Invitation to Tender
Department of Health
Policy Research Programme

Infectious Disease Dynamic Modelling in Health Protection

Introduction

The Department of Health Policy Research Programme (DH PRP) invites applications to provide a programme of modelling to address two key areas:

1. A stream of dynamical disease and health economic modelling which will provide an alternative or ‘second’ opinion to and run parallel with, that provided by Public Health England (PHE). In addition, the programme will support the maintenance of, major changes to, and expansion of the national immunisation programme when required.

2. The estimation of the impact of (infectious) diseases not currently included in the immunisation programme and the efficacy of potential interventions.

This programme will provide a responsive dynamic resource to augment the analytical support currently provided within DH and PHE, which contributes towards the development of infectious disease and immunisation policy.

This will be a one-stage commissioning process. Applications will be subject to independent peer review. Up to £1,250,000 million in total is available for a 5-year programme commencing by August 2013.

Background and Research Area

Immunisation

It is currently envisaged that most of the programme will concentrate on the provision of an alternative stream of modelling and analysis to support vaccine policy.

Very significant spending decisions (e.g. for possible expansion of influenza vaccination programme of the order of £50+ million/year) concerning the introduction of new vaccines are based on the consideration of infectious disease dynamical modelling and analysis by the Joint Committee on Vaccination and Immunisation (JCVI). The need for specialist epidemiological and associated economic analysis is critical to the continued maintenance and expansion of the immunisation programme. The HPA Modelling and Economics Unit (MEU) at Colindale is currently the main provider of such modelling analysis and will continue to do so when the Unit is absorbed into PHE.

The programme would provide a similar flexible and reactive modelling resource to that of the HPA MEU to support the JCVI and DH infectious disease policy. The new resource would provide an alternative view or “second opinion” on high cost programmes and/or programmes of considerable public interest. The availability of an alternative view will considerably increase the confidence in new vaccination programmes and in other decisions arising from modelling.

The construction of the alternative model or analysis will be solely a matter for the programme research team. The intention is not simply to ‘check’ the PHE MEU results but also to consider the impact of different assumptions, modelling approaches and model structures. Where PHE and alternative models agree, this will
provide additional confidence in the results, where they differ this will lead to further investigation

**Infectious diseases not currently included in the immunisation programme**

Health Protection often involves the mitigation of problems generated by communicable diseases outside the standard immunisation programme, for example, in emergency planning. These may be endemic and/or re-emerging but may also include exotic diseases, currently unknown in the UK. The drivers of these diseases may include climate change, population migration and changes in land use and can occur at national and international levels. West Nile virus, Dengue virus, Hantavirus and Japanese encephalitis are examples of diseases that may in the future impact on public health in the UK.

There are many of examples of high priority public health issues where modelling input has been required. These include Pandemic influenza, blood-borne and surgical transmission of vCJD and the reduction of the incidence of TB in the homeless by use of mobile X-ray facilities. In order to assess possible interventions, further work may be required in epidemiological analysis of the diseases and on the effects of various interventions and the scope for possible optimisation.

The programme may also need to provide modelling on non-communicable diseases such as tetanus and anthrax, which at times give rise to policy concerns.

Further background on Infectious Disease Policy and role of modelling in its development can be obtained from key documents listed at the end of the Invitation to Tender.

**Research Requirements**

The programme research team would be expected to interface closely with other academic groups, PHE and other research teams as necessary, especially where disease specific (or possibly economic) expertise was not available within the team or to access, for example, the epidemiological data that may be required. Where it is appropriate, collaborative working with the DH modelling teams will be encouraged.

Analysis that underpins the development of policy requires dynamical disease modelling and the empirical epidemiology of the relevant disease together with the analysis of cost effectiveness of potential interventions.

In order to respond to changing policy and operational priorities that often have fixed deadlines, a flexible and responsive mechanism to commission studies and to change their focus or priority must be in place. Analytical support on infectious diseases to DH policy makers, from a range of sources, is coordinated by the Health Protection Analytical Team (HPAT) and the programme’s research team will be expected to work closely with HPAT in agreeing the focus and priority of their work.

The outline and strategic approach of the work programme for 2-3 years will be determined in discussion with DH (balancing policy need with research team’s interests and initial capabilities) at the commissioning stage of the programme. The initial ‘default’ work programme is likely to include extensive modelling of the current HPV immunisation programme and possible extensions.

Quarterly meetings would refine and reprioritise the work plan in response requirements of the DH. This will include a publication schedule on the alternative, ‘second’ opinion component of the programme.
Reports or publications arising from the programme need to clearly state any potential or actual conflicts of interests of the research team.

**General Comments about Applications**

The Policy Research Programme is a national programme of research dedicated to providing an evidence base for policy-making in the Department of Health. It provides information to the Secretary of State for Health and Ministers directly and through policy directorates in the Department and covers all aspects of the Department’s policy-making activity.

Applications will be considered from other UK countries provided they address the priority areas in a way that is relevant to the needs of the Department of Health (England) and meet all other selection criteria.

Applicants are encouraged to submit multidisciplinary applications.

**Standard Information for Applicants**

The sections below provide standard information on different aspects of PRP funding and will contain details relevant to your application.

**Governance issues**

Day-to-day management of this research will be provided by the principal investigator. They and their employers should ensure that they identify, and are able to discharge effectively, their respective responsibilities under the Department of Health Research Governance Framework for Health and Social Care (Department of Health, 2005), which sets out the broad principles of good research governance.

All successful research involving National Health Service (NHS) and social care users, carers, staff, data and/or premises must be approved by the appropriate research ethics committee (REC) or social care research ethics committee (SCREC). For further information on RECs, please visit the National Research Ethics Service website: [http://www.nres.nhs.uk/](http://www.nres.nhs.uk/)

The successful research team must adhere to the Data Protection Act (1998) and the Freedom of Information Act (2000). Effective security management, and ensuring personal information and assessment data are kept secure, will be essential. In particular:

- The research team shall, at all times, be responsible for ensuring that data (including data in any electronic format) are stored securely. The research team shall take appropriate measures to ensure the security of such data, and guard against unauthorised access thereto, disclosure thereof, or loss or destruction while in its custody.

- Personal data shall not be made available to anyone other than those employed directly on the project by the research team, to the extent that they need access to such information for the performance of their duties.

For any research involving clinical trials, the successful team will be expected to be familiar with the Medical Research Council (MRC) Framework for Evaluating Complex Interventions (MRC, 2000), and to follow the principles of the MRC
Guidelines for Good Clinical Practice in Clinical Trials (MRC, 1998) in proposing structures for oversight of such trials.

**Risk Management**
Applicants should submit, as part of their full application, a summary explaining what they believe will be the key risks to delivering their research, and what contingencies they will put in place to deal with them. Please ensure this is detailed in the Management and Governance section of the full online application form.

A risk is defined as any factor which may delay, disrupt or prevent the full achievement of a project objective. All risks should be identified. The summary should include an assessment of each risk, together with a rating of the risks likelihood and its impact on a project objective (using a high, medium or low classification for both). The risk assessment should also identify appropriate actions that would reduce or eliminate each risk, or its impact.

Typical areas of risk for an evaluation study might include ethical approval, site variation in data gathering, staffing, resource constraints, technical constraints, data access and quality, timing, management and operational issues; however, please note this is not an exhaustive list.

**Patient and Public Involvement (PPI)**
The Policy Research Programme expects the active involvement of patients and the public (e.g. service users and carers) in the research that it supports when appropriate. However, the nature and extent of patient and public involvement (PPI) is likely to vary depending on the context of the study. Applicants should describe how the issue of PPI will be addressed throughout the research process. For example, this could include patient and public involvement in refining research questions, designing research instruments, advising on approaches to recruitment, assisting in the collection and analysis of data, participation or chairing advisory and steering groups, and in the dissemination of research findings.

Applicants are required to describe what active involvement is planned, how it will benefit the research and the rationale for their approach. PPI needs to be undertaken in a manner that acknowledges that some people may need additional support, or to acquire new knowledge or skills to enable them to become involved effectively (see INVOLVE publications for guides for researchers). Applicants should therefore provide information on arrangements for training and support. In addition, applicants should note that a budget line for the costs of PPI is included in the finance form. Where no PPI is proposed, a rationale for this decision must be given.

For further information and guidance about PPI, please visit the INVOLVE website: [http://www.invo.org.uk](http://www.invo.org.uk)

**Outputs and Reporting Arrangements**
The research team will be expected to provide regular progress reports over the lifetime of the research and will be provided with a progress report template to complete at regular intervals. In addition to describing progress, these reports will allow researchers to indicate any significant changes to the agreed protocol, as well as setting down milestones for the next reporting period, giving an update on PPI and also any publications or other outputs. Information on emergent findings that can feed more immediately into policy development will be encouraged and should be made available as appropriate.
A final report on the research, with an accessible executive summary, will be required within one month following completion of the research. The report will be peer reviewed and circulated to policy makers in the Department of Health. Once your study is complete, a summary of your final report will be placed in the public domain, on the Department of Health Policy Research Programme website. This is where the outputs resulting from expenditure of public funds are made available for public scrutiny so it is important that the summary of your final report is easily accessible to the lay reader.

Research contractors are obliged to give at least 28 days notice before submission of any publication arising from research funded by the Department of Health Policy Research Programme. In this instance, ‘publication’ concerns any presentation, paper, press release, report or other output for public dissemination arising from a research project funded by the PRP. There is no time limit to this provision and research contractors remain under an obligation to provide notice even after the contract has ended. Publication of PRP-commissioned research is subject to prior consent of the Secretary of State, which will not be held unreasonably and cannot be withheld for more than three months from the time the publication is submitted.

Research contractors will be expected to work with nominated officials in DH and partner government departments. Key documents including for example research protocols, research instruments and reports must be provided to DH in draft form allowing sufficient time for review.

**Dissemination**
Applicants should describe how the research findings could be disseminated most effectively, ensuring that results of this research impact on policy and practice in the NHS, DH, social care and wider sectors.

Publication of scientifically robust research results is encouraged. This could include plans to submit papers to peer reviewed journals, national and regional conferences aimed at service providers, professional bodies and professional leaders. It might also include distribution of executive summaries and newsletters. Less traditional dissemination routes are also welcomed for consideration.

**Budget and Timescale**
The Department of Health expects the research to be delivered within a cost of £1,250,000 million over 5 years.

Costings can include up to 100% full economic costing (FEC) but should exclude output VAT. Applicants are advised that value for money is one of the key criteria that peer reviewers and Commissioning Panel members will assess applications against.

Funding to the level above will only be available if there are suitable high quality and relevant studies.

The duration of the proposed study should be as short as is consistent with a high quality study.

Notification of outcome is expected to be given by late June 2013. All applications are expected to start as soon as possible and no later than within two months of funding being agreed.
Transparency
In line with the government’s transparency agenda, any contract resulting from this tender may be published in its entirety to the general public. Further information on the transparency agenda is at:

http://www.number10.gov.uk/transparency/

If you wish to view the standard terms and conditions of the Policy Research Programme contract, please go to:

http://prp.dh.gov.uk/applying-for-prp-funding/

Application Process
To access the research specification and application form, please visit the Policy Research Programme website at http://prp.dh.gov.uk

The PRP Central Commissioning Facility (CCF) runs an online application process and all applications must be submitted electronically. No applications will be accepted that are submitted by any means other than the online process. **Deadlines for the submission of research applications occur at 1.00 pm on the day indicated and no applications can be accepted after this deadline.** We strongly recommend that you submit your application on the day before.

Once the 1.00 pm deadline passes, the system shuts down automatically and CCF Programme Managers are unable to re-open it. If you are experiencing any technical difficulties submitting your application, please contact the CCF on 0208 843 8027 in good time, before 1.00 pm on a closing date.

This is a single stage tender and a full application is required to be submitted online by **1.00 pm on 19 March 2013.**

Applicants will be notified of the outcome of their application approximately 15 weeks after the submission date.

Applicants are expected, before submitting applications, to have discussed their applications with their own and any other body whose co-operation will be required in conducting the research. The **declarations and signatures page** must be printed off and signed by an administrative or finance officer for the host (contracting) institution to confirm that the financial details of the application are correct and that the host institution agrees to administer the award if made. This is the only part of the form required in hard copy.

The hard copy of the declaration and signatures page should be submitted within one week of the closing date to:

**PRP Commissioning Round 6**
**Infectious Disease Dynamic Modelling in Health Protection Call**
PRP CCF
Grange House
15 Church Street
Twickenham
TW1 3NL

The standard PRP application process:
In standard one stage commissioning, all full applications submitted to the PRP will be peer-reviewed by both stakeholder and independent academic referees. Wherever time permits, applicants will be given one week to respond to the peer reviewers’ comments.

Full applications, peer reviewers’ comments and any responses to those comments will then be considered by the Commissioning Panel, which is comprised of independent experts (possibly with observers from other government departments and executive agencies), who will advise the Department of Health on which applications are most suited to receive funding. The Panel will be informed by the reviewers’ comments and any responses made to these comments by the researchers. However, it is ultimately the responsibility of the Panel to make any funding recommendations to the Department of Health.

Selection Criteria
Criteria used by peer reviewers and members of the Commissioning Panel to assess applications for funding from the PRP include:

- **RELEVANCE** of the proposed research to the research specification
- **QUALITY** of the research design
- **QUALITY** of the work plan and proposed management arrangements
- **STRENGTH** of the research team
- **IMPACT** of the proposed work
- **VALUE** for money (justification of the proposed costs)
- **INVOLVEMENT** of patients and the public

Timetable
It is anticipated that commissioning of this research will occur to the following approximate timetable:

- Issue of invitation to tender: **22 January 2013**
- Deadline for receipt of full applications: **19 March 2013**
- Peer review to be completed: **15 April 2013**
- Notification of outcome: **late June 2013**
- Award of contract: **01 August 2013 (subject to pre-contract negotiations)**

In order to maximise the benefit from the findings, the research will need to commence as soon as possible following selection of the successful bid and placing of a contract. Capability to start promptly will be an advantage and should definitely be within 1 month of award of a contract.

Contacts
General enquiries regarding the application and commissioning process can be directed to the PRP CCF Help Desk by telephone at **020 8843 8027** or by email to **prp@prp-ccf.org.uk**
Key Documents
The UK Influenza Preparedness Strategy 2011

JCVI website

Healthy lives, healthy People: Improving outcomes and supporting transparency


A Strategy for Infectious Diseases.

References

