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Iechyd Cyhoeddus
Cymru
Public Health
Wales

(CAJE REF: C6/2022/0055)
PUBLIC HEALTH WALES NHS TRUST

JOB DESCRIPTION

JOB DETAILS

Job Title:	Senior Epidemiological Scientist
Pay Band:	Band 8a
Hours of Work:	37½ hours (1.0 WTE)
Department:	Communicable Disease Surveillance Centre (CDSC)
Division:	Health Protection
Base:	Capital Quarter 2, Cardiff, but other PHW offices could be considered
Duration:	Permanent

ORGANISATIONAL ARRANGEMENTS

Accountable to:	Consultant in Health Protection, CDSC
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JOB PURPOSE, KEY DUTIES AND RESPONSIBILITIES

Public Health Wales provides integrated health protection services to the people of Wales, through information, advice and taking action to protect people from communicable disease and environmental hazards. Services are delivered through health protection teams, a range of national health protection programmes, the Communicable Disease Surveillance Centre (CDSC), the environmental health protection team and a national network of microbiology/ reference/ specialist laboratory services.

The Communicable Disease Surveillance Centre (CDSC) is the epidemiology and surveillance branch of the Health Protection Division. This is a senior role in CDSC with a responsibility to lead departmental work supporting the surveillance, field epidemiology and research response to the BBV, STI, TB and inequalities programme and the wider Communicable Disease Inclusion Health Programme. The post holder will lead teams of epidemiologists and analysts to maintain existing surveillance systems, develop new systems, supervise field epidemiology investigations, and engage in teaching and research.

The post-holder will have very advanced knowledge in the field of health protection and communicable diseases. They will use highly developed skills in epidemiology, research and scientific communication to generate and lead epidemiological work, and communicate findings to stakeholders, including the public, health professionals within Public Health Wales, the NHS, Health Boards and Welsh Government.

The post holder will have a role in developing and delivering training on a variety of scientific topics. To do this the post-holder will be required to liaise with individuals from varied backgrounds in a range of organisations.

The post holder will be required to line manage and/or co-ordinate work of junior team members. They will be required to train staff, supervise or mentor junior staff and demonstrate specific tasks or work as required to others.

The post holder will contribute to Public Health Wales's Research Strategy by identifying knowledge gaps in healthcare settings, and undertaking research & development activities that may include the preparation of applications for funding. They will be expected to work within any budgets set by the department but will be expected to make recommendations on the most appropriate allocation of resource.

1. Communication and relationships

- Excellent communications skills, both oral and written, are required to receive and analyse highly complex statistical information. Requires excellent negotiating skills.
- An ability to present highly complex and sometimes sensitive information to other health protection colleagues, public health specialists, clinical staff and non-specialist audiences and individuals
- Presentations conveying complex statistical data and other health / health care information may be made to a variety of audiences.
- An ability to communicate with other members of CDSC and Public Health Wales as well as a range of other groups or individuals seeking help, advice or information on epidemiology, statistics, statistical methods research related to public health, as and when required.
- Write and contribute to reports. These reports will vary in length and complexity, and will range from informal summaries to detailed comprehensive reports. It will also be necessary for the post holder to be able to summarise these reports and disseminate their findings. Some reports will require complex statistical analyses or contain contradictory findings, and it will be necessary to be able to explain such analyses and findings to specialist and non-specialist audiences in a way that they can understand the implications of the report.
- The dissemination of public health surveillance and field epidemiology skills is one of the key roles of CDSC and the post holder will be required to help to develop and deliver training.
- Respond when required to press and other enquiries and general public concerns, in conjunction with the communications team and in accordance with organisational policy.
 - The post-holder may be called upon to administer questionnaires to individuals.
 - The post holder will be expected to work with members of the public/external organisations e.g. in conducting surveys and analytical studies.

2. Knowledge, Training and Experience

Through master's level qualifications, or equivalent qualifications, and experience:

- Highly specialist and in depth knowledge of surveillance, epidemiology and analytical methods
- In depth experience of the establishment, development and management of surveillance systems
- Knowledge and experience of undertaking field investigations in communicable disease outbreaks

- Knowledge to manage the development and production of reports. This requires excellent interpretation and report writing skills and the ability to explain complex information in simple terms.
- Demonstrable experience of undertaking complex statistical analyses, and dissemination of findings with the ability to communicate complex information to specialists and non-specialists.
- Knowledge of project management techniques.
- Knowledge to assist with the development and delivery of training programmes in public health surveillance and epidemiology.
- Detailed knowledge of various statistical software packages as well as database and spreadsheets, and have the knowledge and experience to undertake complex and intensive data management and data manipulation. This will include an awareness of data science techniques, e.g. automation and presentation using R, machine learning, web scraping and text analysis.

3. Analytical and Judgemental Skills

- Lead on and resolve highly complex facts or situations, which will require analysis, interpretation and expert judgement to find the most appropriate solution despite conflicting opinions.
- Deploy well-developed technical and analytical skills appropriately to identify and respond to queries correctly. On occasion, information may not be available and the post holder will need to negotiate / advise clients as to potential alternatives.
- On occasion, results may be conflicting, the post holder will sometimes need to make judgements about the most appropriate analyses and results in relation to the nature of the situation and the assumptions being made.
- Provide advice on the epidemiological aspects of indicators, which may have an impact on the provision of services and quality of care.
- Analyses may involve sensitive information so the post-holder needs to ensure that the analyses are completed carefully and correctly. This involves detailed checking and examination of the analyses produced.
- Ensure that all outputs are within the constraints laid down by the Data Protection Act and that any outputs adhere to Caldicott principles.

4. Planning and Organisational Skills

- Responsible for leading on work planning for the team within the post holder's lead area of expertise
- To ensure that appropriate training is taken and to ensure that appraisals are undertaken in an appropriate and timely fashion. To assist line managers within the team to improve and develop their skills and confidence.
- Deputise for other senior scientists and CDSC consultants.
- Provide epidemiological input and lead field epidemiology investigations for incidents and outbreaks
- Provide leadership for development and running of specific surveillance systems.

- To provide leadership and support regarding the operation of the business with a view to maximising the efficiency and effectiveness of our processes.
- To assist the CDSC management team in respect of financial aspects (e.g. budgetary planning/monitoring).
- Contribute to the formulation of strategic plans accordingly which impact across NHS organisations. This includes long-term plans for the development of the CDSC, including collaboration with outside agencies such as public health academia, and the delivery of the work plan to its key stakeholders.
- Leadership of specific projects and tasks related to the work-programme.
- Plan and prioritise own workload in order to meet tight deadlines on a regular basis, frequently changing planned activities as necessary, ensuring that the quality of the work produced is of the highest standard.
- Manage Epidemiological Scientists/information analysts at Bands 7, 6 and 5 level as appropriate, ensuring that they receive the resources required to carry out their duties.
- Supervise the development of epidemiological scientists and information analysts in line with PDP.
- Continually review current work practices, making recommendations to others and implementing improvements e.g. updating/developing systems within the team.
- Responsible for the organisation, management and execution of own time in the completion of tasks and projects to develop information products.
- Work without supervision on both national and local projects simultaneously.
- Manage and develop key information resources (for example, publish reports electronically and on paper, advise on data quality and interpretation).

5. Physical Skills

- Advanced keyboard skills
- High levels of concentration are required.
- Field investigations including site visits and occasional visits to members of the public

6. Responsibility for Patient /Client Care

- The post-holder may be required have input into guidance and information leaflets for patients, relatives and carers.

7. Responsibility for Policy / Service Development Implementation

- Contributes to the strategic development of CDSC
- Required to performance manage epidemiological scientists and information analysts
- Required to help develop standard practices and procedures, implement new developments particularly in respect of aspects relating to management and

efficiency, assess the impact of changes, and suggest appropriate adjustments to process and methodology.

- Monitor the quality of the work and take appropriate action to address any areas where standards can be improved.
- Take an active part in the review and development of own work against personal development plan and suggest areas of learning and development

8. Responsibility for Financial and Physical Resources

- Provide support to the CDSC management team in matters pertaining to the team budget.
- Approve expenditure in line with standing financial instructions (up to £1,000)
- Observe personal duty of care in relation to equipment and resources.

9. Responsibility for Human Resources

- Participate in personal objective setting and contributes to own personal development plan, identifying learning needs and interests and how to address these.
- Line management responsibility for epidemiological scientist and information analysts, as required. This includes performance management and objective setting.
- Responsible for staff development through either 1:1 training or supporting training/continuous professional development sessions within the organisation.
- Oversee the supervision of students or newer colleagues offering advice and training where required
- Identify and report actual or potential problems within the workplace that may put the health and safety of staff and visitors at risk.
- Ability to act as a role model within CDSC, guiding and developing junior staff.

10. Responsibility for Information Resources

- Where necessary, prepare business cases for the acquisition of software to improve and develop CDSC's capabilities.
- Lead for allocated surveillance system(s).
- The post-holder will be required to ensure individual identity is protected in any reporting system, as they will deal with patient identifiable information, in line with organisational policies.

11. Responsibility for Research and Development

- Lead on the development of new ways of analysing data and expanding the range of analysis. This will be an ongoing requirement.
- Make a key contribution to the development of new ways of analysing data and expanding the range of analysis. This will be an ongoing requirement.
- Provide advice on a range of health protection epidemiology issues relating to the presentation and dissemination of analysis

- Participate in the development and/or utilisation of new methods for the analysis and/or interpretation of data.
- Contribute to the epidemiological aspects of articles for submission to peer-reviewed publications
- Undertake and support research work in collaboration with academic colleagues, as appropriate.
- Contribute to audits and quality control of the work of the analytical team with a view to improving services

12. Freedom to Act

- Establish, interpret and implement national, professional and organisational policies and procedures, advising Public Health Wales on epidemiological /statistical issues where appropriate on behalf of CDSC. For example, the post holder will be key to ensuring that national policies relating to information governance and Caldicott principles are appropriately reflected in CDSC procedures for analysis and quality assurance of outputs.
- Minimum supervision with an ongoing requirement to achieve agreed objectives, with the post holder making decisions on how they may be best achieved, but staying within broad professional or organisational policies
- Managing their own work and that of others so that deadlines are met and work achieved to the highest standard
- Frequent use of own initiative and ability to act independently due to the variety of information and analysis required, but with access to advice as and when necessary.

13. Physical Effort

- Large proportion of work is computer based, therefore, required to sit in a restricted position, using the keyboard, for the majority of the day.
- Required to sit for long periods at meetings.
- Occasional requirements to move/lift heavy items, e.g. boxes.

14. Mental Effort

- Requires frequent high level and prolonged concentration on tasks with tight deadlines, for example, conducting statistical analyses, performing transformations and calculations on a variety of large and intricate datasets, performing repetitive data manipulations which involve using many different software packages simultaneously and which require focus and concentration for long periods of time.
- There are frequent unpredictable requests by senior staff or stakeholders to respond to immediate requests for support or urgent requests for information.

15. Emotional Effort

- Occasional exposure to distressing or emotional circumstances in relation to discipline and grievance procedures. Where applicable, there will be a

requirement to deal with staff appraisal, staff performance and where required disciplinary issues.

- Empathetic to other staff's needs

16. Working Conditions

- Required to use VDU for the majority of the working day
- The post holder may be required to travel to meetings/events across Wales and other areas, including outside the UK.

Disclosure and Barring Service check

The post holder will require a DBS check.

COMPETENCE

You are responsible for limiting your actions to those which you feel competent to undertake. If you have any doubts about your competence during the course of your duties you should immediately speak to your line manager / supervisor.

REGISTERED HEALTH PROFESSIONAL

All employees of the Trust who are required to register with a professional body, to enable them to practice within their profession, are required to comply with their code of conduct and requirements of their professional registration.

SUPERVISION

Where the appropriate professional organisation details a requirement in relation to supervision, it is the responsibility of the post holder to ensure compliance with this requirement. If you are in any doubt about the existence of such a requirement, speak to your Manager.

RISK MANAGEMENT

It is a standard element of the role and responsibility of all staff of the Trust that they fulfil a proactive role towards the management of risk in all of their actions. This entails the risk assessment of all situations, the taking of appropriate actions and reporting of all incidents, near misses and hazards.

RECORDS MANAGEMENT

As an employee of Public Health Wales NHS Trust, you are legally responsible for all records that you gather, create or use as part of your work within the Trust (including patient health, financial, personal and administrative), whether paper based or on computer. All such records are considered public records, and you have a legal duty of confidence to service users (even after an employee has left the Trust). You should consult your manager if you have any doubt as to the correct management of records with which you work.

HEALTH AND SAFETY REQUIREMENTS

All employees of the Trust have a statutory duty of care for their own personal safety and that of others who may be affected by their acts or omissions. Employees are required to co-operate with management to enable the Trust to meet its own legal duties and to report any hazardous situations or defective equipment.

FLEXIBILITY STATEMENT

The content of this Job Description represents an outline of the post only and is therefore not a precise catalogue of duties and responsibilities. The Job Description is therefore intended to be flexible and is subject to review and amendment in the light of changing circumstances, following consultation with the post holder.

CONFIDENTIALITY

All employees of the Trust are required to maintain the confidentiality of members of the public (patients, well women and service users etc.) and members of staff in accordance with Trust policies.

Date Prepared: 12/10/2020

Prepared By: Chris J Williams, CDSC consultant & Mari Morgan, Senior Scientist

Public Health Wales NHS Trust is a non-smoking environment.

PUBLIC HEALTH WALES NHS TRUST**PERSON SPECIFICATION
FOR RECRUITMENT PURPOSES****Job Title: Senior Epidemiological Scientist****Band: 8a**

	ESSENTIAL	DESIRABLE	METHOD OF ASSESSMENT
QUALIFICATIONS	<ul style="list-style-type: none"> • An undergraduate degree, or equivalent, in a numerate, scientific or health related discipline. • A Masters qualification in epidemiology, Public Health or related field or equivalent experience • Demonstrable advanced training/ experience in public health, health protection or epidemiology 	<ul style="list-style-type: none"> • Evidence of qualification/training in programme or project management • Evidence of management / leadership training 	Application Form Interview Certificate
EXPERIENCE	<ul style="list-style-type: none"> • Clearly able to demonstrate a rich experience of utilising large and highly complex public health and related datasets to answer epidemiological / public health related questions and of the design and development of surveillance systems. • Experience of field epidemiology investigation methods • Experience of complex team work planning tasks • Experience of working in public health, NHS or a related area. • Experience of communicating information to clinical and non-clinical staff, external partners and the public. • Experience in the training and development of others • Writing peer-reviewed publications • Presentation of papers at conferences, seminars etc. • Experience of writing in a range of styles from brief summaries through to in-depth technical reports. 	<ul style="list-style-type: none"> • Experience of research and development • Experience in line management, staff development and training • Experience in programme or project management 	Application Form Interview References

	ESSENTIAL	DESIRABLE	METHOD OF ASSESSMENT
SKILLS	<ul style="list-style-type: none"> • Highly numerate with advanced skills in epidemiological and statistical analysis and interpretation of data • Report writing skills • Excellent computer literacy skills including advanced skills in Microsoft Office applications • Able to engage and negotiate with stakeholders to understand and deliver service requirements • Ability to develop and deliver complex presentations to large audiences • Excellent interpersonal and communication skills with the ability to influence and negotiate at local, regional and national level • Evidence of people management skills 	<ul style="list-style-type: none"> • Evidence of ability to meet tight and challenging deadlines, managing complex and multiple pieces of work • Field investigation skills including interviewing patients and site visits 	Application Form Interview References
KNOWLEDGE	<ul style="list-style-type: none"> • Advanced knowledge of epidemiological principles and their application to communicable disease surveillance and control • Knowledge and experience of specialist computer software, such as R studio, SQL, Statistical or GIS systems, for the production of complex epidemiological analyses of public health and related data. • Clear understanding of current and ongoing issues in health protection and epidemiology • Knowledge of data security and confidentiality issues • Knowledge and experience of statistical techniques and procedures, and their application in the field of public health epidemiology and surveillance 	<ul style="list-style-type: none"> • Knowledge of management and development techniques • Knowledge of data science approaches • Knowledge of bioinformatics and genomics 	Application Form Interview References

PERSONAL ATTRIBUTES <i>(Demonstrable)</i>	<ul style="list-style-type: none"> • Able to act independently, with some guidance from line manager, based on sound understanding of general policies and principles as well as being a member of, and contributing to, the all Wales team. • Conscientious and proven team worker with the ability to engage with people at all levels • Able to multi-task in a fluid environment, able to prioritise, plan and manage workload, managing complex and multiple pieces of work/projects and working to deadlines • Able to lead and to support team members especially when they are placed under pressure • Able to deal with personnel issues and performance management • Able to negotiate effectively with service users who may be perceived as difficult 	<ul style="list-style-type: none"> • A willingness to further develop and lead others in adapting to change. 	Application Form Interview References
OTHER <i>(Please Specify)</i>	<ul style="list-style-type: none"> • Willingness to travel to and attend meetings. • Flexible approach to work to meet the needs of the service 	<ul style="list-style-type: none"> • Travel between sites where necessary • Welsh speaker 	Application Form Interview

Date Prepared: 12/10/2020

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& Mari Morgan, Senior Scientist