Postgraduate academic qualifications in Health Protection

1. Background

1.1 Health Protection Consultants (and now non-medical Specialists) have traditionally progressed through generic training schemes in public health (previously public health medicine), with smaller numbers coming from medical microbiology or clinical infectious diseases training. This has generally provided applicants for CCDC and other more specialised health protection posts who have the generic skills and knowledge of their base specialty, but not the specific knowledge to be immediately expert in health protection.

1.2 The experiential learning aspect of health protection training has recently been addressed by new Faculty of Public Health guidance (drawn up in conjunction with HPA) that allows Specialist Registrars and Trainees to obtain the public health competencies required for specialist registration in public health, by applying them to health protection problems encountered during long training attachments totalling up to 3 years with health protection teams/centres.

1.3 However, the knowledge base underlying this experience has not yet been satisfactorily addressed. MFPH and MPH exams are not of sufficient depth in health protection to meet the needs of the current and future health protection workforce. There is a need to address this and there is an opportunity for HPA to shape the market and ensure that suitable training becomes available.

1.4 In addition to successive cohorts of new public health trainees, there will be other professional groups likely to be interested in a comprehensive course in health protection, most notably existing specialist health protection staff (including HPA employed medics, nurses and scientists), applicants for the UK Voluntary Register for Public Health (Defined Specialist in Health Protection) and Environmental Health Practitioners (the Chartered Institute of Environmental Health (CIEH) believe this group would be a significant market).

1.5 There is also a need and a likely market for good quality courses and qualifications for other professional groups, whose role includes an element of health protection work but are not full-time ‘specialists’ in health protection: this could be because they work at the lower ‘Practitioner’ grade in health protection or because mainstream health protection is only one component of a job in a related field. Examples of the latter group might include certain specialist nurses (eg hospital infection control, occupational health, health visiting etc), Health Emergency planning Advisors, Environmental Scientists, Public Health Microbiologists etc.

1.6 There is likely to be significant interest from international students, which will be a major incentive for Universities to provide such courses.
3. Course content

3.1 One method of setting a syllabus would be to consider the various levels of specialisation within health protection and their knowledge requirements, in line with the approach that the HPA LARS Training Strategy, working with the then Training Leads in NRPB, CHaPS, ERD and CDSC, adapted for health protection training:

- **Level 1**: equates to the knowledge that would be expected of a generic consultant/specialist in public health eg that needed by a DPH responsible for the health of a population and for those specialists who take part in on-call rotas.
- **Level 2**: equates to the generalist level knowledge required from those who are applying for a generic health protection specialist post (eg CCDC).
- **Level 3**: equates to the level of knowledge that would be expected of someone who plans to specialise in only one of the 4 key areas of health protection (Communicable disease control (CDC); chemical and environmental hazards; radiation and nuclear hazards; and Emergency Planning). Examples include regional specialist staff in Epidemiology, Chemical and Health Emergency Planning and generic staff in national centres.
- **Level 4**: equates to those who super-specialise within one of the 4 fields (eg in epidemiology and control of gastrointestinal infections).

In setting the knowledge requirements of these levels, we will need to ensure consistency with FPH examinations and competencies, UK Voluntary Register for Public Health competencies (generalist and defined) and the developing work on job related competencies within the HPA.

3.2. This approach might give a curriculum that looks like:

3.2.1 Two **generic public health** modules

**Assessment of health and well-being**
- Health Information
- Epidemiological methods
- Statistical methods

**Basic public health**
- Determinants of health and health promotion.
- Medical sociology, social policy and health economics
- Organisation and management of health care programmes

For the purposes of this proposal, 10 credits would equate to a one week module with directed self study and a subsequent examination or written assessment (in line with standard practice for the Birmingham Masters in Public Health course), but this may change in line with individual University procedures. Each of these generic modules would be 20 credits (2 weeks long) and would compulsory for all qualifications *(DN: unless already have MFPH?)*.
3.2.2 Two Level One Modules, which would probably need 2 weeks each based on experience of MPH courses (i.e. a total of 40 credits) and would both be compulsory for Masters and Diploma qualifications (only one would be compulsory for Certificates to meet potential market needs). They would also be suitable as the HP modules for generic MPH courses:

Level 1 CDC would need to be adequate to cover:
- theoretical basis of the CDC component of the FPH training programme in Public Health (see appendix 2).
- CDC element of MFPH exam syllabus and/or future FPH Diploma in HP (see appendix 1).
- ‘knows how’ competencies in CDC from UK Public Health Voluntary Register for generalist specialists in Public Health (see appendix 3).
- ‘knows how’ CDC competencies for safe on-call for consultant/specialist at PCT level (currently under development between FPH and HPA).
- any ‘shows how’ competencies from above criteria that can be developed within a classroom environment, eg by developing outbreak investigation skills through scenarios and tabletop exercises (see appendices 2 and 3).

Level 1 Environmental Public Health (EPH), which would include chemical, environmental and radiation hazards and emergency planning, would need to cover:
- theoretical basis of EPH component of the FPH training programme in Public Health (see appendix 2).
- EPH element of MFPH exam syllabus or future FPH Diploma in HP (see appendix 1).
- ‘knows how’ competencies in EPH from UK Public Health Voluntary Register for generalist specialists in Public Health (see appendix 3).
- ‘knows how’ EPH competencies for safe on-call for consultant/specialist at PCT level (currently under development between FPH and HPA).
- any ‘shows how’ competencies from above criteria that can be developed within a classroom environment, eg by developing incident management skills through scenarios and tabletop exercises (see appendices 2 and 3).
- Evolving HPA work on competencies for Level 1 staff.

Although there will be overlap between the 3 components of the EPH modules, an indicative split might be 5 days chemical and environment, 2 days radiation and 3 days emergency planning.

3.2.3 Level Two modules would be available in each of the 4 main areas of health protection, ie:
- communicable disease control (probably 20 credits)
- chemical and environmental hazards (probably 10 credits)
- radiation (ionising and non-ionising) and nuclear hazards (5 credits)
- emergency planning, including deliberate release (5 credits)

Each student would be expected to undertake at least 1 of these four modules and each module would need to cover the ‘knows how’ element of the HPA level 2 (generic HP, eg local HPU staff) competencies; the theoretical underpinning of UK Voluntary Register for a Defined Specialist in HP; and the theoretical underpinning of specialist HP on-call competencies being developed with FPH. Those aiming to apply for generalist health protection posts (eg CCDC type posts) would normally opt to do all 4 modules, whereas those planning to sub-
specialise in only one of the above 4 key areas of health protection might only do one of these plus level 3 options in their chosen field.

3.2.4 **Level Three** modules would be entirely optional and cover the HPA Regional Specialist competencies and the UK Voluntary Register super-specialist competencies in Health Protection. Such modules would depend on provider university interests, but might include any of:

**CDC:**
- Microbiology for Public Health
- Food Safety
- Transmission Dynamics
- Hospital Infection Control
- Travel Health
- Immunisation
- Sexual health
- TB control
- Antimicrobial prescribing and control of resistance
- CDC in resource poor countries

**Chemical:**
- Environmental Epidemiology
- Environmental Science
- Environmental Toxicology
- Health and Environmental Impact Assessment and IPPC
- Sustainability

**Radiation:**
- CRCEH advice is that demand for level 3 radiation modules would be small. However, an interested provider might include:
  - Radiation physics
  - Radiation biology, pathology and epidemiology
  - Sources and control of ionising and non-ionising radiation
  - Organisational and legal aspects

**Emergency Planning:**
- Advanced incident planning (development, audit, exercise, review)
- Advanced incident management
- Deliberate release threats and response
- Organisational and legal aspects
- Operations research, systems analysis and logistics
- Hazardous materials and waste: transport, storage + management

3.2.5 **Level Four** training would be similar to level 3, but with selection of optional modules personalised to individual need and the dissertation being undertaken within the proposed area of super-specialisation.

3.2.6 There could also be optional **general modules** applicable to all 4 areas, eg:
- Biological and Clinical basis of Health Protection (possibly compulsory for non-clinical staff taking Masters/Diploma)
- Field Epidemiology
- Epidemiology and Statistics in Health Protection
- Dealing with the media
- Risk assessment and communication
- Public and Environmental Health law
- Occupational Health and Safety

3.3 The **Dissertation** should ideally be used to demonstrate one or more of the ‘shows how’ skills that might be expected of a defined specialist in health protection, eg the use of surveillance data and/or literature review to make recommendations for action on a health protection issue or the development and testing of contingency plans.