



**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.

Please note: The 2023 version of this curriculum has been extensively reviewed and edited by a Curriculum Review Committee chaired by Dr Niamh Bambury (Aspire Fellow, National Cancer Registry Ireland/National Cancer Control Programme) with the contribution of Dr Lucinda Ryan (Specialist Registrar in Public Health), Dr Nicola Murphy (Specialist Registrar in Public Health) and the support of Mariangela Esposito (Education Specialist, RCPI).

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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, local government and the voluntary sector
- Work through a legislative mandate as the Medical Officer of Health (MOH)
- Engage in activities which provide an assessment of the health of the population

The legal role of MOH 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 PHM
- Public Health Advocacy and Policy
- Health Economics

Specialists/Consultants in PHM 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 PHM must also acquire certain core competencies which are essential for good medical practice. These comprise of the core specialty component of the curriculum.

Aims of HST in PHM

Upon satisfactory completion of specialist training in PHM, the doctor will be **competent** to undertake comprehensive medical practice in the specialty of PHM 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 PHM
- Public Health Advocacy and Policy
- Health Economics

Entry Requirements

Higher Specialist Training (HST) in the Faculty of PHM of the Royal College of Physicians of Ireland (RCPI) 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 I of the Membership of the Faculty of PHM of the RCPI (MFPHMI) or Faculty of Public Health Diplomate Examination (DFPH) UK, previously known as Part A MFPH (UK), will be required to sit MFPHMI Part I 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 MFPHMI Part I during training, and who are undertaking academic training for this, RCPI will make a financial contribution towards the cost of a Master of Public Health in support of taking Part 1 MFPHMI.

Note 3: Doctors who have successfully completed MFPHMI Part I or Faculty of Public Health Diplomate Examination (DFPH) UK, previously known as Part A MFPH (UK), before entering the training programme will be expected to complete MFPHMI Part II as outlined in the curriculum.

Duration & Organisation of Training

The duration of HST in PHM is 4 or 4.5 years in supervised approved training posts.

Phase One

The first 2 years are spent in a clinical post in a regional Department of Public Health (2.5 years if a Master of Public Health is undertaken in Year 1).

The earlier years in training will usually be directed towards acquiring a broad general experience of PHM 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.

Phase Two

Training will normally include two to three 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 PHM. All Specialist Registrars are required to rotate through more than one location as approved by RCPI and the Faculty of PHM. Most training posts are based in regional Departments of Public Health as above. Specialty training locations available may include:

HSE National Health Intelligence Unit, Department of Health, Health Protection Surveillance Centre (HPSC), National Immunisation Office (NIO), HSE National Cancer Control Programme, Global Health Programme, National Screening Service, Quality and Patient Safety, Office of the National Clinical Director for Health Protection, Child Health, National Social Inclusion Office, Institute of Public Health and the World Health Organisation. Available training sites may vary from year to year and additional locations may become available in the future. Relevant out of programme experience is allowed for a period of up to 6 months, if approved by the National Specialty Director. This is limited to the final two years of training.

In certain circumstances where, for example, a Specialist Registrar may wish to pursue further training in an area of special interest approved by the Faculty of PHM, the possibility of a further 12 months of training may be accredited i.e. for example post CSCST Fellowship, dependent on development and funding.

Phases of Training and Milestones

Year 1	Health Protection induction / on call Sit MFPHMI Part I for those who have not yet passed Part I. This is a requirement of the scheme. Completion of MPH/ Part I academic training for those undertaking this Initial coverage of core competencies in PHM Initial coverage of generic components
Year 2	MFPHMI Part I 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 PHM Further coverage of generic components
Year 3/4	MFPHMI Part II preparation - initiation of Public Health reports (PHR) MFPHMI Part II completion expected by end of third year of training MFPHMI Part III completion expected by end of programme Health policy experience Advocacy experience Increase in leadership roles Senior public health experience at regional level Rotation through specialist sites as outlined above

Rotation to a second Dept. of Public Health.
Senior responsibility including shadowing/ acting for CPHM/SPHM on call.
Further coverage of generic components

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

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 1 of the training programme. Retrospective recognition may be granted if the Specialist Registrar is transferring from a similar training programme elsewhere. The Specialist Registrar 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.

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

Each post within the programme will have a named trainer and the programme is under the direction of the National Specialty Director(s). Progression of learning is documented in the progress log at regular assessments throughout the year. Trainers and trainees discuss progression during these assessments. Whilst trainee progress is ultimately at the discretion of the trainer, trainees can seek a second opinion or appeal to the National Specialty Director(s) at any point during the training year.

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.

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.

Specialists/Consultants in PHM 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 will engage in on call activities at an early stage of training during their working hours to become competent in health protection. In the first two years this is at the level of first/second responder on call during working hours under supervision of CPHM/SPHM. In the 3rd 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/Consultant on-call during work hours. 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.

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 Specialist Registrar must have satisfactorily completed HST based on annual reviews **and** have been awarded MFPHMI. 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.

Core Professional Skills

These encompass knowledge, skills and attitudes that support competencies and 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 or Consultant in Public Health Medicine (SPHM/CPHM).

Examinations

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

The MFPHMI Part I examination tests a candidate's knowledge of public health medicine, including basic skills in research methods, data analysis, problem solving and communications. The exam is held once a year and consists of four written papers. Papers 1 and 2 are designed to test a candidate's knowledge. Papers 3 and 4 are designed to test a candidate's skills.

The MFPHMI Part II exam consists of two Public Health reports (PHRs) and a subsequent oral assessment.

PHRs must demonstrate the application of a range of competencies from those outlined in the Curriculum for HST in PHM. This must include the critical analysis of an epidemiological or public health question, in-depth investigation/analysis of the question and the proposal of appropriate public health recommendations.

The word count limit for each report is 10,000 words. Both PHRs will be examined in an oral examination. The two reports may be submitted and examined either at one (the same) sitting or at two different sittings. As of December 2022, both PHRs need to be submitted as soft copies only.

There is a limit of three attempts at the Part II examination (Part IIA and Part IIB PHRs), irrespective of the number of PHRs submitted for examination at one attempt/sitting. A PHR that is passed on one attempt may be 'banked' for future sittings.

The MFPHMI Part III is the Public Health Oral Examination of Professional Competence (OEPC). The OEPC consists of an oral examination on topics relevant to the practice of public health medicine. It is conducted as a separate examination following successful completion of the MFPHMI Part II Written examination.

The questions will be drawn from the following areas:

- Health Protection (to include Environmental Health and Emergency Planning)
- Health Services Improvement and Health Intelligence
- Health Improvement
- Plain Language and Communication Skills
- Leadership, Management and Advocacy

Assessment Process through each placement

Training goals should be set. An initial training plan should be drawn up at the start of each placement.

Trainees and trainers complete quarterly assessments (QAs) and end of post assessments (EOPAs) during the training year. QAs and EOPAs are mandatory and are uploaded to the E-Portfolio. QAs/ EOPAs take place at regular intervals during the year as follows:

QA 1	By end of October
QA2/EOPA1	By end of January
QA3	By end of April
QA 4/EOPA2	By mid-July

At each QA/EOPA trainees should demonstrate to the trainer their progression towards or attainment of learning outcomes using evidence uploaded to the E-portfolio repository. Assessments methods that can be used to demonstrate progression are outlined in each domain and learning outcome in the Specialty section of the curriculum document.

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 methods such as Directly Observed Public Health Practice and Case Based Discussions. 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.

Core Professional Skills

This section includes the Medical Council guidelines for medical professional conduct, regarding Partnership, Performance and Practice.

These principles are woven within training practice and feedback is formally provided in the Quarterly Evaluations, End of Post Assessment and End of Year Evaluation.

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

Partnership

Communication and interpersonal skills

- Facilitate the exchange of information, be considerate of the interpersonal and group dynamics, and 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 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, to 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 physical and mental well-being

Practice

Continuing competence and lifelong learning

- Continually seek to learn, improve clinical skills and understand established and emerging theories in the practice of medicine
- Meet career requirements including those of the medical council, employer, and 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 actions and decisions and engage in critical appraisal of one's work to drive lifelong learning and improve practice
- Pay critical attention to the practical values and theories which inform everyday practice
- Be aware of one's level of practice and learning needs
- Evaluate and appraise 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 practices in patient safety
- Conduct ethical and reproducible research

Specialty Section

1. Health Protection

Overarching objective: All Hazards Approach¹ 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.

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, Infection Prevention and Control (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

- Public health medical legislation underpinning health protection including MOH, HPSC and International Health Regulations (IHR) legislation, and other legislation of public health importance
- How to advocate for improved legislation and policy, including Health in All Policies for health protection
- Environmental influences and determinants on health and wellbeing and sustainable development goals (SDGs)
- Epidemiology of infectious diseases of national and international public health importance
- Prevention of infectious diseases including immunisation and IPC
- Importance and application of surveillance systems
- 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
- Public health risk assessment, risk communication and public health medical advice
- How to investigate a reported cluster of non-infectious disease
- Knowledge of the organisation of Major Emergency Management in Ireland, including the roles of the principal response agencies. Knowledge of the role of the SPHM/CPHM in major emergencies
- One Health joint approach, especially in relation to national and international anti-microbial resistance

Skills

- Correctly interpret and use legislation to protect health
- Ability to collect, collate and analyse surveillance data for action

¹ 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>)

- Ability to provide effective immunisation and IPC advice towards prevention and control from policy to practice levels
- Ability to investigate and control infectious disease incidents to prevent avoidable infections
- 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
- Investigate and manage reported clusters
- Manage public health emergencies
- Evaluate and monitor health protection programme(s)

Overview of methods of demonstrating proficiency

Knows	Formal and self-study, Health Protection modules of MPH, attendance at educational seminars, Study Days, Paper 1 of MFPHMI Part I Exam
Knows How	Learning through service experience, on-call hours, participation in workshops / SpR study day (e.g. table-top exercises), Paper 2 of MFPHMI Part I Exam, Work Based Assessments, Case Based Discussion
Shows How	Shows through involvement in more complex cases, outbreaks, environmental incidents, Health Protection Report for Part II Exam, Oral Examination of Professional Competence (OEPC) (MFPHMI Part III Exam), Work Based Assessments, Case Based Discussion Direct Observation of Public Health Practice
Does	Participates regularly in on-call rota for all hazards, supporting the 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, Work Based Assessments, Case Based Discussion, Direct Observation, acting up as SPHM/CPHM, contributing to or leading the development of a position paper, presentations to medical and lay audiences, media experience (written and oral).

Potential settings to gain knowledge and skills:

- Placements in general Departments of Public Health; 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.
- Health protection modules in MPH, Diplomas or other educational courses/certificates.
- EPIET Fellowship
- MFPHMI Part I and II Exams
- Study days- infectious disease, port health, environment and health, emergency planning and response
- Member/ Medical secretary of 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/CPHM; Attendance/observer at regional steering groups

- 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.
- 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)
- Trainings in use of statistical software such as SPSS, R and Stata
- Online courses on outbreak investigation and management, available through ECDC
- Online MEM.ie Emergency training module
- PHM On Call Resources
- Online webinars such as WHO, Port Health
- Site visits such as clinical microbiology departments, food microbiology laboratories, water treatment plants, food production sites, airport emergency planning, EHS, Uisce Eireann sites / reservoirs, landfill remediation projects. Two site visits are highly desirable (one of which should be to a water treatment plant)

Outcome 1: Correctly interpret and use legislation to protect health

Steps to Outcome Completion:

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to achieve minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case Based Discussion (e.g. participation on outbreak control teams)
Partial	<ul style="list-style-type: none"> • Case Based Discussion • Written reports - annual reports, outbreak reports, incident reports. Study days (Health Protection, MOH)
Full	<ul style="list-style-type: none"> • Clinical audit with legislation as standard • Protect health in line with legislation (within report) • Direct Observation of Public Health Practice • Written reports - annual reports, outbreak reports, incident reports, legal course (goal level) • Implement MOH legislation in line with evidence & GDPR in a variety of contexts that require clarity on relevant responsibility and authority • MFPHMI Part III Exam (OEPC)

Outcome 2: Investigate and control infectious diseases

To prevent avoidable infections, including surveillance, contact tracing, provision of effective immunisation, IPC advice from policy to practice levels.

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Exam, Study days (if available) • Case Based Discussion
Partial	<ul style="list-style-type: none"> • MFPHMI Part II Exam (PHR that is relevant to Health Protection) • Direct Observation of Public Health Practice • Written reports • Participation in daytime on call activity • Clinical audit (might be in multiple) • Presentations at national/international symposia
Full	<ul style="list-style-type: none"> • MFPHMI Part III Exam (OEPC) • Direct Observation of Public Health Practice • Case-based discussion • Completion of timely, high quality reports • Chair an outbreak control team • Publications in peer reviewed journals • Preparation of press statements (written/oral)

Outcome 3: Protect the public from environmental threats

Effectively protect the public from environmental threats including performing a public health risk assessment, communicating risk, developing public health medical advice to professionals and the public; surveillance and investigation of reported clusters.

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Exam, Case Based Discussion (can be example or theoretical)
Partial	<ul style="list-style-type: none"> • Case-based discussion • MFPHMI Part II Exam (PHR relevant to Health Protection) • Written reports • Participation in daytime on call activity • Clinical audit (might be in multiple) • Presentations at national/international symposia
Full	<ul style="list-style-type: none"> • Direct Observation of Public Health Practice • 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 • Public health risk assessment of an environmental incident; public health medical advice to professionals and public; investigation and management of alleged / reported cluster

Outcome 4: Manage Public Health Emergencies

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Study day • Case Based Discussion • MFPHMI Part I Exam
Partial	<ul style="list-style-type: none"> • Study day or simulation exercises • Direct observation of public health practice • MFPHMI Part II Exam (PHR relevant to Health Protection)
Full	<ul style="list-style-type: none"> • Work based assessment • Direct Observation of Public Health Practice • Written report • Clinical audit • Manage local / regional public health emergencies including water, air quality incidents • MFPHMI Part III (OEPC)

Outcome 5: Evaluate and monitor health protection programmes

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Exam • Case Based Discussion
Partial	<ul style="list-style-type: none"> • Case Based Discussion • MFPHMI Part II Exam (PHR relevant to Health Protection) • Written Reports
Full	<ul style="list-style-type: none"> • Development of effective outcome measures • Written reports • MFPHMI Part III Exam (OEPC) • Presentation to relevant audiences • Evaluate the structure, process and outcome of the protection of the public from a specific hazard

2. Health Intelligence

By the end of HST 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

- 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
- 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
- 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

- 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:

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

Potential settings to gain knowledge skills

- MPH or equivalent.
- MFPHMI Part I and Part II and Part III Examinations.
- Placements in Departments of Public Health.
- Placement in the Health Intelligence Unit, HSE.
- Placements/attachments in academic and other specialised departments/units.
- Study days.
- Educational seminars/workshops.
- Ethics Foundation RCPI course.
- Ethics for Public Health RCPI course.
- Information Governance 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.

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 MFPHMI Part II Examination, MFPHMI Part III (OEPC), Training Opportunity Assessments Case-Based Discussions Direct Observation of Public Health practice, presentations and publications.
Knows how	Learning through service experience, participation in workshops, MPH or equivalent modules, Training Opportunity Assessments, Case Based Discussions.
Knows	Formal study, attendance at educational seminars, MFPHMI Part I Examination, scientific meetings.

Outcome 1: *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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case-based discussion showing some understanding of the potential value of particular dataset/s.
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examination. • Case-based discussion/s of key health-related datasets (3 or more) demonstrating good understanding of key concepts and factual knowledge.
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Health Intelligence) • Direct Observation of a Public Health practice e.g. demonstrating proficiency in the use of key health-related dataset/s (3 or more) in the presence of trainer/peers. • 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. • 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case-Based Discussion showing some understanding of a range of research methodologies e.g. quantitative, qualitative, mixed, literature review, systematic review. • “Health Research – An Introduction”. E-learning mandatory RCPI course
Partial	<ul style="list-style-type: none"> • MPFHMI Part I Examination • Presentation/s on research methodologies to trainer/peers e.g. at journal clubs/educational seminars or equivalent. Document on a Training Opportunity Assessment form • Participation in one or more research projects using health-related dataset/s e.g. “hands-on”/internal departmental report. Document on a Training Opportunity Assessment form
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Health Intelligence) • 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 • 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: 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case-Based Discussion showing some understanding of the basic analytical tools available in a statistical software package
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examination • Presentation/s of research findings to trainer/peers e.g. at journal clubs/educational seminars or equivalent. Documented Training Opportunity Assessment form • Demonstrates ability to critically appraise research methods e.g. at journal clubs/educational seminars, conferences or equivalent. Documented on Training Opportunity Assessment Form
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Health Intelligence) • 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 • Direct Observation of Public Health practice. (Demonstration of the everyday use of some of the analytical tools). 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 • Presentation/s to senior management (HSE; DOH) 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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case-Based Discussion showing understanding of the principles of professional conduct, ethics and confidentiality as applied to stored information • GDPR E-learning HSE Land E-learning course • Information Governance HSE Land E-learning course
Partial	<ul style="list-style-type: none"> • Case-based discussion of the everyday use of the elements of good information governance (e.g. responding to a FOI request). Case Based Discussion • Ethics Foundation RCPI course
Full	<ul style="list-style-type: none"> • Ethics for Public Health RCPI course • Demonstrates ability to appropriately store, process, analyse and display data in line with good information governance within own body of work: e.g. <ul style="list-style-type: none"> ○ Report/s ○ Publication/s ○ Presentation/s • Portfolio notes: Should show across a number of data sets, checklist with trainer, goal of number set with trainer • Participation in relevant technical/health informatics groups/meetings

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/consultant
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

Knowledge

- 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

Skills

- Ability to undertake health improvement projects including planning, implementation and evaluation
- Work effectively in multidisciplinary settings both within and outside the organisation i.e. inter-departmental 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

Potential settings to gain knowledge and skills	
	<ul style="list-style-type: none"> • Departments of Public Health and speciality placements • 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 PHM Health Improvement Group (PHMHIG)

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, MFPHMI 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Exam
Partial	<ul style="list-style-type: none"> • Case Based Discussion • Direct Observation of a Public Health practice
Full	<ul style="list-style-type: none"> • Oral presentations to various audiences – local, regional, national or international • Published reports – national or local, preferably incorporated into guidelines or policy documents • Peer Reviewed Publication • Direct Observation of Public Health Practice • MFPHMI Part II Examination (PHR relevant to Health Improvement)

Outcome 2: *Evaluation of a preventative or health improvement initiative/ programme/service*

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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none">• MFPHMI Part I Examination• MPH
Partial	<ul style="list-style-type: none">• Case Based Discussion• Direct Observation of a Public Health practice
Full -where achievable*	<ul style="list-style-type: none">• MFPHMI Part II Examination (PHR relevant to Health Improvement)• 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Examination
Partial	<ul style="list-style-type: none"> • Case Based Discussion • Direct Observation of a Public Health practice • Media Communication
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Health Improvement) • 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

Demonstrate an understanding of the 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the Trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	MFPHMI Part I Examinations
Partial	<ul style="list-style-type: none"> • Case Based Discussion • Directly Observed Public Health practice • Media communication or contribute to a communication piece on screening for the public or various target audiences.

Full	<ul style="list-style-type: none">• MFPHMI Part II Examination (PHR relevant to Health Improvement)• Case Based Discussion (which should cover knowledge points)• 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.• Critical appraisal/literature review of an existing screening programme or of a potential future screening programme.
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4. Health Service Improvement

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

1. Understand health systems and health system performance
2. Demonstrate ability to assess the needs of the population
3. Demonstrate ability to evaluate health services
4. Quality and patient safety
5. Quality improvement

Description of knowledge and skills

Knowledge

- 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 and practical application of 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

Skills

- 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 in order to ascertain whether the service meets the needs of the population
- 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

Potential settings to gain knowledge and skills
<ul style="list-style-type: none">• MFPHMI Part I Examination• MFPHMI Part II Examination (PHR relevant to Health Service Improvement)• 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

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to achieve minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Demonstrates some knowledge through discussion with trainer at quarterly meetings • Evidence of health systems understanding in report and/or presentation on PH project
Partial	<ul style="list-style-type: none"> • Evidence of critical thinking on health systems in report of PH project • Participation in departmental planning and evaluation (record example) • MFPHMI Part I exam
Full	<ul style="list-style-type: none"> • MFPHMI Part II exam (PHR relevant to Health Service Improvement) • Reports of PH projects demonstrating effective application of critical health systems methodology to service improvements. • 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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Demonstrates some knowledge through discussion (Case Based Discussion)
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examinations • Direct Observation of Public Health Practice
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examinations (PHR relevant to Health Service Improvement) • Direct Observation of Public Health Practice 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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Demonstrates some knowledge through discussion with trainer at quarterly meetings
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examination

Full	<ul style="list-style-type: none">• MFPHMI Part II Examination (PHR relevant to Health Service Improvement)• Direct Observation of Public Health Practice of leading a service evaluation
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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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Demonstrates some knowledge through discussion • Written report • Case Based Discussion on HSE Patient Safety Toolbox Talks • Training opportunity to view patient safety initiatives e.g. safety huddles, etc.
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examination • Direct Observation of incident review meeting • Case Based Discussion of a previously published clinical service review • Case Based Discussion of a previously published incident report • Patient safety audit • Complaint handling (i.e. case handler role) • Study day • Case Based Discussion or Direct Observation of Public Health Practice of a relevant incident and able to reference HSE Incident Management Framework
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Health Service Improvement) • Case Based Discussion • 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) • Design and develop the methodological approach for a clinical service review

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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Demonstrating through discussion an understanding of QI methodology • Written report
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examination • HSE Foundation programme for QI (accessed on HSeLanD) • Involvement in an Improvement Collaborative • MFPHMI Part II Report (PHR relevant to Health Service Improvement) +/- presentation of work • Participation in local QI committees • Undertake a small QI project with a clearly defined aim, small tests of change and measurable outcomes
Full	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Health Service Improvement) • Project report/case study • Presentation of project (or design overview) to trainer or at meetings/conferences •

5. Strategic Leadership and Management in PHM

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

Knowledge

- 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

Skills

- 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

Potential settings to gain knowledge and skills	
<ul style="list-style-type: none"> • Departments of Public Health and specialty training sites • Leadership/management modules in the MPH • RCPI Mandatory Courses – Leadership, project management etc. • SpR Study Days • MFPHMI Part I and II Examination (PHR relevant to Strategic Leadership and Management) • 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. 	

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 of leadership within the public health environment.
3. Demonstrates proficient ability to lead within the public health environment.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case Based Discussion/presentation/report showing some understanding of the principles of leadership •
Partial	<ul style="list-style-type: none"> • Case Based Discussion/Direct Observation of PHM 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) – • MFPHMI Part I Examination • HST Mandatory Course – Leadership, Management • HSE Leadership Academy Leading Care Course
Full	<ul style="list-style-type: none"> • Direct Observation of PHM 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) - • MFPHMI Part II Examinations (PHR relevant to strategic leadership and management)

Outcome 2: 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case Based Discussion/presentation/report showing some understanding of management principles in healthcare, including human resources and financial management.
Partial	<ul style="list-style-type: none"> • Case Based Discussion/Direct Observation of PHM practice/presentation/report showing good understanding of the principles of management in the public health environment • MFPHMI Part I Examination • HST Project Management mandatory course • HST Leadership in clinical practice mandatory course • Study day
Full	<ul style="list-style-type: none"> • Direct Observation of PHM practice demonstrating ability to manage a project or component of a programme of work in the public health environment (e.g. by bringing it to a successful conclusion or suitable endpoint within available resources and timescales, demonstrating self-awareness) • MFPHMI Part II Examinations (PHR report relevant to Strategic Leadership and Management in PHM) • Management diploma

Outcome 3: 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 engage and communicate effectively with stakeholders from varying backgrounds

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the Trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case Based Discussion/presentation/report showing some understanding of the principles of identifying and engaging with stakeholders
Partial	<ul style="list-style-type: none"> • Case Based Discussion/Direct Observation of a Public Health practice/presentation/report showing good understanding of the principles of identifying and engaging with stakeholders in the public health environment • MFPHMI Part I Examination
Full	<ul style="list-style-type: none"> • Direct Observation of PHM 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) • MFPHMI Part II Examination (PHR relevant to Strategic Leadership and Management in PHM)

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case Based Discussion/presentation/report showing some understanding of the principles of team roles, team dynamics, potential sources of conflict and approaches to conflict resolution
Partial	<ul style="list-style-type: none"> • Case Based Discussion/Direct Observation of a Public Health practice/presentation/report showing good understanding of the principles of effective teamwork within the public health environment (e.g. attending local, regional or national committees/groups) • MFPHMI Part I Examination
Full	<ul style="list-style-type: none"> • Direct Observation of PHM 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) • MFPHMI Part II Examination (PHR relevant to Strategic Leadership and Management in PHM)

6. Public Health (PH) Advocacy and Policy

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

- 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)

Skills

- 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

Potential settings to gain knowledge and skill

- 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 PHM 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 PHM 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

Overview of methods of demonstrating proficiency

Knows	<ul style="list-style-type: none"> • Self-directed learning, advocacy and policy elements of the MPH, attendance at educational seminars, study days, Paper 1 of MFPHMI Part I exam. • 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 & scientific, environmental, economic, ethical, political & policy) criteria.
Knows how	<ul style="list-style-type: none"> • Learning through service experience, participation in workshops • Paper 4 of MFPHMI Part I Exam, Work Based Assessments, Case Based Discussion. • Develop and display an understanding of the approach to effective public health advocacy, policy formation, implementation and evaluation, and development of legislation
Shows	<ul style="list-style-type: none"> • Direct involvement in the areas of communication, advocacy and health policy e.g. Work Based Assessments, Case Based Discussion, media interviews • MFPHMI Part II Examination (PHR relevant to Public Health Advocacy and Policy) • Act as medical secretary or chair to local, regional or national groups e.g. NIAC, HPSC, PHMCDG • 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.)
Does	<ul style="list-style-type: none"> • Leading on health policy and advocacy initiatives, WBAs, presentations to medical and lay audiences, direct media experience (written and oral). • Uses public health advocacy and policy tools to advocate effectively and contribute to health policy formation

Outcome 1: *Effective advocacy for public health*

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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Examination
Partial	<ul style="list-style-type: none"> • Case Based Discussion • Written reports • Direct observation of Public Health Practice • MFPHMI Part II Exam (PHR relevant to Public Health Advocacy and Policy)
Full	<ul style="list-style-type: none"> • Case Based Discussion • Written reports/commentary • Direct Observation of Public Health Practice at the level expected from a specialist/consultant. • Media interview (and course) • Preparation of a press statements or reply to a PQ (can be pre-emptive, log with trainer). 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

Outcome 2: Develop and display an understanding of methods used in policy formation, implementation and evaluation

Steps to Outcome Completion:

- 1 Has knowledge of the approach to policy formation as well as implementation and evaluation.
- 2 Knowledge and understanding of approaches to development and evaluation of strategies and policies and national and international policy
- 3 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Examination • Evidence of appropriate self-directed reading • Case Based Discussion
Partial	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Public Health Advocacy and Policy) • Case Based discussion • Direct Observation of Public Health Practice
Full	<ul style="list-style-type: none"> • MFPHMI Part III Examination(OEPC) • Written Reports • Case Based Discussion • Direct Observation of Public Health Practice • (EOP Q) • Specialty training sites projects • 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. Participation in policy analysis, evaluation, formation and implementation

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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Examination • Evidence of appropriate self-directed reading • Case Based Discussion
Partial	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Public Health Advocacy and Policy) • Case Based Discussion on Literature review • Production of opinion piece with a view to publication in relevant medical or lay publication • Work in a relevant specialist training site
Full	<ul style="list-style-type: none"> • MFPHMI Part III Examination (OEPC) • Written Reports • Case Based Discussion of involvement in undertaking a Health Needs Assessment or Health Impact Assessment or Health Economic Analysis • Medical secretary to local, regional or national groups (e.g. NIAC, HPSC, PHMCDG). Involvement in a local or national strategy

Outcome 4: *Involvement in action to improve public health or health services***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

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • MFPHMI Part I Examination • Evidence of appropriate self-directed reading • Case Based Discussion
Partial	<ul style="list-style-type: none"> • MFPHMI Part II Examination (PHR relevant to Public Health Advocacy and Policy) • Study day (Public Health Policy) • Written reports • Case Based Discussion • Direct observation of a Public Health Practice
Full	<ul style="list-style-type: none"> • Direct observation of a Public Health practice, e.g.: <ul style="list-style-type: none"> • Gain experience in policy and strategy work in a specialist training site • 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)

7. Health Economics

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

Knowledge

- 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

Skills

- 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

Potential settings to gain knowledge and 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)

Overview of methods of demonstrating proficiency

Knows	Learning through health economic modules in MPH, RCPI Health Economics course (accessed through RCPI Brightspace), 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. MFPHMI Part I Examination. Participation in workshops including webinar assisted workshops
Shows how	MFPHMI Part II (PHR relevant to Health Economics e.g. authoring a health economic report) MFPHMI Part III (OEPC). Case Based Discussion.

	Direct Observation of a Public Health practice.
Does	Demonstrates the application and integration of knowledge and skills across health economics: <ul style="list-style-type: none">• Written report/s with significant health economic content e.g. for MFPHMI Part II Examination.• Undertaking critical appraisal of an economic evaluation or assessment e.g. CASP.• Participation in planning and budgeting processes.• Advising on health economic aspects of research and other work.• Publication with significant health economic content.• Presentation to peers at the local, national or international level.• Teaching.• Participation in HTA/mini HTA.

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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case-based discussion showing some understanding of how a health economic paper should be critically reviewed
Partial	<ul style="list-style-type: none"> • MFPHMI Part I Examination • Complete Health Economics Course (available on RCPI Brightspace)
Full	<ul style="list-style-type: none"> • Direct Observation of a Public Health 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. • Author (lead or contributing) of a report (e.g. MFPHMI Part II Examination) 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. • 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. • Undertake a critical appraisal of an economic evaluation or assessment

Outcome 2: 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.

Evidence of Learning

Please regard the following as examples of evidence that can be produced at QAs, EOPAs and EYAs to demonstrate work that has been done to attain minimal, partial or full attainment of the learning outcome in question. Attainment of minimal, partial or full is at the discretion of the Trainer and will be discussed with the trainee at the above-mentioned assessments.

Progression	Suggested assessment methods and evidence of learning
Minimal	<ul style="list-style-type: none"> • Case-based discussion showing some understanding of the potential value of health economics
Partial	<ul style="list-style-type: none"> • Case-based discussion covering key concepts of health economics. • Journal Club presentation
Full	<ul style="list-style-type: none"> • Direct Observation of a Public Health practice demonstrating participation in a health economic and/or resource decision making process • Presentation or report to management or other colleagues on results of an economic evaluation demonstrating proficient ability to appraise a health economic paper • Systematic or other literature review of health economic evaluation or assessment • Undertake a critical appraisal of an economic evaluation or assessment

Expected Experience

This table below summarises the expected experience that each Public Health Medicine Trainee should complete and record on ePortfolio.

Expected experience	Number expected/Further clarification	Reporting Period
Personal goals form	At the start of each training post	Once per post or annually
Competency log	1	Annual
Quarterly assessments (QAs)/End of post (EOP)	3 QAs +1 EOP (year long post) or 2 QAs + 2 EOP (2 six-month rotations)	4/year
End of year evaluation	1	Annual
On call		
On call rota	On a 9-5 basis. To be agreed upon with trainer at the beginning of each post.	Annual
Examinations		
MFPHMI Part I (Expected by end of year 1, required by end of year 2)	-	By end of year 2
MFPHMI Part II (Expected by end of year 3, required by end of year 4)	-	By end of year 4
MFPHMI Part III (Required by end of year 4)	-	By end of year 4
Teaching		
Delivery of Public Health related teaching to undergraduate/postgraduate/multidisciplinary team	1	Annual
Educational Activities		
Study days (online/in person)	4	Annual
National/International meetings (attendance)	2	Annual
Additional qualifications (MPH or equivalent)	1	By end of year 1
Chair of OCT	1	By end of year 4
Medical secretary of committee or membership of a committee	2 (separate committees)	By end of year 4
Mandatory courses (<i>as below</i>)	-	By end of year 4
<i>Introduction to computerized infectious disease reporting (CIDR) for public health users (HPSC)</i>	-	By end of year 4
<i>Ethics Foundation</i>	-	By end of year 4

<i>Ethics For Public Health</i>	-	By end of year 4
<i>Mastering Communication (Year 1)</i>	-	By end of year 4
<i>Performing Audit (Year 1)</i>	-	By end of year 4
<i>Health economics (online)</i>	-	By end of year 4
<i>An Introduction to Health Research Methods</i>	-	By end of year 4
<i>HST Leadership in Clinical Practice</i>	-	By end of year 4
<i>Media training</i>	-	By end of year 4
<i>Project management</i>	-	By end of year 4
Research and Audit		
Presentation at regional/national/international meeting (oral/poster)	1	Annual
Audit/Quality Improvement project	1	Annual
Journal club/Grand rounds (Attendance)	4	Annual
Publications	1	By end of year 4

Progress Log

This Log can be used to track Trainee's progression in each Outcome addressed by the curriculum.

It is recommended to keep this document updated and to use it during each Quarterly Assessment meeting to guide the discussion between Trainee and Trainer. After updating the Log during the meeting, it is recommended that Trainees upload a copy of the document on ePortfolio as an attachment to the Quarterly Assessment Form.

Quarterly Review Scoring guide: M = Minimal P=Partial F=Full/Exceptional – = Not addressed or observed

Year of training programme		Year 1				Year 2				Year 3				Year 4				Year 5			
Trainer initials																					
Quarterly Review		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Domain 1	Health Protection																				
LO1	Correctly interpret and use legislation to protect health																				
LO2	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																				
LO3	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																				
LO4	Manage Public Health Emergencies																				
LO5	The ability to evaluate and monitor health protection programmes																				
Domain 2	Health Intelligence																				
LO1	Demonstrate in-depth knowledge and proficient use of the key health related datasets																				
LO2	Demonstrate ability to apply research methodologies																				
LO3	Demonstrate ability to analyse, interpret and effectively communicate data																				
LO4	Demonstrate the application of good information governance																				
Domain 3	Health Improvement																				
LO1	Scope a health needs assessment and provide the evidence base for preventive and health improvement intervention																				

LO2	Evaluation of a preventative or health improvement initiative/programme/service. – needs feedback from specialist, not achievable																					
LO3	Advocate for public health principles and action, to improve the health of the population or a subgroup.																					
LO4	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.																					
	Year of training programme	Year 1				Year 2				Year 3				Year 4				Year 5				
	Trainer initials																					
	Quarterly Review	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Domain 4	Health Service Improvement																					
LO1	Understand health systems and health system performance: Demonstrate an understanding of a health systems approach to assessing, planning, delivering and evaluating health services																					
LO2	Demonstrate ability to assess the needs of the population																					
LO3	Demonstrate ability to evaluate health services																					
LO4	Demonstrate knowledge, understanding and practical application of quality and patient safety principles in healthcare																					
LO5	Demonstrate knowledge and understanding of quality improvement																					
Domain 5	Strategic Leadership and Management																					
LO1	Demonstrate the ability to effectively lead a programme of work																					
LO2	Demonstrate the ability to manage a programme of work including planning for human and financial resources																					
LO3	Demonstrate the ability to identify and engage with key stakeholders in a programme of work																					
LO4	Demonstrate the ability to work effectively as part of a team																					
Domain 6	Public Health Advocacy and Policy																					
LO1	Effective advocacy for public health																					

LO2	Develop and display an understanding of methods used in policy formation, implementation and evaluation																			
LO3	Critically appraise health policy, strategy and plans for implementation																			
LO4	Involvement in action to improve public health or health services																			
Domain 7	Health Economics																			
LO1	Demonstrate knowledge of health economic principles																			
LO2	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.																			

Year	Quarter	Signature SpR	Date	Signature trainer	Date
1	1				
	2				
	3				
	4				
2	1				
	2				
	3				
	4				
3	1				
	2				
	3				
	4				
4	1				
	2				
	3				
	4				
5	1				
	2				
	3				
	4				