



**FACULTY OF  
PUBLIC HEALTH  
MEDICINE**

ROYAL COLLEGE OF  
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN

# **PUBLIC HEALTH MEDICINE**

OUTCOME BASED EDUCATION CURRICULUM



**This curriculum of training in Public Health Medicine was developed in 2010 and was reviewed in 2020/21 by a cross-faculty group led by Dr Mairin Boland, and Dr Triona McCarthy. This curriculum undergoes annual revision by Dr Triona McCarthy and Dr Anne Sheahan, National Specialty Directors, Dr Ann O’Shaughnessy, Head of Education, and by the Public Health Medicine Training Committee. The curriculum is approved by the Faculty of Public Health Medicine.**

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## Table of Contents

<b>INTRODUCTION</b> .....	<b>4</b>
<b>AIMS OF HST IN PUBLIC HEALTH MEDICINE</b> .....	<b>5</b>
<b>ENTRY REQUIREMENTS</b> .....	<b>6</b>
<b>DURATION &amp; ORGANISATION OF TRAINING</b> .....	<b>7</b>
<b>ASSESSMENT PROCESS THROUGH EACH PLACEMENT</b> .....	<b>10</b>
<b>CORE PROFESSIONAL SKILLS</b> .....	<b>11</b>
<b>PARTNERSHIP</b> .....	<b>11</b>
<b>COMMUNICATION AND INTERPERSONAL SKILLS</b> .....	<b>11</b>
<b>COLLABORATION</b> .....	<b>11</b>
<b>HEALTH PROMOTION</b> .....	<b>11</b>
<b>CARING FOR PATIENTS</b> .....	<b>11</b>
<b>PERFORMANCE</b> .....	<b>12</b>
<b>PATIENT SAFETY AND ETHICAL PRACTICE</b> .....	<b>12</b>
<b>ORGANISATIONAL BEHAVIOUR AND LEADERSHIP</b> .....	<b>12</b>
<b>WELLBEING</b> .....	<b>12</b>
<b>PRACTICE</b> .....	<b>13</b>
<b>CONTINUING COMPETENCE AND LIFELONG LEARNING</b> .....	<b>13</b>
<b>REFLECTIVE PRACTICE AND SELF-AWARENESS</b> .....	<b>13</b>
<b>QUALITY ASSURANCE AND IMPROVEMENT</b> .....	<b>13</b>
<b>SPECIALTY SECTION</b> .....	<b>14</b>
<b>1. HEALTH PROTECTION</b> .....	<b>15</b>
<b>2. HEALTH INTELLIGENCE</b> .....	<b>21</b>
<b>3. HEALTH IMPROVEMENT</b> .....	<b>28</b>
<b>4. HEALTH SERVICE IMPROVEMENT</b> .....	<b>32</b>
<b>5. STRATEGIC LEADERSHIP AND MANAGEMENT IN PHM</b> .....	<b>38</b>
<b>6. PUBLIC HEALTH (PH) ADVOCACY AND POLICY</b> .....	<b>43</b>
<b>7. HEALTH ECONOMICS</b> .....	<b>50</b>
<b>OUTCOME SUMMARY LIST</b> .....	<b>53</b>

## Introduction

### Public health physicians who practise Public Health Medicine (PHM)

- Work within national and international policy frameworks at many levels
- Deliver comprehensive Public Health Programmes for populations, including vulnerable groups
- Improve and protect health; respond to health threats whether biological, chemical or other; provide surveillance and public health risk assessments, infectious diseases prevention and control and respond to public health emergencies
- Promote health and well-being of the population
- Develop and maintain partnerships with communities and local government and voluntary sector
- Work through a legislative mandate as the Medical Officer of Health
- Engage in activities which provide an assessment of the health of the population

The legal role of Medical Officer of Health is held by the Director of Public Health and delegated as appropriate to other Public Health physicians.

Clinical experience provides an important background for the domains of public health medicine practice:

- Health Protection
- Health Intelligence
- Health Improvement
- Health Service Improvement
- Strategic Leadership and Management in Public Health Medicine
- Public Health Advocacy and Policy
- Health Economics

Specialists in public health medicine have an advisory and contributory function in health and well-being, health service planning, health needs assessment, evidence-based health policy, health service evaluation, clinical effectiveness, clinical governance, healthcare economic evaluation, clinical audit, inter-sectoral working and reduction of health inequalities.

The specialty activities of public health physicians can be considered at three levels:

1. Core activities that they lead on e.g. health protection issues including on-call out of working time hours, communicable disease control, issues related to environment and health, managing health threats, emergency preparedness, epidemiological investigations of disease patterns, interfacing with clinicians in the health service provision of evidence-based medical advice, policy analysis and clinical service developments.
2. Activities that they lead or jointly lead e.g. health impact assessment, evaluation of health services and strategic planning in disease prevention.
3. Activities where they have a significant input e.g. health and well-being, chronic disease prevention, health promotion, needs assessment, planning, meeting needs of vulnerable populations and social inclusion.

Besides these specialty specific elements, Specialist Registrars in Public Health Medicine must also acquire certain core competencies which are essential for good medical practice. These comprise the generic components of the curriculum.

## Aims of HST in Public Health Medicine

Upon satisfactory completion of specialist training in Public Health Medicine, the doctor will be **competent** to undertake comprehensive medical practice in that specialty in a **professional** manner, unsupervised and independently and/or within a team, in keeping with the needs of the healthcare system and the domains of public health practice:

- Health Protection
- Health Intelligence
- Health Improvement
- Health Service Improvement
- Strategic Leadership and Management in Public Health Medicine
- Public Health Advocacy and Policy
- Health Economics

### **Professionalism**

According to the Medical Council (Guide to Professional Conduct and Ethics for Registered Medical Practitioners) medical professionalism is a core element of being a good doctor. Good medical practice is based on a relationship of trust between profession and society, in which doctors are expected to meet the highest standards of professional practice and behaviour. It involves partnership between patient/ community and doctor that is based on mutual respect, confidentiality, honesty, responsibility and accountability. In addition to maintaining clinical competence, a doctor should also:

- Show integrity, compassion and concern for others in day-to-day practice
- Develop and maintain a sensitive and understanding attitude with patients
- Exercise good judgment and communicate sound clinical advice to patients
- Search for the best evidence to guide professional practice
- Be committed to continuous improvement and excellence in the provision of health care whether working alone or as part of a team

## Entry Requirements

Higher Specialist Training (HST) in the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland is open to fully registered medical doctors.

### You must have:

- a certificate of completion of Basic Specialist Training in General Internal Medicine or Paediatrics or Obstetrics and Gynaecology or Histopathology
- **or** evidence of completion of an equivalent two-year training programme approved by a postgraduate training body
- **or** completed at least two years of General Practice training with the Irish College of General Practitioners
- **or** specialist registration on the register of General Practice with the Medical Council of Ireland
- **or** evidence of exceptional academic achievements or professional public health experience

**Note 1:** Doctors entering the programme who do not currently hold Part 1 of the Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland (MFPHMI) or Part A MFPH (UK) or equivalent will be required to sit Part 1 of the MFPHMI in Year 1 of the training programme and must have passed the exam by the end of Year 2 of the training programme. Doctors who do not meet this requirement will not be certified to progress on the training programme.

**Note 2:** For the doctors who will sit the Part 1 of the MFPHMI during training, and who are undertaking academic training for this, the Royal College of Physicians of Ireland will make a financial contribution towards the cost of a Masters in Public Health or equivalent in support of taking Part 1 MFPHMI.

**Note 3:** Doctors who have successfully completed Part 1 of the MFPHMI or Part A MFPH (UK) or equivalent before entering the training programme will be expected to complete Part II MFPHMI as outlined in the curriculum.

## Duration & Organisation of Training

The duration of HST in Public Health Medicine is 4 or 4.5 years in supervised approved training posts.

Phase One - The first 2 years (2.5 years if academic programme for Part 1 is required) are spent in a clinical post in one regional Department of Public Health.

Phase Two training will normally include two specialised training attachments of six months duration each. These should occur during the final two years/eighteen months of training with the balance of training time taking place in a regional Department of Public Health other than the Department of initial appointment.

The training programme will provide opportunities to fulfil all the requirements of the curriculum of training for Public Health Medicine. All Specialist Registrars are required to rotate through more than one location as approved by RCPI and the Faculty. Most training posts are based in regional Departments of Public Health as above. Specialty training locations available may include the HSE Health Intelligence Unit, Department of Health (DoH), the Health Protection Surveillance Centre (HPSC), National Immunisation Office, Safefood, National Cancer Control Programme (NCCP) university academic departments, and the WHO where available. Additional locations may become available in the future. The first two / 2.5 years are spent in the clinical setting (i.e. Public Health Department posts). Out of programme clinical experience is limited to the final two years of training.

In certain circumstances where, for example, an SpR may wish to pursue further training in an area of special interest approved by the Faculty of Public Health Medicine, the possibility of a fifth year in training may be accredited i.e. for example post CSCST Fellowship, dependent on development and funding.

The earlier years in training will usually be directed towards acquiring a broad general experience of Public Health Medicine under appropriate supervision. An increase in the content of hands-on experience follows naturally, and, as confidence grows and abilities are acquired, the Specialist Registrar will be encouraged to assume a greater degree of responsibility and independence.

### *Phases of Training and Milestones*

Year 1 Health Protection induction / on call

Sit Part 1 MFPHMI for those who have not yet passed Part1. This is a requirement of the scheme.

Completion of MPH/ Part 1 academic training for those undertaking this

Initial coverage of core competencies in public health medicine

Initial coverage of generic components

Year 2

Part 1 MFPHMI should be completed by the end of year 1 of training, and must be completed by the end of year 2 of training (requirement of scheme)

Further coverage of core competencies in public health medicine

Further coverage of generic components

Year 3/4

Part II MFPHMI preparation - initiation of short reports

Part II MFPHMI completion expected by end of third year of training

Health policy experience

Advocacy experience

Increase in leadership roles

Senior public health experience at regional level

Specialist sites including health intelligence, cancer control, health protection, Safefood, and academic Public Health, Department of Health etc.

Rotation to a second Dept of Public Health. Senior responsibility including shadowing/ acting for SPHM on call.

Further coverage of generic components

## Milestones

Part 1 MFPHMI should be completed by the end of year 1 of training (must be sat during year 1 of training) and must be completed by the end of year 2 of training. Doctors who do not meet this requirement will not be certified to progress.

It is expected that Specialist Registrars complete Part II by the end of the third year in training. Part II MFPHMI must be completed by the end of training

Specialists in public health medicine operate an out-of-hours service (this is a 24/7 on call service for health protection including infectious diseases, environmental health and public health emergencies). Therefore, Specialist Registrars have to become competent in health protection at various levels throughout their training. In the first two years this is at the level of first/second responder on call during working hours under supervision of SPHM. In the 3<sup>rd</sup> year Specialist Registrars will be expected to take a lead in health protection incidents/investigations. In the final year Specialist Registrars may work as acting Specialist on-call. Specialist Registrars are responsible for ensuring they remain up to date with on-call issues and maintaining their on-call competencies throughout their cycle of training.

Each post within the programme will have a named trainer and the programmes is under the direction of the National Specialty Director(s).

The structure of the training programme may vary according to the qualifications, experience and career intentions of the individual Specialist Registrar.

The experience gained through rotation around different departments is recognised as an essential part of HST. Specialist Registrar should not as a rule remain in the same training location for longer than 2.5 years. Specialist Registrars should rotate trainers annually, where possible. Where an essential element of the curriculum is missing from a programme, it needs to be identified at an early stage to ensure access to it can be arranged, by day release, or if necessary by secondment.

A date of appointment to the approved post will be the starting point of the training programme and the Specialist Registrar will start in Year I of the training programme. Retrospective recognition may be granted if the Specialist Registrar is transferring from a similar training programme elsewhere. The Specialist Registrars will be formally advised of the date of enrolment into the training programme by the Medical Training Department. The Specialist Registrar will also be advised of the expected date of completion of Higher Specialist Training. The Specialist Registrar will be entitled to a Certificate of Satisfactory Completion of Specialist Training (CSCST) on satisfactory completion of the training programme. To qualify for a CSCST, a Registrar must have satisfactorily completed HST based on annual reviews **and** have been admitted to MFPHMI by examination. On receipt of the Accreditation Committee's recommendation the applicant will be notified whether or not issue of a CSCST has been authorised through the Medical Training Department.

All training locations are inspected by RCPI. All trainers must be accredited by the Faculty of Public Health Medicine and RCPI.

Other experience related to the Specialist Registrar's personal specialist interests and overseas experiences, if applicable, may be applied for, and requires educational approval to be obtained in advance.

## Core Professional Skills

Knowledge, skills and attitudes support competencies which are common to good medical practice in Medical specialties. It is intended that all Specialist Registrars should re-affirm these competencies during Higher Specialist Training. No time-scale of acquisition is offered, but failure to make progress towards meeting these important objectives at an early stage would cause concern about a Specialist Registrar's suitability and ability to become independently capable as a Specialist in Public Health Medicine (SPHM).



## Examinations

Exam regulations can be found on the RCPI website and candidates are advised to refer to these for full up-to-date details.

### **Examination – Part I and Part II MFPHMI (See Examination Regulations for fully up-to-date information [www.rcpi.ie](http://www.rcpi.ie))**

Doctors entering the programme who do not currently hold Part 1 of the Membership of the Faculty of Public Health Medicine of the Royal College of Physicians of Ireland (MFPHMI) or Part A MFPH (UK) or equivalent will be required to sit Part I of the MFPHMI in Year 1 of the training programme and must have passed the exam by the end of Year 2 of the training programme. Doctors who do not meet this requirement will not be certified to progress on the training programme. It is expected that candidates will have passed Part II by the end of Year 3.

#### Part II

Each candidate is strongly advised that they must sit the Part II examination within 4 years of passing Part I. The Membership of the Faculty of Public Health Medicine in Ireland (MFPHMI) Part II exam assesses candidate knowledge and skills across the full range of public health medicine, at a level appropriate to a senior public health medical practitioner. The Part II exam tests the candidate's ability to critically examine an epidemiological or public health question, carry out in-depth investigations of the issues, and propose appropriate solutions.

#### **MFPHMI Part I: Public Health Reports**

The three Part II public health reports should describe projects, which must demonstrate:

- Theoretical and practical knowledge of candidate's chosen topic area. Familiarity with the relevant literature
- Candidate's power of independent observation and judgement

#### **MFPHMI Part II Public Health Reports - oral**

The Part II public health reports oral is where candidates are required to do an oral test on the subject of their written work, including its relevance to the practice of public health medicine. This is about 30 minutes in duration.

#### **General oral**

The general oral is conducted as a separate exam and is about 30 minutes in duration. It is held on the same day as the public health reports oral.

The general oral exam tests that the candidate has retained and built on the knowledge, attitudes and skills demonstrated in the Part I exam and aims to test a candidate's ability to discuss challenges and problems that may present in the practice of public health medicine.

## **Assessment Process through each placement**

The methods used to assess progress through training must be valid and reliable.. Time should be set aside for appraisal following the assessment e.g. of presentations, case/ outbreak management, observation of procedures. As progress is being made, the lower levels of competence will be replaced progressively by those that are higher. Where the grade for an item is judged to be deficient for the stage of training, the assessment should be supported by a detailed note which can later be referred to at the Annual Evaluation Meeting. The assessment of training may utilise DOPS and Case Based Discussions (CBD) methods adapted for the purpose. These methods of assessment have been made available by HST for use at the discretion of the NSD and nominated trainer. They are offered as a means of providing the trainee with attested evidence of achievement in certain areas of the Curriculum e.g. competence in procedural skills, or in generic components. Assessment will also be supported by the trainee's portfolio of achievements and performance at relevant meetings, presentations, audit, in tests of knowledge, attendance at courses and educational events.

An initial training plan should be drawn up at the start of each placement, with timely quarterly reviews and feedback.

## Core Professional Skills

### Partnership

#### Communication and interpersonal skills

- Facilitate the exchange of information, be considerate of the interpersonal and group dynamics, have a respectful and honest approach.
- Engage with patients and colleagues in a respectful manner
- Actively listen to the thoughts, concerns and opinions of others
- Consider data protection, duty of care and appropriate modes of communication when exchanging information with others

#### Collaboration

- Collaborate with patients, their families and your colleagues to work in the best interest of the patient, for improved services and to create a positive working environment.
- Work cooperatively with colleagues and team members to deliver an excellent standard of care
- Seek to build trust and mutual respect with patients
- Appropriately share knowledge and information, in compliance with GDPR guidelines
- Take on-board available, relevant feedback

#### Health Promotion

- Communicate and facilitate discussion around the effect of lifestyle factors on health and promote the ethical practice of evidence based medicine.
- Seek up to date evidence on lifestyle factors that:
  - negatively impact health outcomes
  - increase risk of illness
  - positively impact health and decrease risk factors
- Actively promote good health practices with patients individually and collectively

#### Caring for patients

- Take into consideration patient's individuality, personal preferences, goals and the need to provide compassionate and dignified care.
- Be familiar with
  - Ethical guidelines
  - Local and national clinical care guidelines
- Act in the patient's best interest
- Engage in shared decision making and discuss consent

**Performance****Patient safety and ethical practice**

- Put the interest of the patient first in decisions and actions.
- React in a timely manner to issues identified that may negatively impact the patient's outcome
- Follow safe working practices that impact patient's safety
- Understand ethical practice and the medical council guidelines
- Support a culture of open disclosure and risk reporting
- Be aware of the risk of abuse, social, physical, financial and otherwise, of vulnerable persons

**Organisational behaviour and leadership**

- The activities, personnel and resources that impact the functioning of the team, hospital and health care system.
- Understand and work within management systems
- Know the impacts of resources and necessary management
- Demonstrate proficient self-management

**Wellbeing**

- Be responsible for own well-being and health and its potential impact on the provision of clinical care and patient outcomes.
- Be aware of signs of poor health and well-being
- Be cognisant of the risk to patient safety related to poor health and well-being of self and colleagues
- Manage and sustain your own physical and mental well-being

**Practice****Continuing competence and lifelong learning**

- Continually seek to learn, to improve clinical skills and to understand established and emerging theories in the practice of medicine.
- Meet career requirements including those of the medical council, your employer and your training body
- Be able to identify and optimise teaching opportunities in the workplace and other professional environments
- Develop and deliver teaching using appropriate methods for the environment and target audience

**Reflective practice and self-awareness**

- Bring awareness to your actions and decisions and engage in critical appraisal of own work to drive lifelong learning and improve practice.
- Pay critical attention to the practical values and theories which inform everyday practice
- Be aware of your own level of practice and your learning needs
- Evaluate and appraise your decisions and actions with consideration as to what you would change in the future
- Seek to role model good professional practice within the health service

**Quality assurance and improvement**

- Seek opportunities to promote excellence and improvements in clinical care through the audit of practice, active engagement in and the application of clinical research and the dissemination of knowledge at all levels and across teams.
- Gain knowledge of quality improvement methodology
- Follow best practice in patient safety
- Conduct ethical and reproducible research

## **Specialty Section**

## 1. Health Protection

All Hazards<sup>1</sup> Approach incorporating Infectious Disease Prevention and Control, Environment and Health (protection of the public from environmental hazards) & Emergency Preparedness and Response. By the end of HST training Trainees should acquire the knowledge and skills to protect health from All-Hazards and in all contexts.

<sup>1</sup> "Using an all hazards approach, which includes natural, biological, technological and societal hazards, the health of populations are put at risk. Examples of hazards include: • Natural: earthquake, landslide, tsunami, cyclones, extreme temperatures, floods or droughts • Biological: disease outbreaks including human, animal and plant epidemics and pandemics • Technological: chemical and radiological agent release, explosions, transport and infrastructure failures • Societal: conflict, stampedes, acts of terrorism, migration and humanitarian emergencies (WHO <https://www.who.int/hac/techguidance/preparedness/who-factsheet-overview-december2017.pdf>)

There are **5 learning outcomes** in Health Protection.

1. Correctly interpret and use legislation to protect health
2. Ability to investigate and control infectious diseases to prevent avoidable infections, including surveillance, contact tracing, provision of effective immunisation, IPC advice from policy to practice levels
3. Ability to protect the public from environmental threats effectively including performing a public health risk assessment, communicating risk, developing public health medical advice; surveillance and investigation of reported clusters
4. Manage public health emergencies
5. Ability to evaluate and monitor health protection programmes

### Description of knowledge and skills

#### Knowledge

1. Public health medical legislation underpinning health protection including MOH, HPSC and IHR legislation, and other legislation of public health importance
2. How to advocate for improved legislation and policy, including Health in All Policies for health protection (LINK)
3. Environmental influences and determinants on health and wellbeing and sustainable development goals (SDGs)
4. Epidemiology of infectious diseases of national and international public health importance
5. Prevention of infectious diseases including immunisation and infection prevention and control (IPC)
6. Importance and application of surveillance systems
7. Notification, investigation of infectious diseases, investigation of sources, prevention of spread, removing conditions favourable to infectious diseases
  - For cases and outbreaks
  - In relation to Port Health
  - For emerging infectious diseases
  - For Health Security including Public Health Emergencies of International Concern (PHEIC), bioterrorism, biological emergencies
8. Public health risk assessment, risk communication and public health medical advice
9. How to investigate a reported cluster of non-infectious disease
10. Knowledge of the organisation of Major Emergency Management in Ireland, including the roles of the principal response agencies. Knowledge of the role of the Public Health Physician in major emergencies
11. One Health joint approach, especially in relation to national and international anti-microbial resistance (statutory function under LINK)

#### Skills

1. Correctly interpret and use legislation to protect health
2. Ability to collect, collate and analyse surveillance data for action
3. Ability to provide effective immunisation and IPC advice towards prevention and control from policy to practice levels
4. Ability to investigate and control infectious disease incidents to prevent avoidable infections
5. Ability to protect the public during and after an environmental incident; perform a public health risk assessment, communicate risk effectively and develop public health medical advice
6. Investigate and manage reported clusters

7. Manage public health emergencies  
 8. Evaluate and monitor health protection programme(s)

Overview of Methods of demonstrating proficiency

<b>Knows</b>	<ul style="list-style-type: none"> <li>Formal and self-study, Health Protection modules of MPH, attendance at educational seminars, Study Days, Paper 1 of Part I Exam</li> </ul>
<b>Knows How</b>	<ul style="list-style-type: none"> <li>Learning through service experience, on-call hours, participation in workshops / SpR study day (e.g. table-top exercises), Paper 2 of Part I Exam, WBAs, CBDs</li> </ul>
<b>Shows How</b>	<ul style="list-style-type: none"> <li>Shows through involvement in more complex cases, outbreaks, environmental incidents, Health Protection Report for Part II Exam, Oral Examination of Professional Competence (OEPC) for Part II Exam, WBAs, CBDs, Direct Observation.</li> </ul>
<b>Does</b>	<ul style="list-style-type: none"> <li>Participate regularly in on-call rota for all hazards, supporting the Medical Officer of Health (MOH) role. Demonstration of integration of competencies across health protection, taking leading role in complex cases, outbreaks, drinking water incidents, Seveso Site Desktop exercises, cluster response, public health risk assessment of environment and health incidents, port health events, WBAs, CBDs, Direct Observation, acting up as CPHM, contributing to or leading the development of a position paper, presentations to medical and lay audiences, media experience (written and oral).</li> </ul>



**Outcome 1:****Correctly interpret and use legislation to protect health**

Example: Implement MOH legislation in line with evidence & GDPR in a variety of contexts that require clarity on relevant responsibility and authority

## Steps to Outcome Completion

1. Has knowledge and awareness of key MOH legislation and statutory roles in Public Health Medicine
2. Demonstrates ability to interpret important legislation
3. Able to apply MOH and other relevant legislation effectively to protect health.

## Evidence of Learning

Step	Formative Assessment tools and expected evidence of learning
1 Minimal	Case based discussion (on participation on outbreak control teams)
2 Partial	Case based discussion Written reports - annual reports, outbreak reports, incident reports. Study days (Health Protection, MOH)
3 Full	Clinical audit with legislation as standard Protect health in line with legislation (within report) Direct Observation of Public Health Practice (DOPH) Written reports - annual reports, outbreak reports, incident reports. legal course (goal level)

**Outcome 2:****The ability to investigate and control infectious diseases to prevent avoidable infections, including surveillance, contact tracing, provision of effective immunisation, IPC advice from policy to practice levels**

Examples: leading in the investigation and control of an ID outbreak; developing and communicating effective control advice; acted upon evidence from surveillance data

## Steps to Outcome Completion

1. Knowledge of infectious diseases epidemiology, guidance/methods of notification, investigation, surveillance and control
2. Demonstrates an ability to carry out investigation, surveillance and control activities
3. Able to investigate and control infectious disease cases and outbreaks, including preventing spread and removing conditions favourable to infections

Step	Formative Assessment tools and expected evidence of learning
1 Minimal	Part 1 Exam, Study days (if available), Case based discussion
2 Partial	Part 2 Direct Observation of Public Health Practice (DOPH) Written reports Participation in daytime on call activity Clinical audit (might be in multiple) Presentations at national/international symposia
3 Full	Part 3 Direct Observation of Public Health Practice (DOPH) Case-based discussion Completion of timely, high quality reports Chair an outbreak control team Publications in peer reviewed journals (optional - record title) Preparation of press statements (written/oral)

**Outcome 3:**

**The ability to protect the public from environmental threats effectively including performing a public health risk assessment, communicating risk, developing public health medical advice; surveillance and investigation of reported clusters**

Example: Public health risk assessment of an environmental incident; public health medical advice to professionals and public; investigation and management of alleged / reported cluster

Steps to Outcome Completion

1. Knowledge of environment and health influences, actions and stakeholders.
2. Demonstrate an ability to protect health from environmental influences
3. Able to protect the public during/after an environmental incident; inform oneself and advise on influences injurious to health

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
1 Minimal	Part 1 Exam, Case based discussion (can be example or theoretical)
2 Partial	Case-based discussion Part 2 Written reports Participation in daytime on call activity Clinical audit (might be in multiple) Presentations at national/international symposia
3 Full	Direct Observation of Public Health Practice (DOPH) Completed public health risk assessment (PHRA); Written Reports Provision of public health medical advice Submission to public consultation/ environmental planning including PHRA Position paper on environmental influences/impacts on health Study day – environment and health

**Outcome 4:**

**Manage Public Health Emergencies**

Example: Manage local / regional public health emergencies including water, air quality incidents

Steps to Outcome Completion (To be applied in more than one)

1. Knowledge of structures and processes for managing public health emergencies
2. Demonstrates ability to manage public health emergencies
3. Able to manage public health emergencies

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
1 Minimal	Study day Case based discussion (theory or example)
2 Partial	Study day or simulation exercises (review options) Direct observation of public health practice
3 Full	Work based assessment Direct Observation of Public Health Practice Written report Clinical audit

**Outcome 5:****The ability to evaluate and monitor health protection programmes**  
(\*Opportunity Dependent)

Example: evaluate the structure, process and outcome of the protection of the public from a specific hazard

Steps to Outcome Completion

1. Knowledge of evaluation and monitoring of health protection programmes
2. Demonstrates ability to evaluate and monitor health protection programmes
3. Has undertaken an evaluation of a health protection programmes

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
1 Minimal	Part 1 Case based discussion
2 Partial	Case based discussion Part 2 Part 3 Written Reports
3 Full*	Development of effective outcome measures Written reports Presentation to relevant audiences

Identified learning opportunities

PLACEMENTS	Placements in general Departments of Public Health Medicine; health protection rota in years 1,2 and 4 – first on-call, incident control team meetings (including outbreak/water incident/major fire), attendance at interagency meetings e.g. Drinking Water Liaison Meetings, meetings with EPA.
	Specialty placements e.g. in the HPSC or NIO
	Attachments to relevant environmental health bodies such as Public Health England - Centre for Radiation, Chemical and Environmental Hazards (Wales), and World Health Organization (WHO) are highly desirable.
ACADEMIC/ MPH	Health protection modules in MPH, Diplomas or other educational courses/certificates.
	EPIET Fellowship
MFPHMI	Part I and II Membership exams
STUDY DAYS	Study days- infectious disease, port health, environment and health, emergency planning and response
COMMITTEE INVOLVEMENT	Involvement/ Medical secretary role in national infectious disease committees (PHMCDG), MOH port health committee, HSE port health network, environment and health committee (PHMEHG), emergency management committee, Observer at HSE Emergency Planning Group. Attendance at interagency Regional Water Liaison Committee Meetings. Drinking Water Incident Management meetings, National expert groups in Environment and health: e.g. EPA Air Quality Group; EPA ORP Radon Working Group; Departmental Climate Change - to attend as observer / work on specific related project with lead SPHM; Attendance/observer at regional steering groups
MEETINGS	National meetings including FPHMI Scientific Meetings, Annual Scientific Meeting Infectious Disease Society of Ireland, EPA National Water Conference, Relevant FSAI/foodborne conference/seminar as may arise, HCAI-related as may arise, Association of Clinical Microbiologists Conference
	International meetings such as ESCAIDE (European Scientific Conference on Applied Infectious Disease Epidemiology), International Conference on Emerging Infectious Diseases (CDC, Atlanta), disease-specific conferences such as those for TB etc.
	Involvement in Department Major Emergency Management Group or observer at the Interagency regional working group (RWG) or project specific participation in subgroups of RWG
	Practical experience of specific incident risk assessment (all hazards approach), mitigation of risk/risk management, risk communication response and recovery of potential public health emergencies and major emergencies of national and international concern.
EXERCISES	Outbreak control, environmental incidents, Port Health, Emergency planning (public health HSE or inter-agency) exercises including SEVESO exercises. Exercises may include table top or simulation exercises)
COURSES	Trainings in use of statistical software such as SPSS, R and Stata
ON LINE RESOURCES	Online courses on outbreak investigation and management, available through ECDC
	Online MEM.ie Emergency training module
	<a href="#">Public Health Medicine On Call Resources</a>
	Online webinars such as WHO, Port Health
SITE VISITS	Site visits such as clinical microbiology departments, food microbiology laboratories, water treatment plants, food production sites, airport emergency planning, EHS, IW sites / reservoirs, landfill remediation projects. Two site visits are highly desirable (one of which should be to a water treatment plant).

## 2. Health Intelligence

By the end of Higher Specialist Training Trainees should acquire the knowledge and skills necessary to exploit the potential of data and evidence in order to identify implications for health and health services

There are **4 learning outcomes** in Health Intelligence.

1. Demonstrate in-depth knowledge and proficient use of the key health related datasets
2. Demonstrate the ability to apply research methods
3. Demonstrate ability to analyse, interpret and effectively communicate data
4. Demonstrate the application of good information governance

### Description of knowledge and skills

#### Knowledge

1. Sources of key health-related data within and outside the health sector, their strengths and weaknesses, biases and artefacts and issues in interpretation (see Appendix - Examples of Key Health-related Datasets)

CSO census, population projections, migration.

Vital statistics e.g. births, mortality, life tables.

Hospital activity e.g. HIPE.

Primary care activity e.g. prescribing.

Other measures of healthcare provision and usage

Surveillance systems e.g. CIDR, congenital anomaly.

Screening programmes e.g. breast, cervical, bowel, diabetic retinal.

Disease/health registries e.g. infrastructure, purpose, governance, data content.

Health determinants e.g. All Ireland Public Health Repository (Institute of Public Health).

Measures of inequality e.g. deprivation/affluence indices.

Health surveys e.g. national/sub-national surveys.

Database/information system design e.g. HIQA Guiding Principles for National Health and Social Care Data Collections.

Scientific data management and stewardship – FAIR Guiding Principles (Findable, Accessible, Interoperable, Reusable). <https://www.go-fair.org/fair-principles/> Awareness of “Big Data”.

International outcome frameworks

Use of information for health service planning and evaluation

2. Research methods

Literature review e.g. critical appraisal, synthesis, reference management.

Systematic review and meta-analysis.

Study design e.g. case-control, cohort, cross-sectional, ecological, randomised controlled trial.

Sampling methodologies e.g. purposive, snowball.

Sample size, power calculations.

Questionnaire design.

Descriptive epidemiology e.g. person, place, time, prevalence, incidence.

Chance, bias, confounding, correlation, causality, statistical vs. clinical significance.

Data collection and storage, data standards.

Active and passive surveillance

Coding and classification systems.

Data/record linkage/re-association.

Qualitative research methodologies e.g. topic guides, semi-structured interviews, focus groups.

Getting research into practice (GRIP) e.g. principles of implementation science.

Translating research into policy formulation and implementation

Specification and use of information systems

3. Analytical methods

Quantitative e.g. univariate, parametric and non-parametric, odds ratio, risk ratio, linear regression, logistic regression, Cox regression, fixed and random effects meta-analysis, time trends, modelling, run charts, Statistical Process Control (SPC) charts.

Qualitative e.g. thematic analysis, grounded theory.

Familiarity with at least one statistical software package e.g. SPSS, R, Stata, NVivo.

#### 4. Legislation and Good information governance

Health legislation i.e. Health Acts 1947 & 1953, Health (Duties of Officers) Order 1949, Infectious Diseases Regulations 1981 (as amended), Health Act 2004, International Health Regulations 2005.

General Data Protection Regulation 2018 (GDPR) - understanding of key principles, key definitions, legal basis and conditions for processing health data, health data as 'special category data'.

Data Protection Act 2018.

Health Research Regulations 2018 - explicit consent, research ethics committees, Data Protection Impact Assessment (DPIA), consent declaration committee.

Freedom of Information Act 2014 (FOI).

Data security including hardware, password, encryption.

Good information governance guidelines e.g. HIQA publications, HSE policy.

#### Skills

1. Critical appraisal of relevant literature.
2. Appropriately collect, manage, access and utilise datasets using relevant database and statistical software, employing appropriate methodologies e.g. quantitative, qualitative, mixed.
3. Appropriately interpret, synthesise and effectively present research findings in written and oral formats e.g. in light of study design and data limitations.
4. Getting research and evidence into practice (based on own or others' work) to help inform a plan for service delivery, strategy or policy development.
5. Ability to use health intelligence to respond to urgent challenges of the day and longer term public health queries in a collaborative, timely, efficient and effective manner.
6. Ability to engage with peers, multidisciplinary team members and stakeholders in health intelligence skills transfer/training in a collaborative and effective manner.

#### Overview of Methods of demonstrating proficiency

DOES	Demonstration of integration of competencies across health intelligence, taking the lead role in health analytics projects from conception to completion.
SHOWS HOW	Learning through involvement in increasingly complex health analytic projects for Part 2 Examination, General Oral for Part 2 Examination, Training Opportunity Assessments (TOAs), Case-Based Discussions (CBDs), Directly Observed Public Health practice (DOPH), Situation-Background-Assessment-Recommendation form (SBAR) in-house reports, presentations, and publications.
KNOWS HOW	Learning through service experience, participation in workshops, MPH or equivalent modules, TOAs, CBDs.
KNOWS	Formal study, attendance at educational seminars, Part 1 Examination, scientific meetings.

**Outcome 1:**

**Demonstrate in-depth knowledge and proficient use of the key health related datasets.**

## Steps to Outcome Completion

1. Demonstrates awareness of key health-related datasets.
2. Demonstrates in-depth knowledge of key health-related datasets.
3. Demonstrates proficient use of key health-related datasets in everyday practice.

Step	Formative Assessment tools and expected evidence of learning
1 Minimal	Required: Case-based discussion showing some understanding of the potential value of particular dataset/s. Documented on CBD form.
2 Partial	Required: Part 1 examination. <b>AND</b> Case-based discussion/s of key health-related datasets (3 or more) demonstrating good understanding of key concepts and factual knowledge. Documented on CBD form.
3 Full	Required: Part 2 examination. <b>AND</b> DOPH practice e.g. demonstrating proficiency in the use of key health-related dataset/s (3 or more) in the presence of trainer/peers. <b>AND</b> Author (lead or contributing) of report/s or research, (poster/oral format) presented at scientific meetings (national/international) or publication/s, using key health-related data sources. <b>AND</b> Has presented methodology and findings of research to two or more audiences, tailored as appropriate e.g. local, national or international, using key health-related data sources.

**Outcome 2:****Demonstrate ability to apply research methodologies.**

## Steps to Outcome Completion

1. Some understanding of research methodologies.
2. Demonstrates in-depth knowledge of research methodologies.
3. Demonstrates the ability to apply a range of research methodologies.

Step	Formative Assessment tools and expected evidence of learning
1 Minimal	Required: Case-Based Discussion showing some understanding of a range of research methodologies e.g. quantitative, qualitative, mixed, literature review, systematic review. Documented on CBD form. <b>AND</b> “Health Research – An Introduction”. E-learning mandatory RCPI course.
2 Partial	Required: Part 1 examination. <b>AND</b> Presentation/s on research methodologies to trainer/peers e.g. at journal clubs/educational seminars or equivalent. Documented on TOA form. <b>AND</b> Participation in one or more research projects using health-related dataset/s e.g. “hands-on”/internal departmental report. Documented on TOA form or SBAR form.
3 Full	Required: Part 2 examination. <b>AND</b> Author (lead or contributing) of report/s or research (poster/oral format) presented at scientific meetings (national/international) or publication/s, using key health-related data sources. <b>AND</b> Has presented methodology and findings of research to two or more audiences, tailored as appropriate e.g. local, national or international, using key health-related data sources.



**Outcome 3:****Demonstrate ability to analyse, interpret and effectively communicate data**

## Steps to Outcome Completion

1. Some knowledge of analytical tools
2. Demonstrates ability to interpret and present data
3. Demonstrates ability to independently analyse, interpret and present data using a range of analytical tools for a variety of audiences.

Step	Formative Assessment tools and expected evidence of learning
1 Minimal	Required: Case-Based Discussion showing some understanding of the basic analytical tools available in a statistical software package. Documented on CBD form.
2 Partial	Required: Part 1 examination. <b>AND</b> Presentation/s of research findings to trainer/peers e.g. at journal clubs/educational seminars or equivalent. Documented Training Opportunity Assessment form. <b>AND</b> Demonstrates ability to critically appraise research methods e.g. at journal clubs/educational seminars, conferences or equivalent. Documented Training Opportunity Assessment Form.
3 Full	Required: Part 2 examination. <b>AND</b> Author (lead or contributing) of report/s or research (poster/oral format) presented at scientific meetings (national/international) or publication/s, using key health-related data sources. <b>AND</b> DOPH practice. (Demonstration of the everyday use of some of the analytical tools). Documented on DOPH practice form. <b>AND</b> Has competently presented complex analyses/issues to two or more audiences, tailored as appropriate e.g. local, national or international, using key health-related data sources.  Desirable: Presentation/s to senior management (HSE; DOH) <b>OR</b> Participation in initiatives aimed at changing policy or clinical practice using own or others' work.

**Outcome 4:****Demonstrate the application of good information governance**

## Steps to Outcome Completion

1. Some knowledge of information governance
2. Demonstrates in-depth knowledge of good information governance (e.g. GDPR, Health Research Regulations 2018, FOI).
3. Demonstrates competence in the application of good information governance

Step	Formative Assessment tools and expected evidence of learning
1 Minimal	Required: Case-Based Discussion showing understanding of the principles of professional conduct, ethics and confidentiality as applied to stored information. Documented on CBD form. <b>AND</b> GDPR E-learning HSE Land E-learning course. <b>AND</b> Good Information Practices HSE Land E-learning course.
2 Partial	Required: Case-based discussion of the everyday use of the elements of good information governance (e.g. responding to a FOI request). Documented on CBD form. Ethics Foundation RCPI course.
3 Full	Required: Ethics for Public Health RCPI course. <b>AND</b> Demonstrates ability to appropriately store, process, analyse and display data in line with good information governance within own body of work: e.g. - Report/s - Publication/s - Presentation/s Documented on DOPH practice form. Portfolio notes: Should show across a number of data sets, checklist with trainer, goal of number set with trainer  Desirable: Participation in relevant technical/health informatics groups/meetings.

<b>Potential settings to gain skills</b>	MPH or equivalent.
	Part 1 and Part 2 Membership Examinations.
	Placements in Departments of Public Health.
	Placement in the Health Intelligence Unit, HSE.
	Placements/attachments in academic and other specialised departments/units. (e.g. UCD - CSTAR)
	Study days.
	Educational seminars/workshops.
	Ethics Foundation RCPI course.
	Ethics for Public Health RCPI course.
	Good Information Practices HSE Land E-learning course.
	Health Research – Introduction RCPI E-learning course.
	Involvement in national/regional/local service planning/evaluation initiatives.
	National scientific meeting e.g. FPHMI Scientific Meetings.
	International scientific meetings.
	Participation in relevant technical/health informatics groups/meetings.
	Familiarisation in the use of datasets: e.g. census, PHIS, HIPE, Health Atlas Ireland, National Quality Assurance and Improvement Systems (NQAIS).
Training in statistical software packages e.g. R, SPSS, Stata.	

## Appendix – Examples of Key Health-related Datasets

1. Census of Population (CSO)
2. Vital Statistics (CSO)
3. Computerised Infectious Disease Reporting (CIDR) system
4. National School Immunisation System (SIS)
5. Public Health Information System (PHIS)
6. Healthy Ireland Surveys
7. Hospital In-Patient Enquiry (HIPE)
8. Primary Care Reimbursement Service (PCRS)
9. National Cancer Registry Ireland (NCRI)
10. The Irish Longitudinal Study on Ageing (TILDA)
11. Screening Programmes e.g. Cervical Check, Breast Check, Bowel Screen, Diabetic RetinaScreen

### 3. Health Improvement

There are **4 learning outcomes** in Health Improvement.

1. Scope a health needs assessment and provide the evidence base for preventive and health improvement intervention
2. Evaluation of a preventative or health improvement initiative/programme/service. – needs feedback from specialist, not achievable
3. Advocate for public health principles and action, to improve the health of the population or a subgroup.
4. In depth understanding of the principles of screening, potential benefits and risks to the population, evaluation of screening programmes, importance of quality assurance, and governance structures.

#### Description of knowledge and skills

- Social determinants of health, health inequality and inequity.
  - Behavioural change theory and theories of health promotion.
  - Importance of key stakeholders and their roles in promoting health e.g. whole-of-government, industry, professionals, NGO, lobby groups, local authorities.
  - Models of health needs assessment, including their strengths and weaknesses.
  - Public health approach to prioritisation within the strategic planning cycle.
  - Relative importance of public policy initiatives that impact on health across all government departments, health legislation and the environment, as well as individual behaviour as determinants of health.
  - Understanding the role and limitations of screening programmes.
- 
- Ability to undertake health improvement projects including planning, implementation and evaluation.
  - Work effectively in multidisciplinary settings both within and outside the organisation i.e. interdepartmental committees, local authorities, health promotion, academia etc.
  - Ability to undertake a health needs assessment.
  - Communication of public health information including health implications of research findings to different audiences.

#### Overview of Methods of demonstrating proficiency

DOES	Demonstration of integration of competencies across health improvement, taking leading roles in health improvement projects, contributing to or leading the development of a position paper or report.
SHOWS HOW	Involvement in health improvement projects or programmes, works as part of a team undertaking health improvement work, member/medical secretary to PHMHIG.
KNOWS HOW	Avails of resources to support theoretical and practical experience, e.g. online courses, SpR study days, attendance at educational events/conferences etc.
KNOWS	Self-study, health improvement modules of MPH, MFPHI Part I exam.

**Outcome 1:**

Scope a health needs assessment and provide the evidence base for preventive and health improvement intervention

Steps to Outcome Completion

1. Understand the principles of health needs assessment, health impact assessment, health equity audit and the importance of an evidence base approach to population health.
2. Contribute to a health improvement intervention.
3. Active involvement in the development and/or implementation of a health improvement project or prevention initiative involving interagency working.

Step	Formative Assessment tools and expected evidence of learning
Minimal	MFPHMI Part I exam
Partial	CBD DOPH
Full	Oral presentations to various audiences – local, regional, national or international. OR Published reports – national or local, preferably incorporated into guidelines or policy documents. Or Peer Reviewed Publication. Direct Observation of Public Health Practice. MFPHMI Part II exam

**Outcome 2:**

Evaluation of a preventative or health improvement initiative/programme/service. – needs feedback from specialist\*

Steps to Outcome Completion

1. Understand the importance of evaluation in health improvement or preventative programmes. Ability to identify relevant data and health information systems which can be used to inform evaluation.
2. Demonstrate the knowledge and skills to evaluate a health improvement programme, or preventative initiative i.e. identify appropriate methodology, including a focus on health inequalities.
3. Complete an evaluation of a health improvement initiative/programme, using the appropriate methodology, including an emphasis on how the initiative/programme addresses health inequalities.

Step	Formative Assessment tools and expected evidence of learning
Minimal	MFPHMI Part I examination MPH
Partial	CBD DOPH
Full* Where achievable	MFPHMI Part II exam Published reports – national or local. Peer Reviewed Publication Audit

**Outcome 3:**

Advocate for public health principles and action, to improve the health of the population or a subgroup.

## Steps to Outcome Completion

1. Knowledge of important public health issues, particularly around health inequalities and the key role of Public Health in advocacy.
2. Contribute to advocacy for a particular public health issue
3. Targeted advocacy on an important public health issue, with particular focus on social determinants of health and reducing health inequalities.

Step	Formative Assessment tools and expected evidence of learning
Minimal	MFPHMI Part I exam
Partial	CBD DOPH Media Communication
Full	MFPHMI Part II exams Published letters, opinion piece or peer reviewed article National and Local Media Communications – oral or written

**Outcome 4:**

In depth understanding of the principles of screening, potential benefits and risks to the population, evaluation of screening programmes, importance of quality assurance, and governance structures.

## Steps to Outcome Completion

1. Know the principles of screening, epidemiology of screening-amenable conditions, potential benefits and risks to the population
2. Know the role of population-based screening, limitations and benefits, the importance of informed decision making in relation to screening, clear communication with the target population, quality assurance processes and governance structures
3. Full understanding of the principles and operational aspects of introducing and evaluating screening programmes including reporting structures.

Step	Formative Assessment tools and expected evidence of learning
Minimal	MFPHMI Part I exams
Partial	Required: <ul style="list-style-type: none"> <li>• CBD</li> <li>• DOPH</li> </ul> Desirable: <ul style="list-style-type: none"> <li>• Media communication or contribute to a communication piece on screening for the public or various target audiences.</li> </ul>
Full	Required: <ul style="list-style-type: none"> <li>• MFPHMI Part II exam</li> <li>• CBD (which should cover knowledge points)</li> </ul> Desirable: <ul style="list-style-type: none"> <li>• Contribute to the work of a screening programme or governing body including an evidence based review, evaluation or audit. Opportunities may arise to work with the National Screening Service, National Screening Advisory Committee, National Cancer Control programme. National Cancer Registry etc.</li> <li>• Critical appraisal/literature review of an existing screening programme or of a potential future screening programme.</li> </ul>

**Potential settings to gain skills**

Departments of Public Health and speciality placements
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<b>Potential settings to gain skills</b>	Master of Public Health, Diplomas or other educational courses/certificates.
	Attachments to local departments of health promotion
	Local healthy city or healthy county initiatives
	Medical secretary or member of Public Health Medicine Health Improvement Group (PHMHIG)

#### 4. Health Service Improvement

Objective: By the end of HST Trainees should acquire the knowledge and skills to plan and evaluate health services, identify areas for improvement including quality improvement methods.

There are **5 learning outcomes** in Service Health Improvement.

1. Understand health systems and health system performance:  
Demonstrate an understanding of a health systems approach to assessing, planning, delivering and evaluating health services
2. Demonstrate ability to assess the needs of the population
3. Demonstrate ability to evaluate health services
  - Demonstrate ability to evaluate a service or component of a service in order to ascertain whether the service meets the needs of the population
4. Quality and patient safety:
  - Demonstrate knowledge, understanding and practical application of quality and patient safety principles in healthcare
5. Quality improvement:
  - Demonstrate a knowledge of the role of leadership in influencing a culture of learning and continuous improvement across teams, services and systems
  - Demonstrate an understanding of the importance of and approaches to person and family engagement for quality improvement
  - Demonstrate an understanding of the importance of and approaches to staff engagement in quality improvement.
  - Demonstrate an understanding of quality improvement methodologies and how they can be applied to achieve better, safer outcomes for service users and staff
  - Demonstrate an understanding of the importance of measurement for improvement and the various methods of collecting, analysing and displaying data to inform improvement
  - Demonstrate an understanding of the science of improvement and how it supports a systems approach to improving quality



Description of knowledge and skills

- In-depth knowledge of a health systems approach and its relevance to health service improvement
- Understand the principles and practice of healthcare evaluation and the different evaluation tools available
- Understand the principals and practice of a population needs assessment to inform health service planning and improvement
- Knowledge of different approaches to improving quality and safety of health services, including concepts of quality improvement and quality assurance
- Knowledge of audit (including clinical audit) and its role in improving the quality of healthcare
- Knowledge of effective governance, including clinical governance, for health service improvement
- Knowledge of measuring and monitoring performance for health service improvement
- Knowledge of approaches to change management
- Knowledge of the principles of effective communication and the importance of influencing stakeholders
- Knowledge of the principles of effective teamwork for health service improvement
- Knowledge of the role of leadership in health service improvement, including influencing a culture of learning and continuous improvement across teams, services and systems
- Understand the importance of and approaches to person and family engagement for quality improvement
- Understand the importance of and approaches to staff engagement in quality improvement.
- Understand quality improvement theories and methodologies and how they can be applied to achieve better, safer, person-centred outcomes for service users and staff
- Understand the importance of measurement for improvement and the various methods of collecting, analysing and displaying data to inform improvement
- Understand the science of improvement and how it supports a systems approach to improving quality
  
- Ability to identify and prioritise areas for health service improvement
- Ability to undertake audit for health service improvement, benchmarked against a recognised standard of care
- Ability to conduct an evaluation of a service or a component of a service
- Ability to conduct a population needs assessment
- Ability to monitor and measure the performance of a health service for improvement
- Ability to lead on and implement a change management project
- Engage and communicate effectively with stakeholders
- Identify, reflect on and learn from critical incidents such as near misses and preventable medical errors
- Ability to communicate effectively
- Ability to work effectively as part of a team for health services improvement
- Proactively lead change and strengthen motivation for improvement
- Ability to facilitate engagement with patients, family and staff
- Apply quality improvement methodologies and tools
- Take a consistent, planned robust approach to measurement
- Ability to generate, interpret and use information (data) for health service improvement
- Ability to implement and sustain a quality improvement project

**Outcome 1:****Understand health systems and health system performance**

## Steps to Outcome Completion

1. Demonstrates understanding of international and national health systems frameworks for example
  - WHO publications on health systems and health systems performance
  - Key Irish strategies and plan with performance frameworks
2. Demonstrate an understanding of a health systems approach planning, delivering and evaluating health services, including the role of clinical governance
3. Demonstrates effective application of a systems approach in a health service improvement project

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
Minimal	Demonstrates some knowledge through discussion with trainer at quarterly meetings or Evidence of health systems understanding in report and/or presentation on PH project
Partial	Evidence of critical thinking on health systems in report of PH project Participation in departmental planning and evaluation (record example) Part 1 exam
Full	Part 2 exam or Reports of PH projects demonstrating effective application of critical health systems methodology to service improvements. or Direct Observation of Public Health Practice of applying critical health systems methodology to service improvements

**Outcome 2:****Demonstrate ability to assess the needs of the population**

## Steps to Outcome Completion

1. Demonstrates understanding of population health needs methodology
2. Demonstrates understanding, interpretation and application of population health needs methodology
3. Demonstrates use of population health needs methodology

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
Minimal	Demonstrates some knowledge through discussion (CBD)
Partial	Part 1 exams or Direct Observation of Public Health Practice (DOPH) in project involvement
Full	Part 2 exams or Public Health reports including a needs assessment or service evaluation or Direct Observation of Public Health Practice (DOPH) of leading a needs assessment

**Outcome 3:****Demonstrate ability to evaluate health services**

## Steps to Outcome Completion

1. Demonstrates understanding of evaluating of services methodology
2. Demonstrates evidence of understanding, interpretation and application of service evaluation methodology
3. Demonstrates use of service evaluation methodology

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
Minimal	Demonstrates some knowledge through discussion with trainer at quarterly meetings
Partial	Part 1 exam
Full	Part 2 exam And Public Health reports including a service evaluation and Direct Observation of Public Health Practice (DOPH) of leading a service evaluation

**Outcome 4:**

## Quality and patient safety

## Steps to Outcome Completion

1. Demonstrates basic knowledge and understanding of patient safety theory and methodology. Has an awareness of the main patient safety challenges in healthcare.
2. Demonstrate evidence of the ability to interpret and apply patient safety methodology including use of patient safety surveillance data
3. Demonstrate ability to interpret and apply patient safety methodology including use of patient safety surveillance data

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
Minimal	Demonstrates some knowledge through discussion and Written report or Case based discussion on HSE Patient Safety Toolbox Talks or Training opportunity to view patient safety initiatives e.g. safety huddles, etc.
Partial	Part 1 Exam and Direct Observation of incident review meeting Or Case based discussion of a previously published clinical service review or  Case based discussion of a previously published incident report  or Patient safety audit Or Complaint handling (i.e. case handler role)
Full	Part 2 Exam and Case based discussion or Direct Observation of Public Health Practice of a relevant incident and able to reference HSE Incident Management Framework or Identify, advise on and implement public health actions in the context of a Serious Incident Management Team (SIMT) – Desktop exercise (Case based discussion) or real (Direct Observation of Public Health Practice) or Design and develop the methodological approach for a clinical service review Study day* If available

**Outcome 5:**

## Quality improvement

## Steps to Outcome Completion

1. Demonstrates a basic knowledge and understanding of Quality and Quality improvement
2. Demonstrate an understanding of the science of improvement including QI methods
3. Demonstrates the ability to design a QI project.

Step	Formative Assessment tools and expected evidence of learning
Level: Minimal	Demonstrating through discussion with a trainer at quarterly meetings an understanding of QI methodology including HSE methodology and improvement science. Or written report
Partial	Part 1 Exam and HSE Foundation programme for QI or Involvement in an Improvement Collaborative or Project report/presentation or Participation in local QI committees Or Undertake a small QI project with a clearly defined aim, small tests of change and measurable outcomes
Full	Part 2 exam and Project report/case study or Presentation of project (or design overview) to trainer or at meetings/conferences

**Potential settings to gain skills**

<b>Potential settings to gain skills</b>	MFPHMI Part I exam
	Written reports for MFPHMI Part II exam
	Participation in quality improvement learning programmes e.g. HSE National Quality Improvement Team 'Improvement Knowledge and Skills Guide', HSE Patient Safety Toolbox Talks, RCPI Diploma in Leadership and Quality in Healthcare
	Attendance & participation at journal clubs, courses, study days, lectures, seminars etc.
	Quality Improvement e-learning programmes e.g. (Institute for Healthcare Improvement (IHI)), NHS Improvement, Healthcare Improvement Scotland)
	RCPI Study Days
	Specialty rotation with the National Quality Improvement (NQI) team
	Participation on quality improvement or incident management committee
Participation in national and local quality improvement initiatives	

## 5. Strategic Leadership and Management in PHM

Objective: By the end of HST training Trainees should acquire the knowledge, skills and attitudes necessary to effectively:

- manage self, people, teams and resources
- work in partnership with others
- influence key stakeholders across a range of organisations/sectors
- lead teams and work programmes/projects

There are **4 learning outcomes** in strategic leadership and management.

1. Demonstrate the ability to effectively lead a programme of work
2. Demonstrate the ability to manage a programme of work including planning for human and financial resources
3. Demonstrate the ability to identify and engage with key stakeholders in a programme of work
4. Demonstrate the ability to work effectively as part of a team

### Description of knowledge and skills

- Theories of leadership and commonly used frameworks/models i.e. systems leadership collective leadership, healthcare leadership model etc.
- Importance of organisational culture and how it impacts staff performance, staff well-being, service user experience and outcomes.
- Theories and frameworks of management including human resources and financial management.
- Team roles and team dynamics.
- Potential sources of conflict and conflict resolution.
- Methods of identifying, engaging and managing stakeholders, both within and beyond the health sector.
- Theory of self-awareness/reflexivity and its importance for those in leadership roles.
- Understanding the governance structure of the organisation.
- 
- Use different leadership styles as appropriate to the context.
- Actively contribute to positive organisational culture by demonstrating the values of the health service (care, compassion, respect) in the workplace.
- Manage people and resources effectively to bring public health projects to a successful conclusion, establish clear roles, responsibilities and reporting relationships.
- Work constructively within a team, including giving and receiving feedback and ensuring accountability.
- Maintain and strengthen professional relationships by managing conflicts that may arise through good communication and/or referral to mediation or other services as appropriate.
- Actively engage with key stakeholders on a regular basis to obtain buy in and maintain a sense of shared ownership.
- Practice self-awareness/reflexivity on an on-going basis.

Overview of Methods of demonstrating proficiency

These outcomes are to be completed across at least two separate posts, one of which is at senior level

DOES	Effectively leads projects/programmes, effectively manages teams and resources, works effectively within a team and demonstrates self-reflection.
SHOWS HOW	Operationalises learning by availing of leadership or management opportunities as they arise across training sites, with the support of trainers, e.g. leading response to health protection incidents/outbreaks, leading discrete pieces of public health work/projects etc.
KNOWS HOW	Avails of resources to support theoretical and practical leadership and management experience, e.g. online courses, HSE Leadership Academy courses etc.
KNOWS	Leadership/management modules of MPH, RCPI HST courses in leadership and management, SPR study days in leadership/ management, MFPHMI Part I examination.

**Outcome 1:**

Demonstrate the ability to effectively lead a programme of work

Steps to Outcome Completion

1. Demonstrates some understanding of the principles of leadership.
2. Demonstrates good understanding of the principles leadership within the public health environment.
3. Demonstrates proficient ability to lead within the public health environment.

Step	Formative Assessment tools and expected evidence of learning
Minimal	<ul style="list-style-type: none"> <li>• CBD/presentation/report showing some understanding of the principles of leadership – documented on the appropriate form/s.</li> </ul>
Partial	<ul style="list-style-type: none"> <li>• CBD/DOPHM practice/presentation/report showing good understanding of the principles of leadership in the public health environment (e.g. identified different leadership styles, identified strengths and development opportunities in own leadership practice) – documented on the appropriate form/s.</li> <li>• MFPHMI Part I Examination</li> <li>• HST Mandatory Course – Leadership, Management</li> <li>• HSE Leadership Academy Leading Care Course (optional)</li> </ul>
Full	<ul style="list-style-type: none"> <li>• DOPHM practice demonstrating ability to effectively lead a project or component of a programme of work in the public health environment (e.g. receiving and giving constructive feedback, ensuring accountability, managing conflict, demonstrating self-awareness, chairing local/regional/national committees/groups) - documented on the appropriate form/s.</li> <li>• MFPHMI Part II Examinations if it involves work clearly demonstrating leadership.</li> </ul>

**Outcome 2:**

Demonstrate the ability to manage a programme of work including planning for human and financial resources

Steps to Outcome Completion

1. Demonstrates some understanding of the principles of management.
2. Demonstrates good understanding of management principles within the public health environment.
3. Demonstrates proficient ability to manage within the public health environment.

Step	Formative Assessment tools and expected evidence of learning
Minimal	<ul style="list-style-type: none"> <li>• CBD/presentation/report showing some understanding of management principles in healthcare, including human resources and financial management. – documented on the appropriate form/s.</li> </ul>
Partial	<ul style="list-style-type: none"> <li>• CBD/DOPHM practice/presentation/report showing good understanding of the principles of management in the public health environment – documented on the appropriate form/s.</li> <li>• MFPHMI Part I Examination</li> <li>• HST Project Management mandatory Course</li> <li>• Study day (Management of resources)</li> <li>• Management diploma (optional)</li> </ul>
Full	<ul style="list-style-type: none"> <li>• DOPHM practice demonstrating ability to manage a project or component of a programme of work in the public health environment (.g. by bringing it to a successful conclusion or suitable endpoint within available resources and timescales, demonstrating self-awareness) – documented on the appropriate form/s.</li> <li>• MFPHMI Part II Examinations if involves work clearly demonstrating management ability.</li> </ul>



**Outcome 3:**

Demonstrate the ability to identify and engage with key stakeholders in a programme of work

Steps to Outcome Completion

1. Demonstrates some understanding of the principles of identifying and engaging with stakeholders.
2. Demonstrates good understanding of the principles of identifying and engaging with stakeholders from varying backgrounds
3. Demonstrates proficient ability to ability to engage and communicate effectively with stakeholders from varying backgrounds

Step	Formative Assessment tools and expected evidence of learning
Minimal	<ul style="list-style-type: none"> <li>• CBD/presentation/report showing some understanding of the principles of identifying and engaging with stakeholders – documented on the appropriate form/s.</li> </ul>
Partial	<ul style="list-style-type: none"> <li>• CBD/DOPH practice/presentation/report showing good understanding of the principles of identifying and engaging with stakeholders in the public health environment – documented on the appropriate form/s.</li> <li>• MFPHMI Part I Examination</li> </ul>
Full	<ul style="list-style-type: none"> <li>• DOPHM practice demonstrating ability to engage and communicate effectively with stakeholders from project initiation to close out or suitable endpoint within the public health environment (e.g. engagement with stakeholders, obtaining buy in, managing expectations, giving a sense of shared ownership, assessing the power and interest of stakeholders, demonstrating self-awareness) – documented on the appropriate form/s.</li> <li>• MFPHMI Part II Examinations if it involves work clearly demonstrating ability the ability to engage and communicate effectively with stakeholders.</li> </ul>

**Outcome 4:**

Demonstrate the ability to work effectively as part of a team

Steps to Outcome Completion

1. Demonstrates some understanding of the principles of effective team work.
2. Demonstrates good understanding of the principles of effective team work
3. Demonstrates proficient ability for teamwork

Step	Formative Assessment tools and expected evidence of learning
Level: Minimal	<ul style="list-style-type: none"> <li>• CBD/presentation/report showing some understanding of the principles of team roles, team dynamics, potential sources of conflict and approaches to conflict resolution - documented on the appropriate form/s.</li> </ul>
Partial	<ul style="list-style-type: none"> <li>• CBD/DOPH practice/presentation/report showing good understanding of the principles of effective team work within the public health environment (e.g. attending local, regional or national committees/groups) – documented on the appropriate form/s.</li> <li>• MFPHMI Part I Examination</li> </ul>
Full	<ul style="list-style-type: none"> <li>• DOPHM practice demonstrating proficient ability for teamwork within public health, external agencies and a variety of other backgrounds (e.g. active member of local, regional or national committees/groups, demonstrating self-awareness) – documented on the appropriate form/s.</li> <li>• MFPHMI Part II Examination if it involves work clearly demonstrating effective team work.</li> </ul>

**Potential settings to gain skills**

<b>Potential settings to gain knowledge and skills</b>	Departments of Public Health and speciality training sites Leadership/management modules in the MPH RCPI Mandatory Courses – Leadership, project management etc. SpR Study Days MFPHMI Part I and II Examination HSE Leadership Academy Leading Care Programmes Online courses, e.g. HSELand Member, medical secretary or chair to national or regional committees Representative roles such as RCPI committee, STC, Lead SPR, Association of Public Health Registrars Ireland (APHRI), European Network of Medical Residents in Public Health (EuroNet MRPH) etc.
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## 6. Public Health (PH) Advocacy and Policy

Objective: By the end of HST Trainees should

- acquire the knowledge and skills in order to advocate for the health of the population
- acquire the knowledge and skills required to form and implement policy as it applies to public health.

There are **4 learning outcomes** in Advocacy and Policy.

1. Effective advocacy for public health
2. Develop and display an understanding of methods used in policy formation, implementation and evaluation
3. Critically appraise health policy, strategy and plans for implementation
4. Involvement in action to improve public health or health services

### Description of knowledge and skills

- Knowledge and understanding of the theory and principles central to public health advocacy including human rights, equity, democracy, and inclusion
- Knowledge and understanding of the theory and principles required for policy formation, implementation and evaluation
- Knowledge of the tools required for the advocacy and policy development process
- Knowledge of the theory and key principles in design of public health messages
- Knowledge of national and international policy and legislation as it applies to health
- High level understanding of the organisational structure and role and influence of key governmental bodies (e.g. HSE, Dept. of Health, Houses of the Oireachtas) and non-governmental organisations (e.g. RCPI, Irish Cancer Society, Irish Heart Foundation, AAI, IMO)
- Critically appraise health policy in regard to
  - the steps required to achieve change
  - the feasibility/success of implementation
  - impact
- Be able to use a range of advocacy and policy tools
- Be able to identify, consult and work effectively with a broad range of stakeholders
- Identify, synthesise and apply the relevant research and evidence to inform advocacy and policy initiatives, such as the development of a position paper, (e.g. a briefing note, a memo for Government or a consultation document for submission etc.)
- Be able to draft a strategy to address a need for change to improve a public health or health care issue with particular consideration given to accuracy, precision and clarity of the message being conveyed

Overview of Methods of demonstrating proficiency

KNOWS	<ul style="list-style-type: none"> <li>• Self-directed learning, advocacy and policy elements of the MPH, attendance at educational seminars, study days, Paper 1 of Part 1 exam.</li> <li>• Knowledge of health need and health impact assessment including the tools necessary to perform them e.g. stakeholder analysis, SWOT analysis, PEST, STEEEP (social, technical &amp; scientific, environmental, economic, ethical, political &amp; policy) criteria.</li> </ul>
KNOWS HOW	<ul style="list-style-type: none"> <li>• Learning through service experience, participation in workshops</li> <li>• Paper 4 of Part 1 exam, WBAs, CBDs.</li> <li>• Develop and display an understanding of the approach to effective public health advocacy, policy formation, implementation and evaluation, and development of legislation</li> </ul>
SHOWS HOW	<ul style="list-style-type: none"> <li>• Direct involvement in the areas of communication, advocacy and health policy e.g. WBAs, CBDs, media interviews</li> <li>• Part II Membership of Faculty of Public Health Medicine Examination</li> <li>• Act as medical secretary or chair to local, regional or national groups e.g. NIAC, HPSC, PHMCDG</li> <li>• Ability to use PH tools in order to advocate or develop policy (e.g. Health Needs Assessment, Health Impact Assessment, Economic Evaluations, Health Technology Assessment, Budget Impact Analysis, Political Economic Social Technological (PEST) Analysis, Strengths Weaknesses Opportunities Threats (SWOT) Analysis, FFA etc.)</li> </ul>
DOES	<ul style="list-style-type: none"> <li>• Leading on health policy and advocacy initiatives, WBAs, presentations to medical and lay audiences, direct media experience (written and oral).</li> <li>• Uses public health advocacy and policy tools to advocate effectively and contribute to health policy formation</li> </ul>

**Outcome 1:****Effective advocacy for public health**

Examples: Persuading a working group that a strategy should include a preventive, population wide element; influencing at senior level to agree the need for change or finance to address a public health issue

**Steps to Outcome Completion**

1. Knowledge of key advocacy tools
2. Demonstrate an ability to use multiple communication platforms targeted to a specific audience to advocate for public health
3. Uses influencing and negotiating skills in a variety of settings to advocate for action on a public health issue of local, national or international importance.

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
<b>Minimal</b>	Part 1 examinations
<b>Partial</b>	Case-based discussion or Written reports or Direct observation of Public Health Practice Part 2 examinations FPHMI
<b>Full</b>	Case-based discussion or Written reports/commentary or Direct observation of Public Health Practice at the level expected from a specialist.  Media interview (and course)  Preparation of a press statements or reply to a PQ (can be pre-emptive, log with trainer q)

**Outcome 2:**

Develop and display an understanding of methods used in policy formation, implementation and evaluation

e.g. Participation in policy analysis, evaluation, formation and implementation

## Steps to Outcome Completion

4. Has knowledge of the approach to policy formation as well as implementation and evaluation.
5. Knowledge and understanding of approaches to development and evaluation of strategies and policies and national and international policy
6. Demonstrate a strong knowledge of:
  - a. Key institutions and stakeholders relevant to regional and national policy formation.
  - b. Governance underpinning national and international health policies.
  - c. Methods through which global health institutions respond to health threats.

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
<b>Minimal</b>	Part One Membership of the Faculty of Public Health Medicine Examination Evidence of appropriate self-directed reading CBD
<b>Partial</b>	Part Two Membership of FPHM Examination  Case Based Discussion or Direct Observation of Public Health Practice
<b>Full</b>	Part 3 Oral Examination  Written Reports or Case Based Discussion or Direct Observation of Public Health Practice  (EOP Q) Specialty training sites projects And Medical secretary or member of local, regional or national groups e.g. NIAC, HPSC, PHMCDG, Port health, Faculty or RCPI policy groups, HSE PPPs, Child Health.

**Outcome 3:**

Critically appraise health policy, strategy and plans for implementation

Steps to Outcome Completion

1. Knowledge of methods and frameworks that can be used to undertake policy analysis
2. Displays evidence of having appraised options, determined what actions are feasible and realistic and made recommendations.
3. Ability to evaluate health policy and implementation strategies

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
<b>Minimal</b>	Part One Membership of FPHM Examination Evidence of appropriate self-directed reading CBD
<b>Partial</b>	Part II Membership of FPHM Examination  Case Based Discussion on Literature review  Production of opinion piece with a view to publication in relevant medical or lay publication  Involvement in a local or national strategy/group Work in a relevant specialist training site Medical secretary to local, regional or national groups (e.g. NIAC, HPSC, PHMCDG).
<b>Full</b>	Oral Examination (p3, correct name) Written Reports Case Based Discussion of involvement in undertaking a Health Needs Assessment or Health Impact Assessment or Health Economic Analysis

**Outcome 4:**

Involvement in action to improve public health or health services  
Document evidence of active participation

## Steps to Outcome Completion

1. Demonstrates an understanding of the process and need for stakeholder engagement. Know national and international public involvement frameworks as well as an understanding of the organisational structure and role of key governmental organisations/bodies and non-governmental organisations
2. Demonstrates the ability to produce recommendations to address a complex health issue with a Public Health implication.
3. Evidence of contribution to advocacy, policy or strategy development including a communication strategy

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
<b>Minimal</b>	Part One Membership of FPHM Examination Evidence of appropriate self-directed reading CBD
<b>Partial</b>	Part Two Membership of FPHM exam Study day (Specific) Medical secretary or member of local, regional or national groups. Written reports or CBD or Direct observation
<b>Full</b>	Direct observation of Practice – (has done list examples) (for any of the following) Gain experience in policy and strategy work in a specialist training site (eop assessment q) Medical secretary or chair to local, regional or national groups Member of national policy/strategy development group (steering group, working group etc.)  Involvement in undertaking a Health Needs Assessment or Health Impact Assessment (optional)



**Potential settings to gain skills**

Placements in general departments of public health
Member of local, regional and national committees and groups e.g. HSE working groups and steering groups, RCPI policy groups, National Immunisation Advisory Committee (NIAC)
Participation in national and international meetings and conferences e.g. Faculty of Public Health Medicine FPHMI scientific meetings
Specialist placements e.g. within the National Cancer Control Programme
Policy and strategy work with government departments, agencies and NGOs (e.g., HIQA, HRB, IPH)
Involvement in Association of Public Health Medicine Registrars of Ireland (APHRI)
RCPI training courses e.g. on communications, use of the media and ethics
Involvement in external advocacy organisations such as the Irish Heart Foundation, Breakthrough Cancer, Irish Cancer Society, Marie Keating Foundation among many others

## 7. Health Economics

Objective: By the end of HST Trainees should acquire the knowledge and skills to apply the principles of health economics to inform resource decision making.

There are **2 learning outcomes** in Health Economics.

1. Demonstrate knowledge of health economic principles
2. Demonstrate the ability to apply knowledge of health economic principles to inform a health economic and/or resource decision making process at the local, regional or national level.

### Description of knowledge and skills

- Health economic principles in the context of “Health in all policies”
- Macro-economic policy and impact on inequality and health outcomes
- Health system funding
- Healthcare markets
- Health insurance markets
- Funding strategies
- Health economic evaluation
- Health technology assessment (HTA/mini-HTA)
- Budget impact assessment
- Resource allocation processes with particular regard to balanced resourcing and the narrowing of inequality
- Ability to appraise a health economic evaluation/s or assessment/s.
- Ability to inform a health economic and/or resource allocation study/process/initiative that utilises health economic principles at the local, regional or national level.

### Overview of Methods of demonstrating proficiency

KNOWS	Learning through health economic modules in MPH, RCPI health economics course, participation in study days. Communicating knowledge through discussion with trainer, and other fora; reports writing.
KNOWS HOW	Ability to answer and contribute to queries and debates. Part 1 membership examination. Participation in workshops including webinar assisted workshops
SHOWS HOW	Authoring a health economic report e.g. Part II exam. General oral for Part II. Case based discussion. DOPH practice.
DOES	Demonstrates the application and integration of knowledge and skills across health economics: <ul style="list-style-type: none"> <li>• Written report/s with significant health economic content e.g. for Part II exam.</li> <li>• Undertaking critical appraisal of an economic evaluation or assessment e.g. CASP.</li> <li>• Participation in planning and budgeting processes.</li> <li>• Advising on health economic aspects of research and other work.</li> <li>• Publication with significant health economic content.</li> <li>• Presentation to peers at the local, national or international level.</li> <li>• Teaching.</li> <li>• Participation in HTA/mini HTA.</li> </ul>

**Outcome 1:****Demonstrate knowledge of health economic principles**

## Steps to Outcome Completion

1. Demonstrates some understanding of basic health economic principles
2. Demonstrates good understanding of health economic principles.
3. Demonstrates the proficient application of health economic principles in the healthcare environment.

<b>Step</b>	<b>Formative Assessment tools and expected evidence of learning</b>
<b>Minimal</b>	Required: Case-based discussion showing some understanding of how a health economic paper should be critically reviewed - documented on CBD form.
<b>Partial</b>	Required:  Part 1 examination <b>AND</b> Complete Course
<b>Full</b>	Required: DOPH practice demonstrating direct involvement in a health economic and/or resource allocation study/process/initiative that utilises health economic principles at the local, regional or national level. <b>OR</b> Author (lead or contributing) of a report (e.g. Part 2 Exam) demonstrating direct involvement in a health economic and/or resource allocation study/process/initiative that utilises health economic principles at the local, regional or national level. <b>OR</b> Competent presentation to peers of a health economic and/or resource allocation study/process/initiative that utilises health economic principles at the local, regional or national level. <b>OR</b> undertake a critical appraisal of an economic evaluation or assessment

**Outcome 2:**

Demonstrate the ability to apply knowledge of health economic principles to inform a health economic and/or resource decision making process at the local, regional or national level.

## Steps to Outcome Completion

1. Demonstrates some understanding of how a health economic paper should be reviewed.
2. Demonstrates good ability to review a health economic paper.
3. Demonstrate the ability to apply knowledge of health economic principles to inform a health economic and/or resource decision making process at the local, regional or national level.

Step	Formative Assessment tools and expected evidence of learning
<b>Minimal</b>	Required: Case-based discussion showing some understanding of the potential value of health economics - documented on CBD form.
<b>Partial</b>	Required:  Case-based discussion covering key concepts of health economics - documented on CBD form.  OR  Journal Club presentation
<b>Full</b>	Required: DOPH practice demonstrating participation in a health economic and/or resource decision making process. Or Presentation or report to management or other colleagues on results of an economic evaluation demonstrating proficient ability to appraise a health economic paper. <b>OR</b> Systematic or other literature review of health economic evaluation or assessment. OR undertake a critical appraisal of an economic evaluation or assessment

**Potential settings to gain skills**

Departments of Public Health or specialty sites with a health economic role  
 SpR training days  
 Health economics academic events  
 Health economics courses  
 Collaboration on economic research projects  
 Scientific meetings  
 Health Technology Assessment Group (HTAG)  
 Health Information and Quality Agency (HIQA)

## Outcome Summary List

<b>1. HEALTH PROTECTION</b> .....	<b>15</b>
1. Correctly interpret and use legislation to protect health .....	15
2. Ability to investigate and control infectious diseases to prevent avoidable infections, including surveillance, contact tracing, provision of effective immunisation, IPC advice from policy to practice levels .....	15
3. Ability to protect the public from environmental threats effectively including performing a public health risk assessment, communicating risk, developing public health medical advice; surveillance and investigation of reported clusters .....	15
4. Manage public health emergencies .....	15
5. Ability to evaluate and monitor health protection programmes .....	15
<i>Outcome 1:</i> .....	17
<i>Outcome 2:</i> .....	17
<i>Outcome 3:</i> .....	18
<i>Outcome 4:</i> .....	18
<i>Outcome 5:</i> .....	19
<b>2. HEALTH INTELLIGENCE</b> .....	<b>21</b>
1. Demonstrate in-depth knowledge and proficient use of the key health related datasets .....	21
2. Demonstrate the ability to apply research methods .....	21
3. Demonstrate ability to analyse, interpret and effectively communicate data .....	21
4. Demonstrate the application of good information governance .....	21
<i>Outcome 1:</i> .....	23
<i>Outcome 2:</i> .....	24
<i>Outcome 3:</i> .....	25
<i>Outcome 4:</i> .....	26
<b>3. HEALTH IMPROVEMENT</b> .....	<b>28</b>
1. Scope a health needs assessment and provide the evidence base for preventive and health improvement intervention .....	28
2. Evaluation of a preventative or health improvement initiative/programme/service. – needs feedback from specialist, not achievable.....	28
3. Advocate for public health principles and action, to improve the health of the population or a subgroup.....	28
4. In depth understanding of the principles of screening, potential benefits and risks to the population, evaluation of screening programmes, importance of quality assurance, and governance structures. ....	28
<i>Outcome 1:</i> .....	29
<i>Outcome 2:</i> .....	29
<i>Outcome 3:</i> .....	30
<i>Outcome 4:</i> .....	30
<b>4. HEALTH SERVICE IMPROVEMENT</b> .....	<b>32</b>
1. Understand health systems and health system performance: Demonstrate an understanding of a health systems approach to assessing, planning, delivering and evaluating health services .....	32
2. Demonstrate ability to assess the needs of the population .....	32
3. Demonstrate ability to evaluate health services .....	32
4. Quality and patient safety .....	32
5. Quality improvement.....	32
<i>Outcome 1:</i> .....	34
<i>Outcome 2:</i> .....	35
<i>Outcome 3:</i> .....	35
<i>Outcome 4:</i> .....	36
<i>Outcome 5:</i> .....	37
<b>5. STRATEGIC LEADERSHIP AND MANAGEMENT IN PHM</b> .....	<b>38</b>
1. Demonstrate the ability to effectively lead a programme of work.....	38
2. Demonstrate the ability to manage a programme of work including planning for human and financial resources .....	38
3. Demonstrate the ability to identify and engage with key stakeholders in a programme of work.....	38
4. Demonstrate the ability to work effectively as part of a team .....	38
<i>Outcome 1:</i> .....	40
<i>Outcome 2:</i> .....	40
<i>Outcome 3:</i> .....	41
<i>Outcome 4:</i> .....	41

<b>6. PUBLIC HEALTH (PH) ADVOCACY AND POLICY .....</b>	<b>43</b>
1. Effective advocacy for public health .....	43
2. Develop and display an understanding of methods used in policy formation, implementation and evaluation 43	
3. Critically appraise health policy, strategy and plans for implementation.....	43
4. Involvement in action to improve public health or health services .....	43
<i>Outcome 1:</i> .....	45
<i>Outcome 2:</i> .....	46
<i>Outcome 3:</i> .....	47
<i>Outcome 4:</i> .....	48
<b>7. HEALTH ECONOMICS.....</b>	<b>50</b>
1. Demonstrate knowledge of health economic principles .....	50
2. Demonstrate the ability to apply knowledge of health economic principles to inform a health economic and/or resource decision making process at the local, regional or national level.....	50
<i>Outcome 1:</i> .....	51
<i>Outcome 2:</i> .....	52