



CAREER PROGRESSION FOR MEDICAL SCIENTISTS

Submission to the Department of Health and Health Service
Executive

March 2021

INTRODUCTION

The Medical Laboratory Scientists Association (MLSA) is the trade union representing medical scientists in Ireland. It has over 1,800 members in public and private hospital laboratories and non-hospital clinical diagnostic laboratories across the country. This submission on career progression for medical scientists follows on from the [MLSA Submission on Recruitment and Retention](#) in September 2020.

Medical Scientists are highly educated and skilled scientists, with level 8 degrees and specific multi-disciplinary clinical training to work in a clinical diagnostic laboratory setting. Over 70% of medical scientists have MSc degrees or other post-graduate qualifications including PhD, FRCPath and MBA. The profession is regulated by CORU, the regulatory body for Health and Social Care professions and registration with CORU will be a statutory requirement to practise as a medical scientist in clinical laboratories from 31st March 2021.

The medical scientist workforce has tremendous skill, expertise and experience in laboratory diagnostics, test development, assessment, adoption and whole-service rapid transformation for the benefit of the patient and indeed the population. Most recently, they have demonstrated this by responding to the COVID-19 pandemic and providing new diagnostic services for a new virus expertly, rapidly and on a nationwide basis, leading to improved patient and public health outcomes. This was achieved while continuing to provide the existing internationally accredited diagnostic service to patients on a 24 hour / seven day a week basis.

KEY MESSAGES

1. The COVID-19 pandemic has clearly demonstrated the crucial role and the immense challenges faced by the national laboratory medicine workforce, primarily comprised of medical scientists. The HSE and Department of Health have now recognised that there is an urgent need for investment in services to prepare for the healthcare system of the future as envisioned by Sláintecare. The HSE should engage with Medical Scientists to maximise the contribution of the profession to better health outcomes for the population and optimal use of clinical laboratory resources.
2. The pandemic has also proven the benefits of clinical diagnostic laboratories embedded in hospital settings, with complete electronic traceability of samples from receipt in the laboratory to reporting, well-established logistics for specimen transport and local IT connectivity, resulting in rapid turnaround times. The timeframes and quality assurance standards necessary for the laboratory medicine service dictate that analysis must be provided within accredited laboratories within the country and not outsourced.
3. Substantial challenges in recruitment and retention of medical scientists have existed for several years and the additional pressures arising from COVID-19 have highlighted and compounded these challenges.
4. The current career pathway for Medical Scientists fails to fully utilise the skills of these highly qualified and motivated healthcare professionals to contribute to the improvement and development of services by developing extended scope and advanced practice. Promotional roles such as Chief Medical Scientist and Laboratory Manager steer the scientists towards vital managerial functions but here is no scope for further promotion at a scientific level.
5. Retention of our graduates requires an improved career path as envisioned in [New Horizons](#), a joint paper by the MLSA and ACSLM, presented to the Department of Health in 2016. A parallel career structure for medical scientists and clinical biochemists, with the potential to progress to consultant grade, will provide a pathway for progression that will enable laboratories to build their workforce and their service to meet demand and improve patient services and outcomes.
6. Appropriately qualified Consultant Medical Scientists would place Medical Scientists in key leadership roles in laboratories nationally to mentor junior members of the profession and encourage advanced practice throughout the service.
7. The streamlining of scientific career pathways in healthcare will allow all scientists to contribute to the full extent of their competencies and will ensure in the interests of patient safety that all scientists working in clinical diagnostic laboratories are regulated by CORU.

A CAREER PATHWAY FOR MEDICAL SCIENTISTS

Consultant Medical Scientist

In 2001 the [Expert Group Report on Medical Laboratory Technician and Technologist Grades](#) (Expert Group Report) considered that the creation of a consultant scientist grade in all disciplines was outside its remit but recommended that formal consideration be given to the possible role of consultant level scientists in disciplines other than clinical biochemistry. Twenty years later despite the efforts of the MLSA and the Academy of Clinical Science and Laboratory Medicine (ACSLM), and the support of Minister for Health Leo Varadkar in 2015 for the development of such a grade, there has been little progress made.

The 2019 budget allocated €20m to a Sláintecare Integration Fund to “support innovative local approaches to delivering more care in community settings and better integration of care across the system”. Such investment is a testament to the government’s commitment to innovative change to achieve integrated care. Laboratories provide a novel setting to assist with integration, since laboratories provide services for a wide variety of clinical services across all specialties. National Clinical Programmes, such as the National Clinical Programme for Older People, for Acute Medicine or for Diabetes, will rely heavily on diagnostic availability, as will the Sláintecare vision to integrate care.

Consultant Medical Scientists will be well positioned to drive integrated care as they will provide the necessary link between services and specialties. Their scientific training and knowledge of diagnostics, when combined with clinical skills attained through specialist training, will be invaluable in developing diagnostic and treatment pathways for integration initiatives.

NHS Consultant Scientist Pathway (HSST).

In the NHS a [Higher Specialist Scientist Training \(HSST\) programme](#) has been developed as the pathway to a Consultant Scientist position. The HSST is a five-year workplace-based training programme that provides opportunities for scientists to train to become eligible to apply for available consultant scientist posts.

Successful applicants leave their existing contracts to take up a five-year fixed term contract with a host organisation or remain with their existing employer to undertake their HSST. Most HSST places are filled through the latter ‘in-service’ route

Examples of potential areas where Consultant Medical Scientist posts could be developed are detailed in [New Horizons](#) (2016)

EXAMPLES OF THE RANGE OF EMPLOYMENT ROLES UNDERTAKEN BY CONSULTANT CLINICAL SCIENTISTS



Required Action 1

The joint working group of the ACSLM and RCPI Faculty of Pathology, set up in 2017 to look at the educational and training pathways to advanced practice, has now been superseded by the National Group to Inform the Strategic Direction of Laboratory Medicine.

At least one service area has already been identified where Consultant Medical Scientist(s) is/are required due to chronic Medical Consultant deficits.

The HSE/Department of Health must now immediately engage with stakeholders to put in place the necessary training programme(s) and engage with stakeholders to provide for the extension of existing Consultant Scientist grade (Consultant Clinical Biochemist) to other areas of laboratory services where there is an identified and agreed service need. A working group with representation from the HSE, DOH, MLSA and ACSLM should be set up immediately to start this process.

Extended Scope of Practice and Advanced Practice

Extended Scope of Practice and Advanced Practice can be described as “a level of practice that involves either activities that are within the recognised scope of the professional but traditionally a function of other professions or alternatively activities that may be outside the recognised scope of practice for a profession”

There are many additional specialities and requirements that have developed in laboratories since the [Expert Group Report](#), where medical scientists have taken on new responsibilities outside of their recognised scope or taken over responsibilities traditionally a function of other professions. These responsibilities require the development of new skills and competencies that contribute to the development of the service.

1. Extended Scope of Practice

One area where there have been significant advances in extended scope of practice by Medical Scientists is the undertaking of Histodissection under supervision in Cellular Pathology (Histology). In a number of large teaching hospitals Medical Scientist staff at all grades have in recent years been undertaking histodissection, a task previously carried out by a consultant histopathologist. Medical Scientists are deemed competent to undertake this task following the successful completion of a training programme under the supervision of a consultant histopathologist.

Required Action 2

The MLSA seeks that provision should be made for staff to obtain due recognition of their extended scope of practice through the **provision of an allowance to staff who qualify and subsequently routinely undertake this additional duty at the grade of staff grade medical scientist.**

2. Advanced Practice

In discussing advanced practice for medical scientists, it is useful to look at the examples of other health and social care professionals in this area. The Society of Radiographers (UK) has developed two senior roles: the Advanced Practitioner and the Consultant Radiographer.

The Society defines the Advanced Practitioner as an expert in clinical practice combined with some of the following: team leadership, an educational role, a research role, and a role in service development. Advanced Practitioners must have expert knowledge and skills in diagnostic imaging and radiotherapy and oncology. Advanced Practitioners also work in multi-disciplinary teams. Consultant Radiographers ‘practice at the leading edge of the profession, with the ability to create and interpret knowledge that extends the forefront of the profession. They provide leadership in relation to clinical practice and the delivery of clinical services.

In '[A Guide to Defining the Competences Required of a Consultant in Clinical Chemistry and Laboratory Medicine](#)' (Beastall et al, 2005) a clear vision of the role of the Consultant Scientist was set forth for Clinical Biochemists:

“A consultant is defined as a senior professional with responsibility for the design, development, delivery, and direction of a clinical and / or scientific service in the area of Clinical Chemistry Laboratory Medicine. A consultant functions as an autonomous practitioner within a clinical team and within the overall strategic plan of his / her employing authority and is accountable for service quality, including data interpretation and clinical liaison”.

Roles for medical scientists that meet this definition of consultant practitioner roles and the pathway required to develop them are discussed earlier in this document.

Examples of current medical scientist roles that meet the advanced practitioner description include:

- Laboratory Quality Officers
- Laboratory Training Officers
- Laboratory Health and Safety Officers
- Laboratory ICT Officers
- Molecular Pathology managers
- Point of Care Testing managers
- Surveillance Scientist managers
- Haemovigilance managers
- Histodissection managers
- BNP Programme managers and other mobile clinics and services

The Expert Group Report recommended the creation of a specialist medical scientist grade:

“The Specialist Medical Scientist posts are applicable in those cases where individuals are exercising a high degree of skill and knowledge. Some specific examples include: providing a national or regional service for particular tests or providing Health and Safety, Information Technology or Quality Management services to all departments within the Division of Pathology.”

Unfortunately, the use of the specialist grade since 2001 has been extremely limited. The HSE agreed in 2003 to roll out a set number of specialist posts initially and in many cases even these posts were either never filled or were later lost when they fell vacant during the moratorium years. Many hospitals and departments struggled to decide which of the many speciality areas to allocate the one specialist medical scientist post to. The proper utilisation of this grade for the purpose for which it was intended would support the existing areas of advanced practice, reward the expertise, competencies of highly qualified medical scientists and assist in the development of the clinical laboratory service.

Required Action 3

The MLSA seeks direct engagement with the HSE to discuss the further roll-out of the Specialist Medical Scientist position into agreed advanced practice areas such as those mentioned above and other specialist roles that are determined at local level for appointment at Specialist Medical Scientist grade.

Medical Scientist Promotional Grades

The [Expert Group Report](#) was clear on the need for a new approach to promotional posts in laboratories and recommended that the simple application of numbers should no longer limit an individual Medical Scientist's progress through the career structure." The 1981 Grading Structure Agreement had recognised six departments - Clinical Biochemistry, Haematology, Blood Transfusion, Microbiology, Histopathology, and Immunology - for grading structure purposes. The 2001 Expert Group Report recommended that to allow for future developments in the rapidly evolving scientific environment of the clinical laboratory service, claims for the existence of separate departments should be judged against agreed objective criteria

Unfortunately, the 2003 grading agreement that eventually came out of the Expert Group Report is, at management's insistence, a continuation of a numbers-based approach, which has been implemented with some rigidity in the twenty years since, particularly in HSE hospitals. Since 2001, despite significant developments in technology and clinical laboratory service delivery, the expansion of medical scientist promotional grades, from senior to specialist and chief grades, to respond to evolving service needs and emerging specialities has been extremely limited, again most particularly in HSE hospitals.

This lack of promotional opportunities compared to other health professions is pushing our medical scientist graduates into other sectors and also encouraging our existing practitioners to look elsewhere for their career progression. The table below shows the disparity in the ratio of promotional posts for clinical biochemists and medical scientists in seven hospitals in 2017. Perhaps it is not surprising that there is such a shortage of applications for entry grade medical scientist posts but no corresponding shortage of clinical biochemist applicants, or that medical scientists in Biochemistry departments are applying for and obtaining promotional clinical biochemist posts.

Ratios of Promotional Posts for Biochemists and Medical Scientists

Table 1: Resource profiles in Irish Clinical Chemistry laboratories

	Consultant Biochemist	Principal Biochemist	Senior Biochemist	Basic Grade Biochemist	Ratio of promotional to basic grades for Biochemists	Ratio of promotional to basic grades for Medical Scientists	Chief Medical Scientist	Specialist Medical Scientist	Senior Medical Scientist	Basic grade Medical Scientist
Hospital A	1	2	2	1	5.0 : 1	0.5 : 1	2.5*	0	6.5	18
Hospital B	1	1	4	1	6.0 : 1	0.4 : 1	1	0	6	18
Hospital C	1	1	0	0	2.0 : 0	0.8 : 1	1	0	8	12
Hospital D	2	4	2	2	4.0 : 1	1.0 : 1	2**	1	4	7
Hospital E	0	0	0	0	NA	0.8 : 1	1	0	8	12
Hospital F	0	1	5	7	0.9 : 1	0.8 : 1	1	0	4	6
Hospital G	0	0	1	0	1.0 : 0	0.2 : 1	0	1	0.7	7.4

* Includes Chief Medical Scientist designated to Immunology ** Includes Chief Medical Scientist designated to Near Patient Testing

Required Action 4

The MLSA seeks detailed information on the number of HSE-funded medical scientists at each grade and discipline across each individual hospital in the health service, to allow a proper assessment of the promotional opportunities available to medical scientists. The HSE should commission a complete census of the medical scientist workforce to determine the demographic challenges facing the profession in the next twenty years and current and future requirements at each grade of the service. The census could be done in conjunction with the planned impact assessment on the proposed trainee grade appointments.

Continuous Professional Development

With the ending of the transition period for the CORU register for Medical Scientists on 31st March 2021, medical scientists now have a statutory obligation to undertake and record a specified amount of continuous professional development (CPD). The protected time for day-to-day CPD as provided for Medical Scientist grades in the Haddington Road Agreement must now be facilitated in all laboratories.

In conjunction with other AHP grades, improved and standardised study leave for training courses for career and service development, e.g., MSc, FRCPath, PhD and post-graduate diplomas must be provided, in line with similar agreements for medical and nursing personnel.

Required Action 5

The HSE must **reconfirm the commitment given to provide protected time for staff for CPD purposes**, with exact arrangements to be determined locally in consultation with the laboratory manager.

Required Action 6

The HSE must **provide resources and supports for the immediate development of a CPD and Lifelong learning training budget and training resources for medical scientists to achieve CPD requirements. develop competencies and qualify for career progression roles. e.g., study leave, study facilities, access to on-site and off-site CPD activities, clinical tutors.**

CONCLUSION

Urgent development of the career pathway and training of medical scientists is required to safeguard the current provision of clinical laboratory services and to allow services to respond adequately to healthcare and technological developments. An adequate supply of suitably skilled and state-registered medical scientists working in internationally accredited hospital laboratories is essential for the provision of the world class laboratory services the health system depends on.

Parity between medical scientists and other scientists working alongside them is required to attract graduates and to retain existing highly qualified medical scientists. Parallel career structures for all scientists in clinical diagnostic laboratories, including the opportunity to progress to consultant scientist grade, will enable adequate recruitment and retention of scientists and allow scientists to contribute to the maximum of their competencies and capabilities to Irish healthcare.

Recent experience, not least the Cervical Check scandal and the COVID-19 pandemic, have demonstrated how much Ireland requires its highly educated and skilled medical scientists to be at the forefront of decisions about testing, quality assurance and training and to be able to respond rapidly when crises such as this occur. Urgent investment in staffing, equipment and information technology is essential to safeguard existing services and to allow for future developments.

The MLSA seeks investment in clinical laboratories and their workforce to provide for current and future service needs. This will require a parallel scientific career structure for all scientists in clinical diagnostic laboratories, as recommended by the 2001 Expert Group Report on Medical Technicians and Medical Technologist Grades. In addition, and in the interest of public safety, all scientists involved in clinical diagnostic testing should require state registration by CORU.

The revised and updated medical scientist career structure should allow suitably qualified and experienced medical scientists to operate to the highest level of their qualifications and competences and to progress to consultant scientist grade, as is common in many health services worldwide, so that the Irish health service can benefit from the expertise and leadership of scientists that is essential for the future development of the service.