Local child and adult protection procedures and who to contact for further advice.

Skills

S1: Collect data by utilising a variety of tools (e.g. databases, software systems, APIs, digital devices).

S2: Extract, import, clean, and manipulate a wide range of quantitative and qualitative data.

S3: Undertake advanced statistical and epidemiological analysis.

S4: Interpret and present advanced statistical and epidemiological analyses being mindful of the risks associated with presenting and publishing health information.

S5: Undertake linkage of health and care data accurately and in accordance with the relevant information governance requirements.

S6: Design and specify data flows, collection, storage and collation mechanisms for both qualitative and quantitative data.

- S7:** Develop data visualisations appropriate for a range of audiences and contexts using a variety of analytical tools including statistical programming software and industry standard packages (e.g. R, Tableau, PowerBI).
- S8:** Professionally interpret and present health and care intelligence analyses and recommendations in a well structured report.
- S9:** Formulate analysis questions and hypotheses which are answerable given the data available.
- S10:** Investigate patterns and variations in determinants, diseases, and other factors affecting health and care outcomes.
- S11:** Design and undertake surveys, audits or research (e.g. to investigate patterns of disease or support service development).
- S12:** Review, and critically appraise evidence and research including survey design and analysis. Summarise and disseminate relevant literature.
- S13:** Work with users of information to clarify their information needs, focusing on understanding the problem to solve or decision to inform, and tailor reports and presentations accordingly.
- S14:** Provide advice and guidance to internal and external stakeholders at all organisational levels, on data collection, analysis and interpretation.
- S15:** Develop and deliver management/Board level presentations which influence senior decision makers, both non-technical and technical.
- S16:** Communicate sensitively, accurately and appropriately to audiences from technical and non-technical backgrounds.
- S17:** Comply with, implement and advise on local and national data protection and confidentiality legislation, policies, procedures and any other relevant legal frameworks.
- S18:** Demonstrate effective leadership and change management skills to influence the use of analysis within an organisation, managing analytical teams and adhering to the principles of continuous improvement.
- S19:** Evaluate the significance of human factors in the effective development and implementation of organisational strategies for collection, analysis and use of data.
- S20:** Develop and communicate a vision of how data, intelligence and evidence can be used to influence and improve decision making in an organisation.
- S21:** Develop effective partnership working arrangements with a range of colleagues across departments and organisations, in particular the public sector and voluntary sectors and academia.
- S22:** Manage the resources of an analytical team, including staff and budget management.
- S23:** Support the professional development of others in the health and care system.
- S24:** Design and deliver effective training and evaluate its impact.
- S25:** Apply a range of coaching interventions and techniques relevant to the health and care system, selecting the most appropriate method to meet the needs of an individual or group.
- S26:** Determine when mentoring is appropriate for others in the health and care system and either act in a mentoring capacity or identify the appropriate individual(s) to act as mentors.

S27: Develop, maintain and enhance activity and financial and outcomes models, sense checking and refining the model based on various scenarios and advising on the best option for planning future activity and income or expenditure.

S28: Apply a range of project management techniques to lead and / or manage complex health and care intelligence projects.

S29: Protect and safeguard vulnerable people and promote the welfare of children, young people and vulnerable adults.

S30: Apply economic principles and tools to calculate value for money by determining costs, benefits and return on investment of interventions and services.

Behaviours

B1: Treat people with dignity, and respect diversity, beliefs and culture.

B2: Act with integrity with respect to ethical, legal and regulatory frameworks ensuring the protection of personal data, safety and security.

B3: Be customer focused both within own organisation and with external stakeholders.

B4: Be self-directed in learning and reflection to constantly improve and work towards evidence-based best practice.

B5: Be adaptable, reliable and consistent, demonstrating discretion, resilience, self-awareness and team working.

B6: Act as a role model to peers and demonstrate leadership.

B7: Constructively challenge inappropriate behaviour and use of information when necessary.

Qualifications

English & Maths

Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Additional details

Occupational Level:

7

Duration (months):

36

Review

This apprenticeship standard will be reviewed after three years

Find an apprenticeship

Version log

VERSION	DATE UPDATED	CHANGE	PREVIOUS VERSION
1	10/07/2020	Funding published. Approved for delivery	Not available
1	07/04/2020	Assessment plan first published	Not available
1	20/09/2019	Standard first published	Not available
1	27/09/2018	Initial creation	Not available