SCHOOL QUALITY REVIEW 2016

Self-Assessment Report

UCD School of Medicine

Scoil an Leighis UCD

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List of Acronyms

Acronym	Full Names
CHAS	College of Health & Agricultural Science
CEMS	Centre for Emergency Medical Science
CORU	Health & Social Care Professionals Council
CRC	UCD Clinical Research Centre
CRCI	Clinical Research Coordination Ireland
CUH	Children's University Hospital, Temple Street
DAHC	Dublin Academic Health Care (now Dublin Academic Medical Centre)
DAMC	Dublin Academic Medical Centre
ECTS	European Credit Transfer System
GEM	Graduate Entry Medicine
GR	Graduate Research
GT	Graduate Taught
IEHG	Ireland East Hospital Group
MMUH	Mater Misericordiae University Hospital
NMH	National Maternity Hospital, Holles Street
OLCHC	Our Lady's Children's Hospital, Crumlin
RCSI	Royal College of Surgeons in Ireland
RIIG	Research, Innovation & Impact Group
SBBS	School of Biomolecular & Biomedical Science
SMMS	School of Medicine & Medical Science (previous School name)
SMT	School Management Team
SVUH	St Vincent's University Hospital
TLSG	Teaching & Learning Strategy Group
T&L	Teaching & Learning
UCD	University College Dublin
UCD MR	UCD Medicine Research
UEM	Undergraduate Entry Medicine (also known as Direct Entry)
UMT	University Management Team

1. Introduction and Context

1.1. School Overview, Mission & Vision

Encompassing the professional disciplines of Medicine and Radiography, the *UCD School of Medicine* ("the School") is a large and geographically dispersed School within the College of Health & Agricultural Sciences. The School delivers six principal undergraduate programmes, over fifty graduate-level programmes and has an extensive research portfolio with grants under management to the value of over €80 million. The Medical School was founded in 1854, while the School of Radiography was established in 1934. The latter was one of world's first four training centres for Radiographers and since 2005 has been fully integrated within the *UCD School of Medicine.*

This School's mission is "*to improve healthcare in Ireland and around the world by educating and training health professionals and biomedical scientists who together form a community that is driven by a commitment to service, enquiry, and continuous health improvement*" [1].

The School aims to be recognised as a dynamic, research-intensive Medical School fully integrated within Ireland's global University and within Ireland's leading academic health system[1]. More specifically, it seeks to be[2]:

- A leading international Medical School where excellence in teaching is supported by a commitment to research and innovation.

- An academic centre that is recognised for its comprehensive portfolio of high quality programmes for undergraduate and graduate study and which supports continuous professional development.

- A School which fosters a critical and scientific attitude to learning and through student-centred teaching ensures that all aspects of our students' educational needs - clinical, practical and interpersonal skills – are addressed.

- The educator of world class healthcare professionals who meet the expectations and needs of our patients and the community at large through effective communication, consultation and clinical skills.

- Recognised for its cohort of translational research scientists that establishes Irish leadership in biomedical, biopharmaceutical and bioengineering.

- A centre which improves healthcare through individual- and multi-investigator-led translational medicine research programmes that apply our scientific and clinical expertise.

- A creator and supporter of innovative healthcare enterprise and spin-out companies that drive significant improvement in healthcare.

- An internationally recognised academic medical centre (Dublin Academic Medical Centre) which, in partnership with Mater Misericordiae University Hospital and St Vincent's Healthcare Group, will significantly improve the health of our patients and the general population, and provide excellent training to healthcare professionals, by purposefully linking treatment, teaching and research.

- Renowned for our clinical leaders and translational medicine role models, who contribute to advances in healthcare and scientific discovery.

- Recognised for the commitment to life-long learning by, and ongoing connectivity with, our graduates in Ireland and throughout the world.

1.2. Developmental Milestones, Current Structures & Activity

The Catholic University Medical School was opened in 1855 in Cecilia Street, Dublin. By the end of that century, it had become the largest medical school in the country. Following the creation of the National University of Ireland in 1908, the School became the Medical Faculty of UCD.

Throughout its history, the School has adopted an innovative and collaborative approach to enhance its teaching, research and international student recruitment. It has educated healthcare professionals who are employed in leadership positions across the globe. It has recruited international students from South East Asia for over 30 years as part of a four Irish University consortium (*Irish Universities & Medical Schools Consortium, IUMC)* and in 1998, the School established Penang Medical College, in Malaysia in collaboration with the Royal College of Surgeons in Ireland (RCSI). In 1999, it co-founded the Conway Institute of Biomolecular and Biomedical Research and in 2006 it relocated to the Belfield campus from its city centre ancestral home in Earlsfort Terrace.

Following recommendations of a major review of medical education in Ireland ("Fottrell Report"), in 2006 it was the first Irish University to introduce a graduate entry medicine degree programme. It has the largest clinical training network, comprising over 25 acute, specialist and general hospitals and a country-wide primary care teaching network with over 150 practices. [4]

The School has an extensive portfolio of graduate taught programmes comprising 37 programmes at certificate, diploma or masters level within 6 principal subject domains, a further 12 graduate research programmes at masters and doctoral level, and four occasional/continuous professional development courses. It delivers a range of professional training programmes in conjunction with postgraduate training bodies, and provides a 1-year Medical Intern training for the Dublin Mid-Leinster region.

UCD has pioneered degree-level education for Radiographers, and was the first university in Europe to award a degree in Diagnostic Radiography in 1990. It has proactively led the development of the profession, increasing the numbers of students in its four year degree programme in response to a national shortage of radiographers within the Irish health service. *UCD Radiography & Diagnostic Imaging* was a founder member of the first European Radiography network for student mobility under Erasmus in 1994. Postgraduate programmes are delivered to meet the broad spectrum of professional needs in the diagnostic imaging clinical environment, including ultrasound, magnetic resonance, and computed tomography.

In 2006, in conjunction with the UCD School of Biomolecular and Biomedical Science (SBBS), the School of Medicine introduced a four-year *B.Sc. in Biomedical, Health and Life Sciences* (BHLS), which aims to prepare students for careers in academic or industry-based biomedical research, and also provides an ideal precursor for those considering graduate entry to medicine. Also of note, School staff contribute extensively to the BSc Science Programme, with staff responsible for the delivery and organisation of Physiology as a degree subject.

The *UCD Centre for Emergency Medical Science* (CEMS) was established within the School in 2001 to provide a national centre of excellence for research, development, education and training in pre-hospital emergency care. The Centre's principal activities are provision of graduate and undergraduate education and training in pre-hospital immediate care, provision of short courses in immediate care and management and delivery of the MERIT Project (Medical Emergency Responders: Integration & Training).

1.3.   Current Structures and Activity

In recent years, the School has revised its organisational structures, changed its physical location, developed new facilities, undertaken extensive changes to its programme curricula and significantly increased its research portfolio. The reform of academic governance procedures in UCD has facilitated restructuring within the School to create academic sections, providing clear line management, more transparent resource allocation and greater opportunities for strategic development (see Chapter 2).

Opened in 2006, the UCD Health Sciences Centre on the Belfield campus provides a state of the art facility for interactive teaching and learning in large and small groups. Clinical simulation areas make possible a practically relevant and comprehensive education for doctors, radiographers and paramedics, while reinforcing the team nature of health delivery from the early stages of professional education. Clinical training facilities have been significantly improved across a number of our clinical sites principally at the Mater Misericordiae University Hospital (MMUH), St Vincent's University Hospital (SVUH) and through the establishment of a primary care teaching network (see Chapter 3).

Our curricula have undergone continuous development within a consultative framework informed by internal evaluation, external review and international best practice. Our educational programmes have been enhanced through the introduction of modularisation and the adoption of a semesterised academic calendar, whereby teaching and assessment within programmes are linked to explicit educational outcomes, and further allows an accurate measure of educational resource requirements (see Chapters 4 and 5).

Research spans from fundamental biology through translational research to population and clinical research, with an emphasis on research that can be translated into improvements in human health and well-being. Many faculty members in the School are active investigators in the Conway Institute and collaborate with other biomedical investigators as part of the Molecular Medicine Ireland (MMI), Clinical Research Coordination Ireland (CRCI) and other collaborative research initiatives. We are currently midway through our research strategy, which seeks to build strong performing research centres and aims to leverage these to drive impacts on healthcare, international collaboration and disruptive innovation (see Chapter 6).

As the School is required to maintain professional accreditation in both Medicine and Radiography, it continually monitors and seeks to enhance quality through strategic development and adoption of international best practice as well as by implementing university policies in an effective manner (see Chapter 7). There are well-established University-, School- and Student Union-led student support services on campus and our students have a reputation as engaged and active university citizens. The School has led the development of peer mentoring within the University and is developing a more formalised system of student mentoring by staff to support students at critical points in their education across the range of sites (see Chapter 8).

As a school delivering professional healthcare programmes, the School maintains important, complex and influential external relationships with public agencies, professional and statutory bodies, and employers in Ireland, as well as having close liaison with other educational institutions and private organisations in Ireland and abroad (see Chapter 9).

1.4. School Leadership

The School is led by the Head of School who is also Dean of Medicine and Chair of the School Executive Management Committee, Chair of School Management Team and Chair of School Programmes Board. The current Head of School is Professor Patrick Murray who is also Professor of Clinical Pharmacology, a consultant nephrologist at the Mater Misericordiae University Hospital and Chair, UCD Clinical Research Centre.

The Head of School is supported by an 8-person School Management Team which includes Associate Deans for Programmes & Educational Innovation, Research & Innovation and International Relations. The School Management Team is responsible for guiding the day-to-day business of the School and is a subset of an 18 person School Executive Management Committee which draws representation from across all Sections and principal functions within the School.

1.5. Teaching and Learning

An Associate Dean for Programmes & Educational Innovation provides academic oversight of all educational activities. He is a member of the School management team and represents education on the School's Executive Management Committee (School Executive). This individual is both Deputy Chair of the Medicine Programmes Board which monitors ongoing programme implementation and Chair of the School's *Teaching and Learning Strategy Group* (TLSG) which draws together education leaders to guide strategic programme development and advance educational best practice.

In its "Education Strategy", School aims to deliver excellence in education by [5]:

- Offering a comprehensive portfolio of high quality undergraduate and graduate taught programmes which are informed by the latest research, and which support our graduates throughout their careers.
- Fostering a critical and scientific attitude to learning, and through student-centred teaching, to ensure that all aspects of our students' education needs - clinical, practical and interpersonal skills – are addressed.
- Applying educational best practice to deliver high quality, innovative teaching and assessment.
- Nurturing a commitment to career-long learning to ensure continued professional development and medical education.

1.6. Research & Innovation

The School has a broad and active research portfolio, as evidenced by current activity:

- 100+ Principal Research Investigators
- 200+ Research Masters or Doctoral Students
- 300+ Active Research Projects
- Value of grants and studies under management in excess of €80 million
- 300+ peer reviewed publications per annum

Having previously focused on developing research strands build around biomedical science (biological process or technology) functions, the School has in recent years sought to build 'Translational research' as the overarching, dominant research theme. In recent years, there has been an increasing focus on health services and applied clinical research, including both investigator-led studies and clinical trials. The School has sought to build multi-investigator research groups within the School and leverage these centres to build

national and international collaborations. For example, in 2015, principal investigators within the School were awarded two of four national awards to support the establishment of clinical trial networks.

Current research centres within the School include:

- Centre for Emergency Medical Science
- Diabetes Complications Research Centre
- Centre for Research in Infectious Diseases
- Academic Centre on Rare Diseases
- Centre for Human Reproduction

- Academic Centre for Paediatric Research
- UCD Centre for Biomedical Engineering
- UCD Centre for Bioinformatics
- UCD Charles Institute of Dermatology
- UCD Systems Biology Ireland

1.7.   International Relations

Recognising the importance of our international student recruitment and the need to support this activity but also graduate placement and alumni relations, the School has created an Associate Dean for International Relations.

The School is proud of its long tradition of international participation. We have welcomed overseas students to our programmes from the earliest days and during the course of their studies, many of our students will travel to our international partners. We currently boast over 50 nationalities among our student and staff cohort. Our alumni live and practise across the world, and many of our academic and clinical staff have worked in international healthcare organisations, bringing back experience, knowledge and a global perspective.

Our International objectives include:

- Engage with key strategic partners and networks to sustain and develop our international presence.
- Lead a professional campaign of international student recruitment across a range of markets.
- Promote and communicate the School's current international activities and global engagement to support future international recruitment to both the School and the University.
- Develop strong mutually beneficial relations with our alumni and recent graduates to maintain knowledge of international healthcare trends and build elective opportunities for future students.

1.8.   Statement of School Priorities & Objectives / Alignment with UCD Strategic Plan

During 2014-15, the School undertook a major strategic planning exercise involving widespread consultation resulting in the publication of its strategic plan, which re-states our Vision, Mission, identifies priorities and objectives and aligns these with the University's strategic plan 2015 - 2020[1].

The School's Strategic Priorities are summarised as:

1. To substantially increase the quality and quantity of translational and clinical research in areas of national significance and global importance through internal re-focus and external collaboration.

2. To be internationally recognised as a leading European medical school with a strong portfolio of professionally relevant undergraduate and graduate programmes that allow high calibre students reach their full potential as medical practitioners and healthcare leaders.

3. To innovate in teaching and assessment, and to undertake comprehensive medical education research which impacts upon our programmes and which exploits research/education linkages.

4. To continue to attract a diverse cohort of international students and to offer elective opportunities around the world so that our graduates emerge competitive for careers in global healthcare leadership.

5. To continue to attract and retain high calibre students and staff who are driven by the pursuit of excellence in teaching, research and clinical practice and who have clear pathways for individual progression.

6. To maintain a strong scientific basis to internationally benchmarked programmes which support our ambition to produce graduates who are inquisitive, critical thinkers throughout their careers.

7. To build an enduring sense of community and proactive engagement with University business among our patients and clinicians, our biomedical science researchers, our alumni and other stakeholders.

8. To support our education and research endeavours on campus and across our clinical training networks by further strengthening our educational and research infrastructure (including facilities and clinical networks).

9. To maintain a strong financial performance, diversified income and a resource allocation that is consistent with our School's strategic priorities.

10. To consistently and constructively question our assumptions and collect appropriate key performance data that supports informed decision making and organisational development.

1.9. National Context: Contemporary Issues Facing Irish Medical Schools

Since the School's last Quality Review was conducted in 2008-9, the national landscape within which School operates has changed considerably. National student intake to each of the established Medical Schools continues to be capped by Department of Education via the Higher Education (HEA) quota. In 2007, a new graduate medical school was established at University of Limerick. There are now seven medical schools on the island of Ireland, five of which operate graduate-entry programmes. Although the Fottrell Report target (725 in 2014 compared with 305 in 2006) has been achieved, the Irish health system continues to face a shortage of doctors and has one of the highest reliance on international medical graduates (36% of doctors practising in Ireland qualified elsewhere[1]).

The higher education and healthcare sectors have undergone considerable funding and manpower challenges which have impacted on their capacity to support research and education. Furthermore, continuing healthcare reforms, e.g. the introduction of hospital groups and the introduction of free GP care, mean that our education and research activity continue within a system that is both dynamic and fluid. The School values its relationship with affiliated hospitals, primary care centres and other affiliated clinical sites and recognises the importance of supporting their endeavour. To this end, the School's most recent curricular changes have sought to utilise clinical training capacity across a wider network of affiliated clinical sites, with a view to optimising clinical education experience and teaching capacity.

In proposing six hospital groupings as a transition to independent hospital trusts, the 'Higgins Report' sees the development of hospital trusts as delivering greater integration between the healthcare agenda and teaching, training, research and innovation[6]. The 'Higgins Report' emphasises the importance of academic linkages to Universities with a focus on research, innovation, education and training in order to deliver improved patient care. The recommendation is that each hospital group will include a primary academic partner to stimulate a culture of learning and openness within the group. UCD is the academic partner of the 'Ireland East Hospital Group', which comprises Mater Misericordiae University Hospital, St Vincent's University Hospital, Midland Regional Hospital Mullingar, St Luke's General Hospital, Kilkenny, Wexford General Hospital, National Maternity Hospital, Our Lady's Hospital, Navan, St Columcille's Hospital, St Michael's Hospital, Dun Laoghaire, Cappagh National Orthopaedic Hospital and the Royal Victoria Eye and Ear Hospital. UCD is represented in the management of the hospital group at executive level, and the School of Medicine has strong links with the Group at an operational level. With the recent publication of a University Strategy that prioritises high quality research, community engagement and multi-disciplinarity [7] and the formal establishment of hospital groups [6], further strengthening our links with hospitals and primary care in the 'Ireland East Hospital Group' region, is clearly a priority.

Our *Radiography & Diagnostic Imaging* group is the national training centre for radiography and its clinical training centres extend across the entire country (and beyond the *Ireland East Hospital Group*) to encompass 8 University teaching centres nationally, 3 paediatric centres in Dublin and specialist centres such as the Dublin Dental Hospital and Positron Emission Tomography–Computed Tomography (PETCT) centres nationally.

Despite the challenging landscape, the School has consistently exceeded its financial targets over the past ten years, growing profitability by approximately €1 million per annum, and diversifying revenues year-on-year through new programme development.

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[1] Medical Workforce Intelligence Report 2015, Medical Council of Ireland

1.10. International Context

With international students representing 23% of our student cohort, and many of our graduates seeking employment abroad as part of their professional training, the international context is of critical importance to the School.

International Recruitment

International recruitment has become increasingly competitive with the majority of European Medical Schools having significant intakes of international students. There has been a significant increase in the number of Medical Schools in the United States of America and both North American and European Medical Schools are setting up branch campuses across the globe. As a result, there has been a significant increase in medical graduates worldwide, with increased numbers studying throughout the world, including Australia, Middle East and Eastern Europe.

With both the intake to its direct entry Medicine programme and its part ownership of *Penang Medical College,* the School is particularly exposed to the current volatility of the South East Asian market. Malaysia's economic difficulties and a proliferation of new medical schools has almost ended state funding of international medical studies. The private market is more difficult to target but is increasingly been pursued by both IUMC and PMC. Singapore has also become more competitive with the opening of Imperial Medical School there. Although we continue to receive strong Singaporean applicants, our advisors in the region have cautioned that this marketplace is becoming more competitive, and recommend that Irish Medical Schools also consider recruitment from Australia. Such recruitment would require organising internships in Ireland, as international medical graduates cannot currently avail of internships in Australia.

Some capacity exists to introduce international students to both the Radiography and the Biomedical, Health & Life Sciences degree programmes. Exploiting our strong international leadership in diagnostic imaging, it may be possible to introduce Graduate Entry Radiography or graduate entry to specialist imaging modalities. However, these have not yet been formally explored.

Postgraduate Residency Programmes

Although the number of US and foreign medical graduates has increased significantly in the past two years, there has, as yet, been no corresponding increasing the number of residency slots in the US, the traditional location for postgraduate medical specialty training. Both the US and Canadian governments have introduced increasing barriers to entry for graduates of foreign medical schools.

2. Organisation & Management

2.1. Overview

The School is a large and geographically dispersed unit with over 397 staff and 428 affiliated staff based at 9 principal locations (three in Belfield; six clinical sites) as well as a range of other clinical sites. It delivers 79 academic programmes (comprising 713 modules) to 2,465 students. The School is led by the Head of School / Dean of Medicine who chairs both a representative School Executive Management Committee which meets every 4-6 weeks and a smaller School Management Team which meets weekly/fortnightly. The Dean also chairs the School Programmes Board, to which a series of individual programme committees and sub-committees report. There are a number of additional committees and *ad hoc* working groups which report directly to the Head of School or via one of three Associate Deans. There are a number of associate business units which share staff with the School of Medicine, but which have separate organisational structures (NVRL, MBRS).

Figure 1   **Key School Organisational Structures**
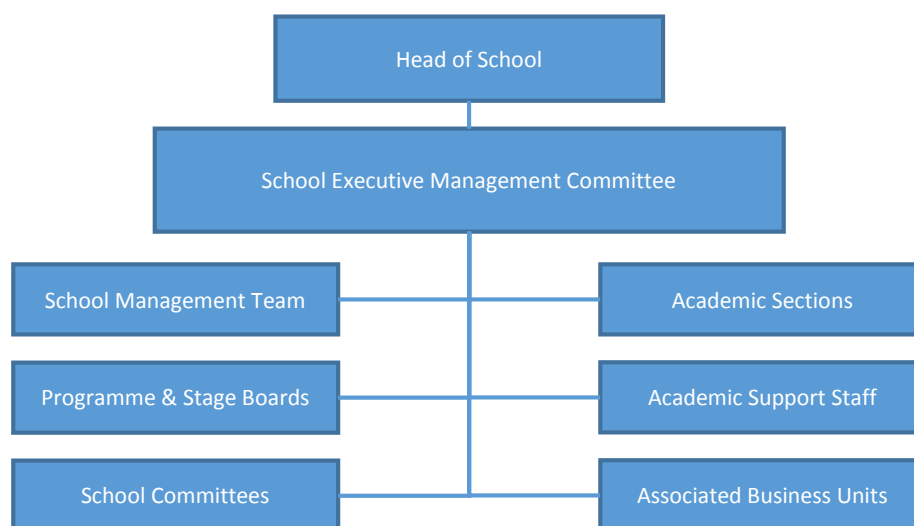
The School Executive Management Committee (School Executive) is a consultative forum comprising 18 representatives from all academic sections as well as the School's main research institute, the Conway Institute. The Medicine Intern Programme Director, the School's Director of Strategic Development, the Director, Health Science Programme Office and the College HR Partner are also members of this committee. The School Executive Management Committee meets on a 6 weekly basis and provides input and advice to the Head of School on policy development and strategic developments.

The School Management Team (SMT) represents a subset of the School Executive and comprises 9 individuals including the Head of School, three Associate Deans, Biomedical Sciences Section Leader, a Conway Research Leader, Director of Strategic Development, Health Science Programme Office Director and the School Office Manager. This group deals with day-to-day issues arising across the School and meets on a weekly or fortnightly basis. School staff are organised around a series of academic sections which are designed to integrate across subject areas and across geographical locations. There are currently six academic sections each comprising a Section Leader to whom academic staff report. This organisational structure has been in existence since 2008/2009. Academic support resource is generally aligned to these Academic Sections, which represent the fundamental management unit of the School.

Academic support staff (comprising professional, administrative and technical support) are deployed within defined teams aligned to the School's academic section structure. There are three School-level teams (School Office, UCD Medicine Research Office and Health Science Programme Office) which report to the Head of School and/or Associate Dean. Six Section-specific academic support teams are aligned to each of the six academic sections reporting to the Academic Section Leader (or Deputy Section Leader). For efficiency of administration, the Eccles (Mater-based) and Merrion (SVUH-based) teams are defined by geographical location. Both teams work closely to provide seamless administrative support to two academic sections which operate across both clinical sites. Similarly, the Women's & Children's Health Support team is a virtual team supporting academic activity across 4 clinical sites (Coombe, Crumlin, National Maternity Hospital, Temple Street).

Routine programme management for both undergraduate and graduate, taught and research programmes is conducted via a hierarchy of stage and programme committees which report to the Medicine Programmes Board chaired by the Dean of Medicine or Associate Dean for Programmes & Educational Innovation.

Figure 4   Principal Programme Governance Structures
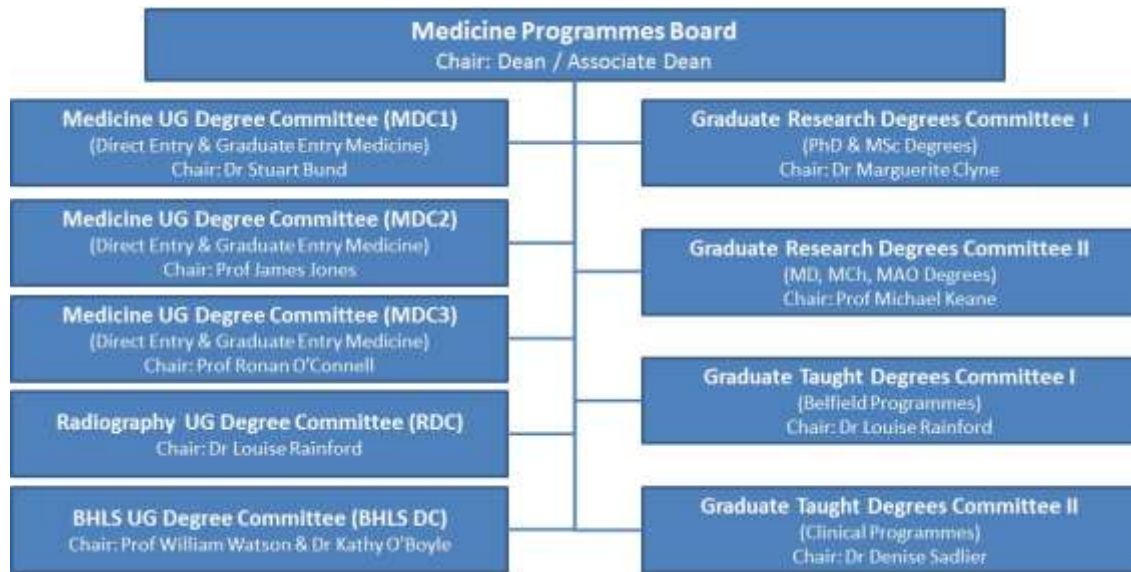
In addition, the Associate Dean for Programmes & Educational Innovation chairs a *Teaching &* Learning Strategy *Group* which reviews proposed new programmes and module changes, guides the School's educational strategy and education development initiatives including research in medical education.

The Associate Dean for Research & Innovation chairs a *Research Centres & Groups Committee* which comprises leaders of the School's various Research Centres and/or Research Groups. This committee guides the development and implementation of the School's research strategy and informs research investment priorities.

The School also operates a *Staff / Student Liaison Committee* as a forum to encourage student feedback and address any organisational or administrative issues arising.

2.2.   Academic Workload

Academic workload is managed by individual Section Leaders (in conjunction with Heads of Subject where relevant) and is generally guided by the School's academic workload model, which seeks to reconcile teaching commitments to large programme class sizes with the need to maintain strong research activity. Strategic research recruitment by Research Institutes and/or UCD Research has resulted in a number of professorial staff who remain outside of this formal academic workload management.

2.3.   Budget Management

The School's budget is determined by negotiations involving the Head of School and the College Principal supported by the Director of Strategic Development, the College Accountant and the College Director of Finance.   The School budget is set based on the School's multi-annual staff plan, programme revenue projections and University targets.

The Head of School retains budget authority for all major School expenses including student recruitment, refurbishment and capital development. Discretionary budget allocations are provided to Section Leaders based on an agreed formula which incorporates the number of academic staff, the number of modules coordinated and the number of student FTE's in these modules (as a proxy for education activity), and the number of graduate research students supervised (as a proxy for research activity).

Over the past 10 years, the School has consistently delivered revenue growth, has diversified its income streams, and has met or exceeded financial targets set by the University. However, there is widespread frustration that despite this performance, the School is consistently denied new or replacement staff resource to support new or expanding programmes even after increased revenue has been delivered. The University has repeatedly reneged on agreed School development plans and the constant changing of budget rules has discredited its finance function.

Also, there is a sense that School expenditure is multiply scrutinised or micromanaged (Section, School and College level), while significant resource commitments have been made by the College or University with little School input but with are ultimately charged to the School (e.g. major capital items, treatment of research funded staff, recruitment of strategic research hires).

The current budget model (which requires the equivalent of 2.5 times revenue growth to support incremental cost growth in subsequent years) is grossly unfair to profit-generating Schools that have prudently managed their financial affairs over many years. The School of Medicine has been severely damaged by the continuous re-drawing of budget targets and re-basing of budgets to a year of exceptional profit (2013/2014). The College and Central Support Units are incentivised to load exceptional charges on the School, as they receive 60% of any additional School revenue grow to meet its budget targets. This model acts as a considerable disincentive to further School growth.

2.4.   Communications

The line management structures (School Executive, School Management Team, Section Leaders) are the primary communication channels within the School. There are typically three 'All School' meetings per annum to which all staff (academic, academic-support and research staff) are invited however these are poorly attended. In addition, Sections are encouraged to hold regular meetings and informal gatherings. Some Sections also hold periodic Heads of Subjects meetings.

These communication fora are supplemented by formal communication via the School's website, a fortnightly e-newsletter to all staff (approximately 900 people) and targeted communications from the Head of School or School Office to subsets of the 'All School' list (e.g. academic staff, research staff, etc). The School has also selectively used social media (particularly Twitter and Facebook) to communicate more informally with the wider stakeholder community. These communications channels have been particularly well received. The School's website was nominated in four categories for the Irish web awards and one the 'Best Practice' award for its use of responsive web technology. Our twitter account has built an extensive and engaged community of followers and whereas our Facebook is used more for student and alumni engagement.

Not surprising for a School of its size and complexity, poor communications remains a persistently reported issue. There is a strong sense that communication is one-way (from Head of School or Section Leader to Staff), with only occasional feedback from individual staff members. Despite repeatedly seeking input on a range of items, staff feedback is characteristically low (as was evident during this Self-Assessment exercise). As student numbers have increased substantially over recent years without commensurate increase in staff headcount, our faculty and support staff are increasingly extended. Clinical staff are further challenged by increased clinical service loads and declining numbers of non-consultant hospital doctors. A number of key individuals and offices who might ordinarily be relied on to support informal communications are particularly stretched. School social events have tended to focus on key student engagements, with minimal opportunities for informal staff-staff interactions.

2.5.   Committee & Board Effectiveness

The School has surveyed the Chairs of each of its main committees, sub-committees and boards to evaluate their effectiveness. Each Chair was asked the following questions on their committees:

1. How frequently does the committee meet?
2. How many members are invited to take part?
3. How well attended are the meetings?
4. Are formal minutes or actions recorded?
5. Are students represented?
6. Who does the Committee report to?
7. Is there a formal review of the Committee functioning by the overseeing individual or group?
8. Has the committee reviewed its effectiveness?

Example :   Biomedical, Health & Life Sciences Undergraduate Degree Committee

Committee: **Biomedical, Health & Life Sciences Undergraduate Degree Committee**

Chair: Prof William Watson and Dr Kathy O'Boyle (SBBS)

Chair's Assessment:

> The committee meets every month of each academic semester 1 and 2 and as required during the summer semester. It is made up of 13 members representing the main subjects of the programme of Pathology, Physiology, Anatomy, Microbiology, Genetics, Biochemistry, Pharmacology and Clinical across the school of Medicine and School of Biomolecular and Biomedical Sciences. As well as a student advisor, there is also a student representative from each of the 4 stages.

> There is at least a 75% attendance across the committee. The committee is supported by a dedicated senior executive assistant who works with the chair to take the minutes which are actioned and distributed to the committee. The committee reports to the Medicine Programme board. The external examiner for the programme reviews the programme as a whole which would include the committee.

2.6.   Assessment of Committee Effectiveness

Ref.	Committee	Meeting Frequency	Number Invited	Typical Attendance	Records Kept	Student Reps	Reports to	Review by Oversight Group	Review by Committee
1	School Executive Management Committee	6 wks	20	50 – 75%	Y	N	HoS	Y	Y
2	School Management Team	2 wks	10	50 – 75%	Y	N	HoS	N	Y
3	Medicine Programmes Board	4 wks	20	> 75%	Y	Y	HoS	Y	Y
4	Biomedical, Health & Life Sciences UG Degree Cmtte	4 wks	13	> 75%	Y	Y	3	Y	N
5	Medicine UG Degree Committee 1 (MDC1)	4 wks	21	50 – 75%	Y	Y	3	N	Y
6	Medicine UG Degree Committee 2 (MDC2)	4 wks	20	50 – 75%	Y	Y	3	N	N
7	Medicine UG Degree Committee 3 (MDC3)	6-8 wks	18	50 – 75%	Y	Y	1	N	Y
9	Graduate Research Degrees Committee 1 (GRDC1)	4 wks	10	25 – 50%	Y	N	HoS	N	N
10	Graduate Research Degrees Committee 2 (GRDC2)	4 wks	6	> 75%	Y	N	ACCE	Y	N
11	Graduate Taught Degrees Committee (GTDC)	1 per semester	25	50 – 75%	Y	N	3	N	N

3. Staff & Facilities

3.1. Overview

The UCD School of Medicine employs approximately 425 staff members (372 FTE's) comprising 175 academic staff, 157 Research staff, 93 support staff members.

Table 1   Staff Headcount & FTE's by Staff Type

	Headcount	*FTE's*
Academic Staff (including Clinical Tutors)	175	146.7
Researchers & Research Support Staff	157	139.4
Support Staff (Administrative & Technical)	93	85.8
Total Staff	*425*	*371.9*

Table 2   Academic Staff by Academic Rank

	Headcount	FTE's
Professor	45	34.7
Associate Professor	3	1.7
Senior Lecturer	26	21.2
Lecturer	54	46.3
General Practitioners	7	3.3
Clinical Tutor	40	39.5
Academic Total	*175*	*146.7*

Table 3   Research Staff by Staff Type

	Headcount	FTE's
Research Fellow	30	26.8
Post Doctoral Fellow (PD2)	16	16.0
Post Doctoral Fellow (PD1)	35	33.9
Research Scientist	15	13.0
Laboratory Manager	3	3.0
Research Assistant	15	14.2
Research Nurse	27	18.8
Clinical Tutor	5	4.0
Research Administrators	11	9.7
Total Research Staff	*157*	*139.4*

Table 4 **Academic Support Staff by Staff Type**

	Headcount	FTE's
Director	2	2.0
Administration Manager	21	20.6
Senior Executive Assistant	32	30.1
Executive Assistant	14	12.5
Research Administrator	1	1.0
Graduate Demonstrator	2	2.0
Research Scientist	4	3.1
Technologist	3	2.5
Senior Technical Officer	7	6.0
Technical Officer	3	3.0
Laboratory Attendant	4	3.0
Support Staff Total	*93*	*85.8*

The School's research and teaching mission is additionally supported by 428 adjunct clinical staff comprising hospital consultants, general practitioners, radiographers and imaging specialists based at 19 hospitals and over 100 primary care centres across the coutry. In addition, there are 11 on-clinical adjuncts and visiting academic staff associated with the School.

Table 5 **Clinical Adjunct Staff**

	Headcount
UCD Clinical Professor	9
UCD Associate Clinical Professor	60
UCD Senior Clinical Lecturer	132
UCD Clinical Lecturer	227
Total:	*428*

Table 6 **Non-Clinical Adjunct & Visiting Academics**

	Headcount
Adjunct Professor	1
Adjunct Associate Professor	2
Adjunct Senior Lecturer	2
Adjunct Lecturer	1
Visiting Academic	5
Total	**11**

3.2. Staff Profile

Gender Profile

Gender balance across the School (62% Female; 38% Male) comprises Academic (49% Female ; 51% Male), Research Staff (67% Female ; 33% Male) and Support Staff (80% Female; 20% Male).

Table 7   Gender Profile by Staff Type

Gender	Female	Male	Total
Academic Staff (including Clinical Tutors)	85	90	175
Researchers & Research Support Staff	105	52	157
Support Staff (Administrative & Technical)	74	19	93
Total	*264*	*161*	*425*

Figure 5   Academic Staff by Rank & By Gender
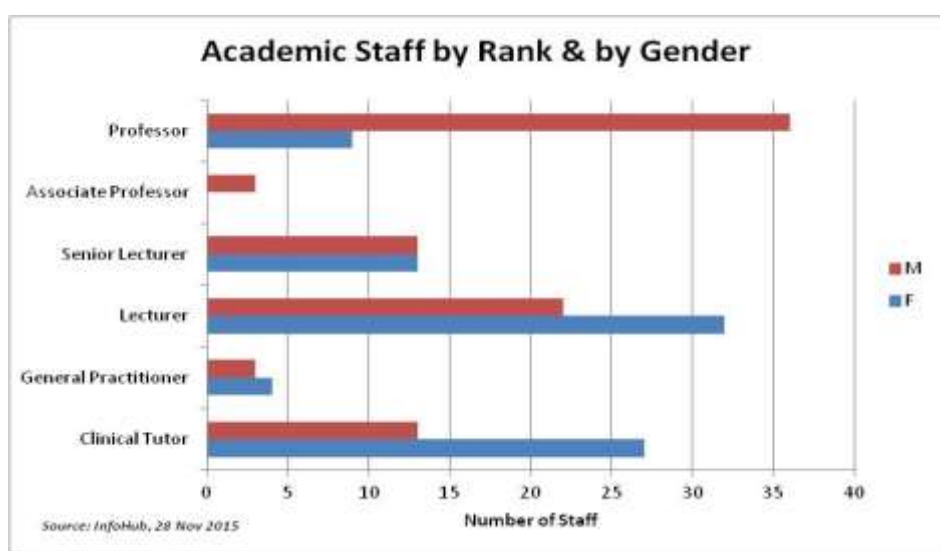
As with the University profile, males occupy a larger proportion of senior academic staff positions relative to their female colleagues. Only 20% of professorial positions are held by women while they hold 45% of senior lecturer posts. There is a significantly higher proportion of females among research (62%) and academic support roles (78%).

Age & Experience

Reflecting the (early) retirement of senior personnel in recent years and their replacement at junior ranks, the School has a young profile with the average age falling by 5 to 41 years. 5% of current staff will reach retirement age (65 years) within the next 5 years.

Figure 6   Staff by Age & By Gender
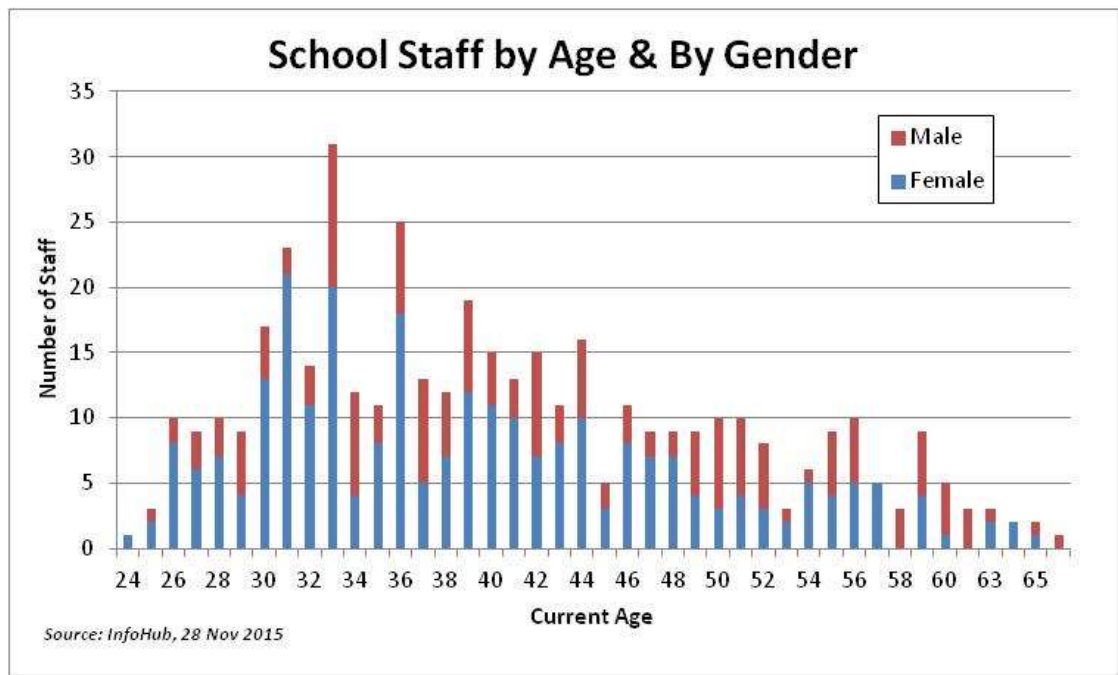
Over 40% of academic and support staff have worked in UCD for more than 10 years. Excluding clinical tutors (who generally are employed for less than 3 years as they progress through clinical training), academic staff have worked in UCD for on average 11 years and 85% of them have been employed for more than 5 years.

By contrast, 80% of research staff have been employed for less than 5 years in UCD reflecting the transient nature of research funded staff (and particularly research support staff). 50% of researchers have been employed for more than 5 years whereas only 20% of research support staff have been employed for more than 5 years.

Employment Status

Reflecting the University's employment policies over recent years and the large research faculty, 259 staff (61%) are employed on temporary contracts representing a significant staff retention risk for the School. 41% of academic staff (including clinical tutors) are employed on temporary contracts and 37% of Lecturers are employed on temporary contracts. Hence over half of our frontline teaching cohort are employed on temporary contracts. Many of these 'temporary staff' are in fact recent recruits to continuing posts, as a result of the application of the Employment Control Framework which has prevented appointment on an indefinite basis.

Nationality

26% of School staff have a nationality other than Irish, and there are over 35 nationalities represented among the School staff.

3.3. Staff Development, Planning, Recruitment

Staff Induction

All staff joining the School of Medicine are encouraged to participate in the Induction Programme and Learning and Development courses organised by the University. New staff are also supported by their direct superiors and other more experienced staff members. Following the initial employment period, the staff development processes may vary depending on the type of staff and their location.

In 2013, the School introduced a formal 2 day induction programme for our Special Lecturers/Clinical Tutors, a cohort of staff which turnover frequently as they progress through non-consultant hospital doctor training programmes. This has proven extremely useful in developing a sense of community among the 60 tutors who are deployed across multiple sites.

The *UCD Radiography & Diagnostic Imaging* group host formal training and bi-annual update meetings with their National Practice Tutors, which is an important forum for maintaining dialogue with the frontline training staff.

Staff Plan

The School maintains a rolling 5-year staff plan, which forms the basis for our annual budget submissions. When a vacant post occurs, the recruitment process is indicated by the Section Leader and supported by the School Office and the University HR. The submission for a new or replacement post is reviewed and approved by the Head of School and College Principal supported by the School Office Manager and Director of Strategic Development (School Review) and by the College Finance Manager and the HR Partner (College Review).

Figure 7   **Summary of Staff Types**

3.4. Facilities

The School staff are based at ten principal locations, on the Belfield campus, at our affiliated teaching hospitals and across our clinical training network. UCD is located on a beautiful, leafy 133 hectare campus close to Dublin's city centre, which provides a mix of academic facilities, research institutes, libraries and archival collections, enterprise space, student villages, and sports and recreational facilities.

Located in the UCD Science District, the UCD Health Sciences Centre is home to the three constituent Schools of the College of Health Sciences: Medicine, Nursing Midwifery and Health System, Public Health, Physiotherapy and Sports Science. The Centre also encompasses the UCD Health Sciences Library and the Medical Bureau of Road Safety. The UCD Health Sciences Centre is connected to both UCD Conway Institute for Biomolecular and Biomedical Research via the UCD Charles Institute of Dermatology and UCD Systems Biology Ireland.

Completed in 2007, the 16,000 m^2 UCD Health Science Centre building is designed to support interdisciplinary education, research and social interaction whilst preserving a degree of identity for each discipline. Medicine, Nursing, Radiography and Physiotherapy groups are arranged in three wings around the central modern Health Sciences Library. Lecture theatres, ranging in capacity from 40 to 320 seats are situated on the ground floor, along with an open access computer suite, the IT services centre as well as a social space and restaurant facilities. Clinical skills teaching wards and laboratories are located on the first floor grouped around the central library atrium with small group classes, tutorial, meeting rooms and office arranged around the periphery, a design which provides natural light and ventilation for nearly all areas. Despite the scale and quality of facilities available for teaching on campus, the substantial growth in the School's educational activity means that continued development and investment in new facilities is a priority.

Undergraduate teaching and graduate research laboratories are positioned on the second and third floors towards the centre of the building surrounded by a range of offices and meeting rooms. Clinical areas and specialist laboratories are available to students and staff across all schools and the UCD School of Medicine has responsibility for the following:

- clinical skills laboratory and simulated clinical environments
- anatomical dissection facility
- anatomy and pathology specimen library
- 120 seat computer aided learning suite
- multidisciplinary biomedical teaching laboratory
- over 1300 m^2 of wet and dry research spaces providing more than 200 research work stations
- Radiography suite with CR, DR and film screen acquisition, and associated dosimetry and printing capability
- multi-modality simulation suite with CT, MRI, Ultrasound, RIS-PACS management technologies and user eye-tracking facility
- PACS laboratory and research space, LAN and web accessible

Throughout the building, the multidisciplinary approach to education and research is strengthened by the presence of cutting-edge audio visual and computing equipment and services. The simulated wards and clinical skills areas contain ceiling mounted digital video systems that allow either student or educator led recording of patient interview, examination and investigation. This user-friendly

system is ideal for both autonomous and directed student learning. In addition, the building has full wireless network coverage.

The *Radiography & Diagnostic Imaging* area, unique to Ireland, contains a networked Picture Archive and Communication System (PACS) that allows storage of, and access to, diagnostic images from all diagnostic and biological imaging modalities. This system is aligned to the national PACS network development across all main acute hospitals under the HSE's NIMIS project and as such offers a mirror image of technology across clinical departments in the public health sector. This has clear advantages in terms of educating all healthcare professionals on the equipment that they will use within the hospital environment but also has considerable research potential. A teleconference equipped lecture theatre permits simultaneous interactive lecture broadcast on campus and across several clinical education sites.

The University Estates Services Unit provides the general day to day management and maintenance support to the building equipment and facilities. In 2014 the Health Sciences teaching spaces were upgraded and new audio visual equipment was fitted. The specialist AV technicians who are providing audio visual support during the term are managed by the University Campus Services team.

3.5.   Clinical Campus

Our clinical partners include Ireland's best acute, specialist and general hospitals as well as a nationwide primary care network. Our students are supported by the country's largest clinical faculty comprising over 350 consultant physicians, 450 general medical practitioners and 75 radiographers or medical imaging staff.

Figure 8   Key Clinical Training Sites
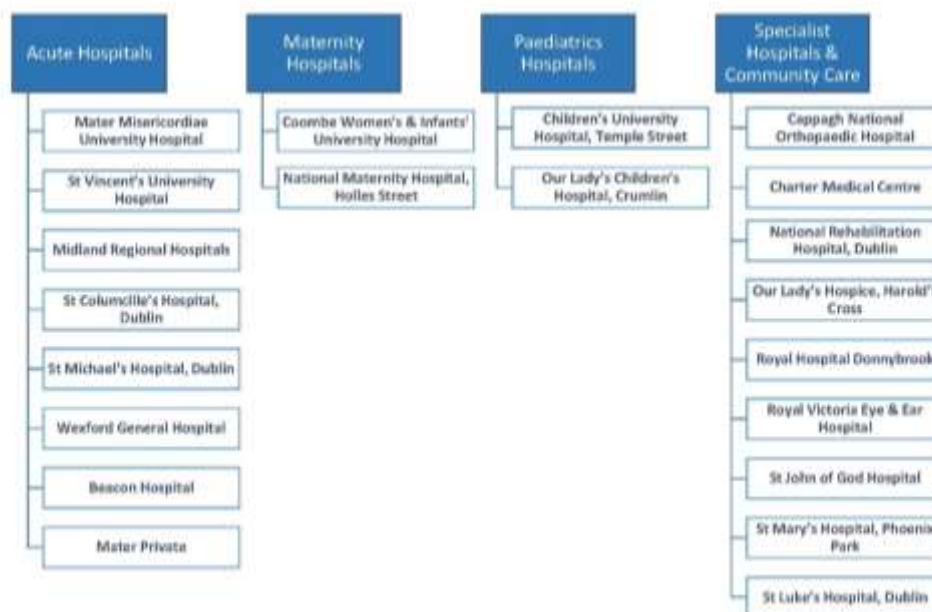
Although the above demonstrates the normally recognised UCD affiliated hospitals, *UCD Radiography & Diagnostic Imaging* extends beyond this clinical network and enjoys student placements and relations with hospitals nationwide including the Adelaide & Meath/National Children's Hospital, Beaumont Hospital, Cork University Hospital, St James' Hospital, University Hospital Galway and University Hospital Limerick.

4. Teaching, Learning and Assessment

4.1. Key Changes Since the Last Quality Review

Since the last quality review, there have been a number of significant changes to the programme portfolio, the external accreditation processes and the academic governance of the School.

Programme Portfolio Changes

The School has added a Graduate Entry to Medicine programme (GEM) and, through the process of modularisation, has added a number of additional exit and entry routes to its existing undergraduate and graduate programme portfolio (See Table 8).

Additions to the Graduate Taught programme portfolio tend to be niche programmes, with small credit volumes, and small numbers of students. These are designed to capitalise on existing expertise within the School and its associated clinical sites. They are in line with patient / professional needs, and strongly drive the reputation of both the School and University. Table 8 demonstrates our current graduate taught programme portfolio, and notes those programmes which have been introduced since the last quality review.

External Accreditation Process Changes:

With the advent of Graduate Entry to Medicine (GEM), the School has been through a series of annual external accreditations through the Irish Medical Council. The Medical Council base their accreditation processes on the World Federation for Medical Education standards, in addition to their own identified *Domains of Good Professional Practice*. Both our Undergraduate Entry to Medicine (UEM) and Graduate Entry to Medicine (GEM) programmes have been assessed against these adjusted criteria in the last five years with key outcomes summarised in Table 16.

In addition, our international Penang Medical College programme has been reviewed by both the Malaysian Medical Council and the Irish Medical Council in the last five years (2010 and 2012 respectively) and has undergone a formal UCD Quality Review in 2013/2014. The Radiography Programme external accreditation processes have also changed. In the past, the process was administered through the recognised professional body, the *Irish Institute of Radiography & Radiation Therapy* (IIRRT), but since then, the government have launched a new *Health and Social Professions Council* (CORU) that regulates all human health professions outside of Medicine, Nursing and Pharmacy. Within CORU, radiographers must now register through the Radiographers Registration Board who are also responsible for reviewing and accrediting UCD's national Radiography Programme. The Programme, Section, School and University were successfully reviewed earlier in 2015. Separately, the MSc in Computed Tomography and MSc in Magnetic Resonance Imaging programmes have been accredited by IIRRT.

Academic Governance Changes Related to Teaching and Learning

Many of the same principles regarding programme and teaching and learning reporting lines have been maintained. Within the School, the Medicine Programmes Board remains the overarching mechanism for programme governance, but a number of changes in the committees reporting into the Medicine Programmes Board have taken place.

For Medicine, because there are now two programmes, with the final two years of both programmes being common, there are now three committees reporting into the Medicine Programmes Board; Medicine Degrees Committee 1 (first 3.5 years of the Undergraduate Entry to Medicine Programme), Medicine Degrees Committee 2 (first 2 years of the Graduate Entry to Medicine Programme) and

Medicine Degrees Committee 3 (last 2 to 2.5 years of both Medicine programmes). Other changes include a division of the research degree committees into Clinical Research Degrees Committees and Science Research Degrees Committees. The Radiography Undergraduate Degree Committee (RDC) has also been established since the last quality review exercise.

To improve effectiveness, the Graduate Taught Programme committee structure has also split into Belfield Campus-based Taught Graduate Programmes (generally Legal Medicine, Radiography/Medical Imaging and Healthcare Informatics) and Clinical Campus-based programmes (generally in medicine, clinical research and psychotherapy). Additional committees include the Biomedical, Health and Life Science Degree Committee and Emergency Medical Science Degrees Committee (Diploma, Graduate Diploma and Masters programmes generally aimed at paramedic education and training, accredited through the Pre-Hospital Emergency Care Council (PHECC).

4.2. Educational Strategic Priorities

In addition to the programme structure, the School identified the need for a Teaching and Learning Strategy Group with broad representation from across the School. The terms of reference of this group are available on request, but to summarise, the group considers new module and programme development and makes recommendations

- through the Associate Dean for Programmes and Educational Innovation to both the Programme Board for matters of academic governances and pedagogy and
- to the School Management Team / Executive for matters relating to finance, resource and infrastructure.

The Group is supported by the School's Educational Development Team (see below).

Figure 9   **School's Education Development Team**
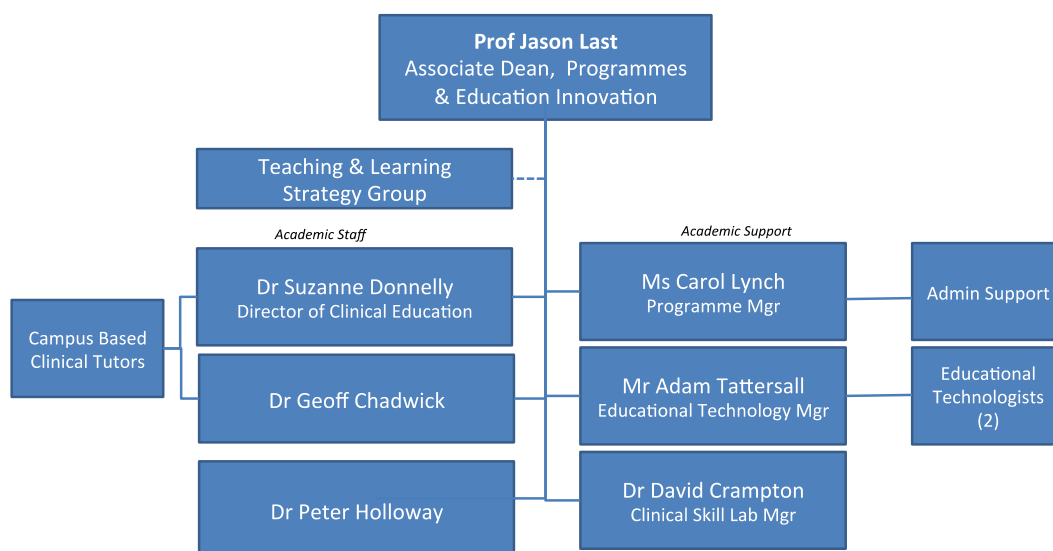
Between the Medicine Programmes Board and its associated Committees, the Section leaders and the TLSG, the School has continued enhance and innovate within its taught programme portfolio which has grown by 25% over the past five years, with a concomitant increase in income to the University. Our 49 programmes comprising over 713 active modules are delivered to over 2,500 students (1,800 FTE's) across more than 25 locations, under the direction of 175 academic and 466 adjunct staff. Our

programmes continue to enjoy strong endorsement by our graduates, employers and external accreditation bodies.

The Schools immediate focus is to continue to deliver this large portfolio of specialist training to the highest academic and professional standards, maintaining academic coherence whilst supporting effective programme development that embraces educational best practice. This is increasingly difficult as student numbers grow but teaching staff numbers do not. This issue is further compounded by the University-wide narrative that has prioritised research. A major educational priority is to maximally support academic staff who wish to invest the majority of their time in teaching & learning. We encourage the University to reconsider promotion criteria and/or establish a senior teaching career pathway to recognise the educational imperative that fuels our research ambition.

The recognition of teaching achievement will significantly accelerate educational strategic objectives. Adjusting the balance between small and large group instruction in the early years of our Medicine programmes has been identified as a critical strategic objective and a major focus for the School in the coming years. The early clinical stage (Clinical 1) is being redesigned to improve our students' confidence and preparedness for clinical practice and to make optimal use of the full clinical training network beyond our two principal acute teaching hospitals. We will deliver a series of activities that will act as a *call to action* to staff and students to '**make a difference**'. We will continue to collaborate with patient advocate groups to ensure that our students are attuned to the needs of the population they will serve.

The School has five strategic objectives in the remit of education development for the period 2015 – 2020 ;

- To be nationally and internationally recognised for our strengths in module design and programme development that address the healthcare needs of society.

- To empower staff to be passionate about education, and to support them in their ambitions to enhance teaching & learning

- To have demonstrated an ability to enhance and grow high quality educational products in response to changing societal needs

- To ensure that every student in each programme will be supported in reaching their individual potential.

- To ensure that our clinical partners are fully integrated as part of our academic community.

4.3. Programme Portfolio

The School offers five undergraduate programmes of study and a further 44 taught postgraduate programmes in multiple offerings across a number of subject areas.

Table 8   Taught Programmes Portfolio (2015/2016)

Award	Programme	NFQ Level
Medicine	MB BCh BAO (Medicine)	8
	MB BCh BAO(Medicine Graduate Entry)	8
BSc	BSc (Biomedical Health & Life Sciences)	8
	BSc (General Biomedical Science)	8
	BSc Medical Science	8
	BSc Radiography	8
	BSc (General Health Science)	8
Diploma	HDip Psychotherapy Studies PT	8
	Diploma in Emergency Medical Science	7
Professional Certificate	Prof Cert IV Cannulation & Administration	9
	Prof Cert Forensic Radiography	9
	Prof Cert Radiation Safety	9
	Prof Cert IOFB Screening	9
	Prof Cert Dual Energy X-ray Absorptiometry	9
	Prof Cert Child Protection	9
	Prof Cert Non Accidental Injury	9
	Prof Cert Paediatric Imaging	9
	Prof Cert Early Pregnancy Ultrasound	9
	Prof Cert Radiography Imaging Systems/Picture Archive & Comms System	9
	Prof Cert Paediatric Imaging	9
Graduate Certificate	Grad Cert Sexual Assault FE PT	9
	Grad Cert Clinical & Translational Research PT	9
	Grad Cert Clinical & Translational Research FT	9
	Grad Cert Magnetic Resonance Imaging FT	9
	Grad Cert Mammography FT	9
	Grad Cert Obstetric Ultrasound PT	9
	Grad Cert Fertility Ultrasound PT	9
	Grad Cert Paediatric Radiography PT	9
	Grad Cert Interventional Imaging and Practice PT	9
	Grad Cert Computed Tomography	9
	Grad Cert Medical Imaging	9
	Grad Cert Ultrasound	9
	Grad Cert Radiology Information Systems PT	9
Graduate Diploma	Grad Dip Child Mental Health FT	9
	Grad Dip Computed Tomography FT	9
	Grad Dip Magnetic Resonance Imaging FT	9
	Grad Dip Medical Imaging	9
	Grad Dip Ultrasound	9
	Grad Dip Healthcare Informatics (Sept) FT	9
	Grad Dip Dermatology FT	9
	Grad Dip Emergency Medical Science FT	9
	Grad Dip Emergency Medical Science (Advanced Paramedic) FT	9
	Grad Dip Forensic Medicine PT	9
	Grad Dip Risk Mgt & Quality PT	9
Master of Science	MSc Computed Tomography FT	9
	MSc Magnetic Resonance Imaging FT	9
	MSc Mammography FT	9
	MSc Healthcare Informatics (Sept) FT	9
	MSc Healthcare Informatics (Sept) PT	9
	MSc Ultrasound FT	9
	MSc HC Risk Management & Quality (May) FT	9
	MSc Emergency Medical Sciences (Advanced Paramedic) FT	9

Award	Programme	NFQ Level
	MSc Group Analytic Psychotherapy PT	9
	MSc Child Art Psychotherapy PT	9
	MSc Clinical & Translational Research PT	9
	MSc Medical Imaging PT	9
	MSc Systemic Psychotherapy PT	9
	MSc Psychanalytic Psychotherapy PT	9
	MSc Forensic Medicine	9

4.4.   Undergraduate Programmes in Brief

Undergraduate Entry to Medicine (MB BCh BAO)

Undergraduate Entry to Medicine (UEM) is a six-year programme which progresses from Science through Medical Science to Clinical based modules. Entry is through CAO on the basis of moderated School Leaver Points combined with a Health Professions Admissions Test (HPAT) for EU students and through multiple pathways for international students.

Horizontal integration is apparent throughout, with a modest clinical vertical integration, increasingly through patient educators on campus and community-based practice. During the final two years, students are fully immersed in our clinical network. The main hospitals associated with our programme are St Vincent's University Hospital and the Mater Misericordiae University Hospital. In addition there are more than 20 other training hospitals and over 100 primary care practices that facilitate learning.

Some international students gain advanced entry to the second year of this programme. No Irish or EU students are permitted advanced entry unless they can demonstrate that they have covered the equivalent material in a third level degree programme elsewhere. If applicants have spent one year in a science degree programme (or equivalent) and then apply through the CAO for Medicine, they are exempted year one of the UEM programme.

Penang Undergraduate Entry to Medicine (MB BCh BAO)

The University, alongside the Royal College of Surgeons in Ireland, own a medical college in Malaysia called Penang Medical College (PMC). Students from Malaysia, whether recruited for our full UEM programme or for the PMC UEM programme, undertake five years of medical education which equate to the final five years of the current UCD UEM programme. In the PMC UEM programme, the students enter our second year, stay for 2.5 years, and then return to Penang for a further 2.5 years of clinical education. At the end of the programme, they are awarded an NUI MB, BCh, BAO degree. UCD and RCSI have systems in place to ensure that there is adequate educational oversight of the clinical education in Penang to assure an equivalence of degree. This includes our educators travelling to Penang, lead examiner exchanges, and participation in a joint Academic Executive, a joint Academic Council and a joint final Examination Board.

Graduate Entry to Medicine (MB BCh BAO)

UCD Medicine Graduate Entry (GEM) is a four-year programme which shares its final two years with the UEM programme. Entry for EU students is through the CAO on the basis of a 2:1 honours degree and a competitive GAMSAT. Two-thirds of the modules in the first two years are bespoke to the GEM programme. These modules are often discipline-based rather than horizontally integrated, and the integration is instead at a semester level. For example, in semester two of the programme, the students will take modules in parallel that cover the anatomy, physiology, pathology and pharmacology of the cardiovascular and respiratory system. This approach may inform future changes

in the UEM. The programme also has primary care, clinical skills and problem based learning exposure in its first two years.

BSc Radiography

The Radiography Degree Programme is the only Radiographer training programme in the State and is delivered by *UCD Radiography & Diagnostic Imaging* Section, which is the national training centre for graduate imaging training programmes. Entry is through the CAO on the basis of school leaver examination points with various pathways for international students. It is a four-year programme, which aims to develop graduates who are patient-centred, competent and safe diagnostic imaging practitioners with a strong professional identity and understanding of their role in the wider healthcare context and their contribution as part of a multi-disciplinary team. The early programme introduces the scientific basis of radiographic practice and progresses to clinical practice modules and research in the later years. Clinical placements run from the first year with large clinical placement modules in Years 2 through Year 4 of the programme.

BSc Biomedical, Health & Life Sciences (BHLS)

The BHLS programme aims to produce graduates that will be capable of spanning the gap between laboratory-based and clinical research. Entry is through the CAO on the basis of school-leaver examination points. The programme is of four-year duration and starts with basic science, progresses through biomedical sciences and culminates in a research experience cognate to the student's interests. The programme is a collaboration between the School of Medicine and the School of Biomolecular & Biomedical Science and benefits from a significant number of optional modules which allow the students to build a programme that aligns with their key interests and research ambitions.

BSc Physiology

The four-year level eight Physiology degree programme is a collaboration between the School of Medicine and the College of Science. Entry is through a non-denominated Science Programme route on the basis of school leaver examination points. The first two years are chiefly College of Science based modules, and the final two years are chiefly physiology taught and research modules that are delivered by the School of Medicine. The programme is not governed by the Medicine Programmes Board but rather through the Science Programme Board.

Diploma in Emergency Medical Science

The Diploma in Emergency Medical Science (Paramedic Programme) is run jointly by HSE National Ambulance Service College and the UCD School of Medicine. The aim of the Dip EMS (Paramedic) course is to provide the level of education and training necessary for modern emergency medical care providers to become safe, competent and effective practitioners in the pre-hospital environment. This course develops a sound theoretical base to support the student's competencies in clinical decision-making, patient assessment, clinical care and professional practice. Entry to this programme is not via the CAO, as the students first need to be employed within an ambulance service / equivalent. The course also serves as a foundation for further professional study to the Graduate Diploma in EMS, MSc (Advanced Paramedic) and MSc (immediate Care) programmes. An undergraduate degree programme (BSc in Emergency Medical Science) is under development with a planned for launch in 2017.

4.5.   Taught Graduate Programmes

Table 9   Graduate Taught Programmes Portfolio

Programme	Prof Cert	Grad Cert	Dip/Grad Dip	MSc
Radiography & Diagnostic Imaging	10	7	2	5
Psychological Health			2	4
Legal Medicine		1	2	2
Emergency Medical Science			2	2
Clinical Research		2		1
Other Medicine Programmes		1	2	2

Taught graduate programmes in *Radiography & Diagnostic Imaging* are designed to provide professional development opportunities for radiographers both national and internationally. They tend to allow specialisation in one of a number of domains of diagnostic imaging including Computer Tomography, Magnetic Resonance Imaging, Interventional Radiography, Information and Archive Systems in addition to multidisciplinary courses, for example in radiation safety and obstetric ultrasound. These programmes continue to grow both in student numbers and in variety.

The most recent programme, *MSc in Child Welfare and Protection*, due to commence in September 2016, is a collaboration between the Schools of Medicine, Nursing and Social Science. As many of our imaging programmes cross disciplines (e.g. nursing, midwifery, radiotherapy) and cross industry sector (e.g. industrial radiation, radiology communication, PACS Administration), we believe that there is scope for further programme expansion.

The *Radiography & Diagnostic Imaging* group has exploited its international connections and collaborations to develop foreign language versions of its existing online programmes (e.g. a Portuguese version of the Radiation Safety programme has been developed; Italian language versions of its Safe Computed Tomography has also been created.) These programmes also position the Section strongly to develop internationally accessible educational offerings to support Continuous Professional Development (CPD) with online delivery. Modest investment by the School has allowed the section to produce high quality e-learning programmes.

Psychological health programmes span psychiatry and psychotherapy based disciplines aimed at both adult and child mental health. Over the years, several different types of psychotherapeutic practice have become prevalent within the State, and UCD has developed programmes in line with these practices including psychoanalytic, group analytic, systemic (or family) and child art psychotherapy. In addition, our child psychiatry team have developed a programme in child mental health. This particular group of courses is under current review by the School. The domains are becoming state regulated through CORU and it is likely that each of the programmes will need to adapt over the next three to five years in order to maintain Irish and/or European accreditation. The programme leads are committed to working together despite their quite separate ideologies and are currently exploring synergies in joint teaching, mutual recognition of research modules, doctoral opportunities and in shared human and physical resources.

The legal medicine associated programmes are aimed at health, legal, forensic and law enforcement professionals and include the subjects of healthcare risk management and quality, forensic medicine and sexual assault assessment. Leadership within subject of Forensic and Legal Medicine in the School have also developed short programmes aimed at training Gardaí in competencies associated with drug and alcohol testing.

Clinical and translational research is becoming the leading domain associated with the medical and clinical community within the School. The programmes are developed and lead through UCD Clinical Research Centre and aim to develop clinical trials and translational research knowledge and competencies within the health professional and scientific communities. Some of the programmes have developed through strong links with industry.

Other successful programmes within the taught graduate programme portfolio include healthcare informatics (both diploma and masters level), a graduate diploma in dermatology and graduate certificates in obstetric ultrasound/fertility ultrasound. The latter is undergoing development in 2015/16 in preparation for potential launch at Penang Medical College.

4.6. Student Intake

All undergraduate programmes (with the exception of the Emergency Medical Science programmes) take in Irish/EU students through Central Applications Office (CAO) entry, and international students by a variety of direct and agent-led routes. Admission numbers, nationalities and gender profile are demonstrated in the charts below. Total registration numbers over the last five years in our various taught graduate programmes are represented in a chart format also. The total number of students in taught graduate programmes has fluctuated over the years, explained by changing HSE funding models for graduate programmes, an economic recession and partly by some programmes admitting students to 2 year MSc programmes every second year where the first year of the programme is also a certificate or diploma entry / exit route.

Programme Intake - All Medicine Programmes (UEM + GEM + PMC)
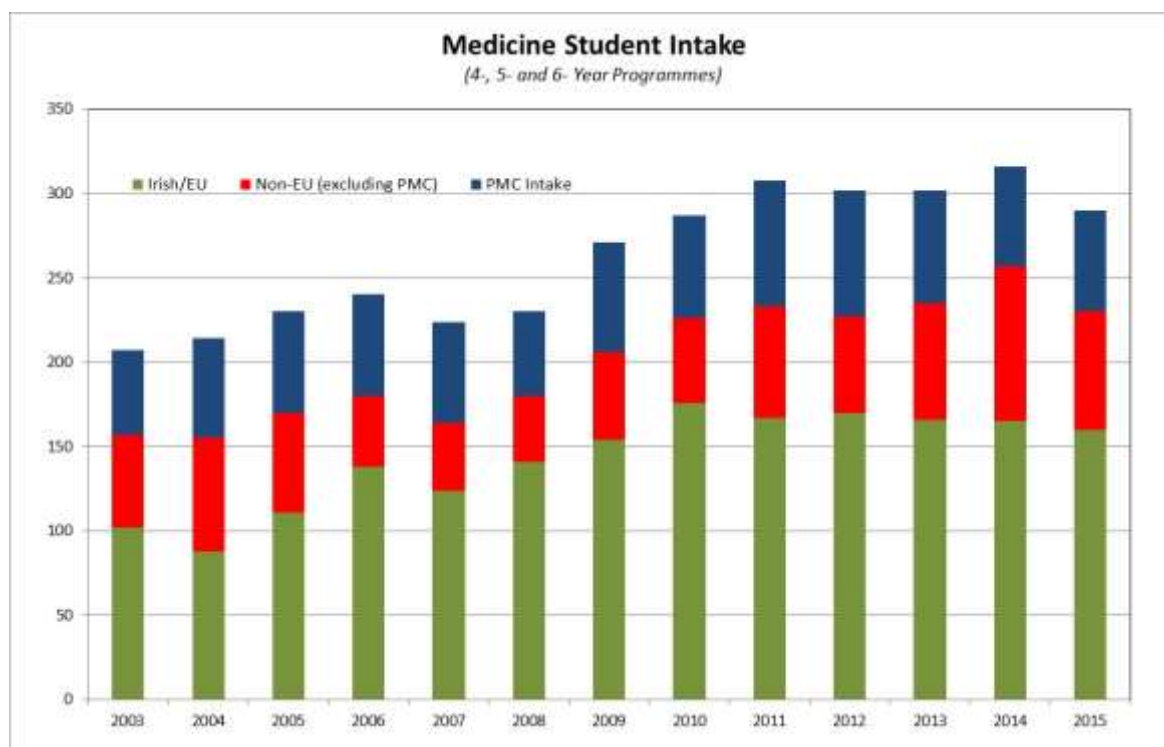
Programme Size – Direct Entry Medicine + PMC (Stages 1-3)
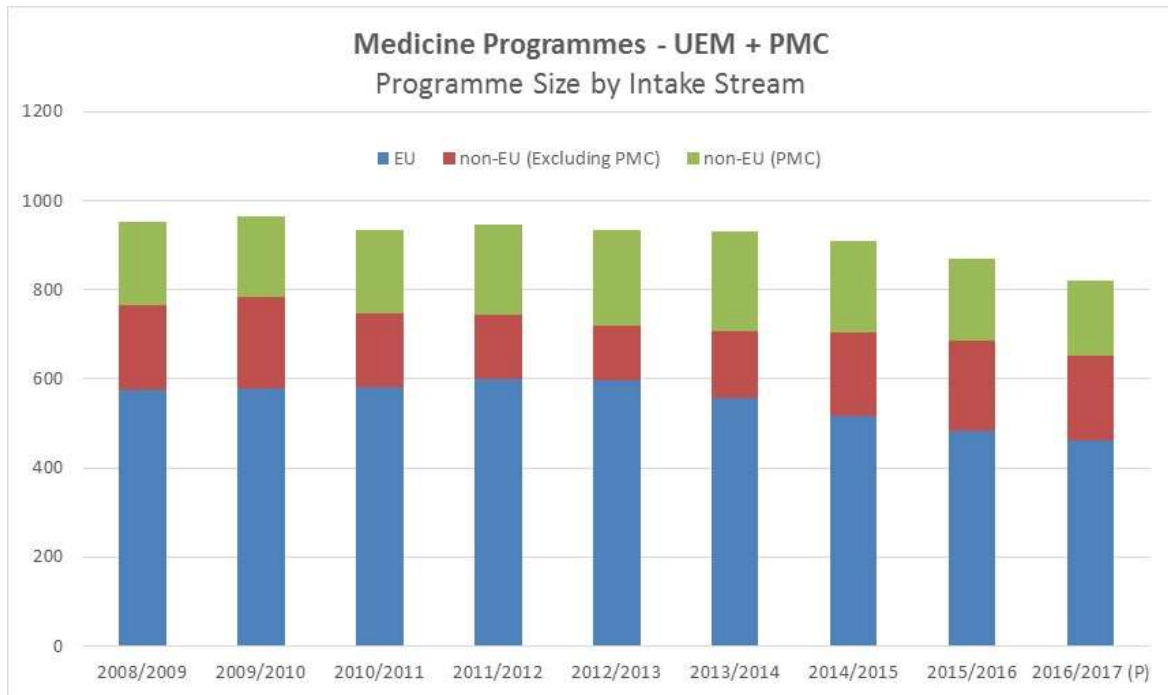
Programme Size - Biomedical, Health & Life Sciences
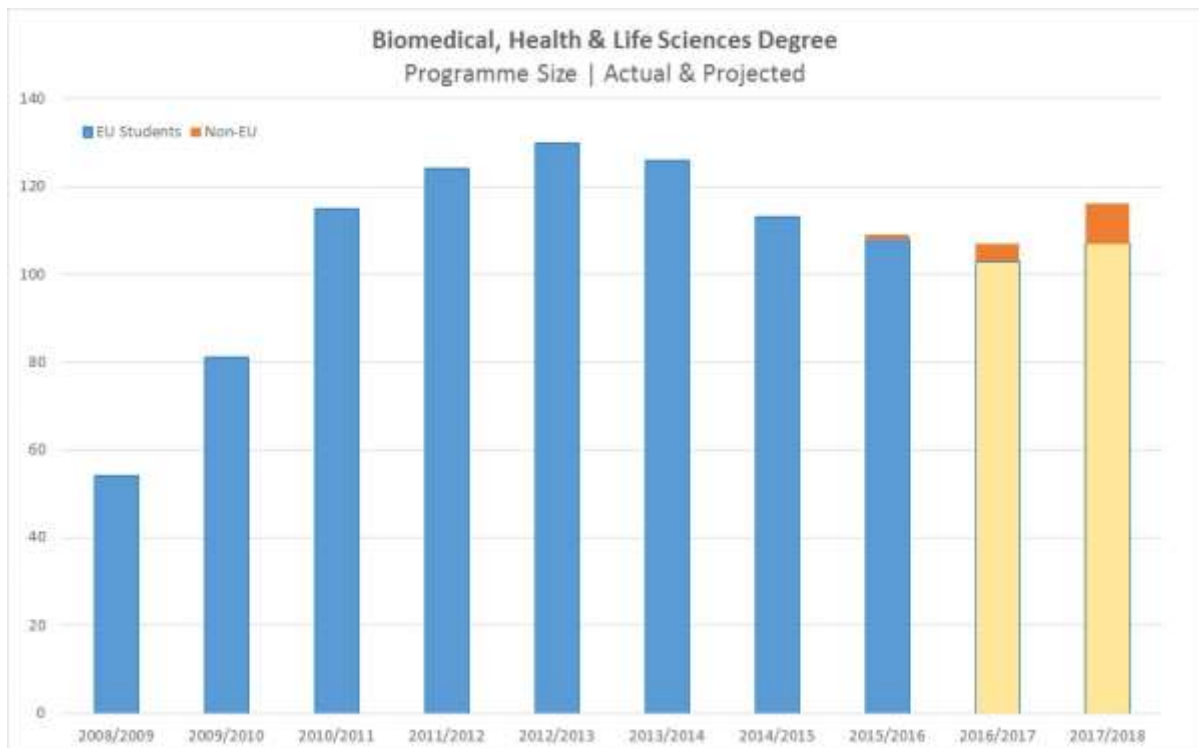
Programme Size – Radiography
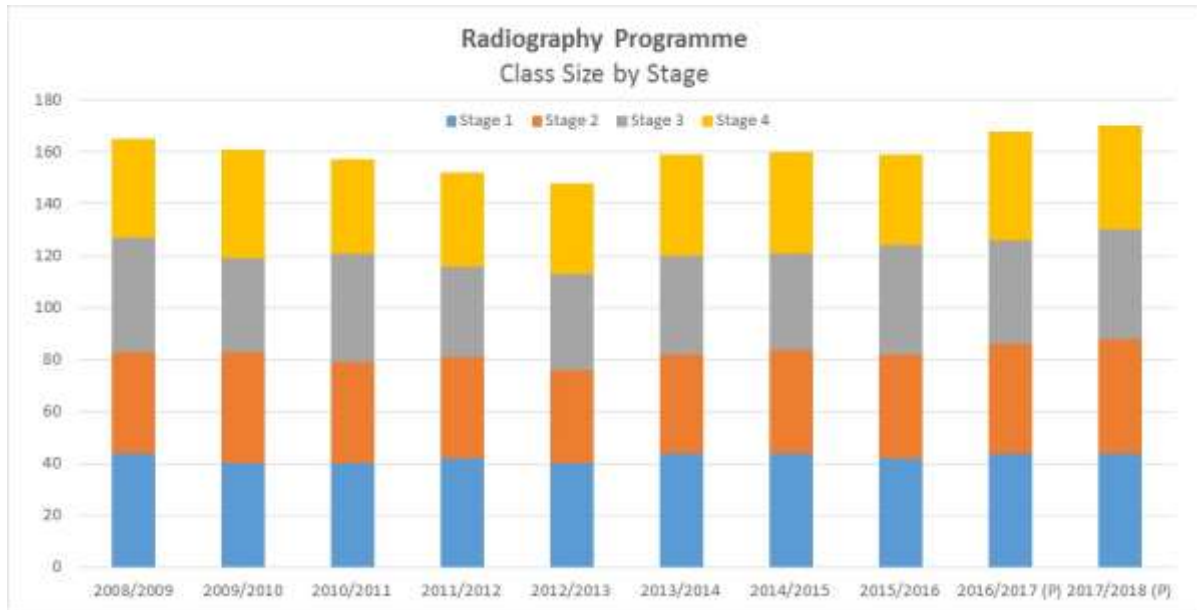
Figure 10

Student Headcount by Programme by Stage

Programme/Stage	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Biomedical Health & Life Sci's					
Stage 1	40	40	40	38	44
Stage 2	33	28	27	24	21
Stage 3	29	33	29	24	21
Stage 4	22	27	30	27	23
Biomedical Health & Life Sci's Total	**124**	**128**	**126**	**113**	**109**
Medicine (Direct Entry)					
Stage 1	86	80	84	93	103
Stage 2	153	136	130	136	127
Stage 3	151	155	138	131	138
Stage 4	143	148	154	142	126
Stage 5	287	277	286	295	293
Medicine Total	**820**	**796**	**792**	**797**	**787**
Medicine Graduate Entry					
Stage 1	98	94	100	109	103
Stage 2	82	97	94	99	104
Stage 3/4	82	129	179	192	196
Medicine Graduate Entry Total	**262**	**320**	**373**	**400**	**403**
Medicine UCD Penang					
Stage 1			1	5	7
Stage 2	75	76	75	57	57
Stage 3	63	75	73	75	58
Stage 4	62	61	75	148	73
Medicine UCD Penang Total	**200**	**212**	**224**	**285**	**195**
Medicine Penang					
Stage 4	0	0	60	58	
Stage 5	0	58	62		
Medicine Penang Total	**0**	**58**	**122**	**58**	
Physiology					
Stage 3	25	21	21		28
Stage 4	14	18	17		11
Physiology Total	**39**	**39**	**38**		**39**
Radiography					
Stage 1	42	40	44	44	43
Stage 2	39	36	38	40	42
Stage 3	35	37	39	37	41
Stage 4	36	35	36	39	35
Radiography Total	**152**	**148**	**157**	**160**	**161**
Grand Total	**1597**	**1701**	**1832**	**1813**	**1694**

4.7.   CAO Preferences

Irish/EU students wishing to apply for entry to undergraduate degree programmes in Ireland do so through the Central Applications Office (CAO) by specifying their programme choice in order of preference. Places are allocated based on second level education academic performance with the aim of providing students with their highest preference programme choice.

Undergraduate (Direct Entry) Medicine

Total CAO preferences for our Undergraduate Direct Entry Medicine (UEM) programme have increased by 61% over the period 2002 – 2015 with particular increase since 2009. Despite reducing the number of available places (to accommodate our Graduate Entry Medicine programme), 85% of students admitted to this programme place it within their top 3 preference choices.

Compared with other Irish Medical Schools, the UCD programme attracts the highest proportion of total CAO preferences although it tends to have the second highest for first preferences (after Trinity College Dublin). The UCD programme in 2015 required the highest CAO points total of any Irish UG Medicine degree however, this largely reflects the ratio of available place compared with the number of applicants. While it is gratifying to note that most students want to study UEM in UCD, we are cognisant of the fact that Medicine is highly oversubscribed and is highly competitive. Hence all Schools within the island of Ireland collaborate through multiple fora to share best practice and assure high quality programmes throughout.

Figure 11   CAO Preferences for UCD Undergraduate (Direct Entry) Medicine Programme
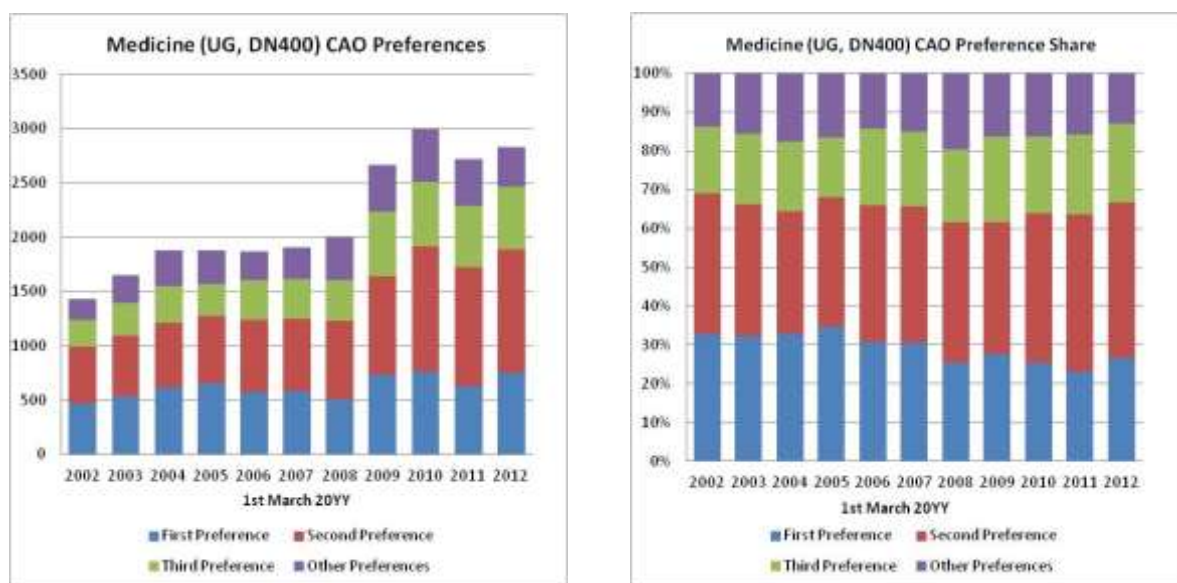
Graduate Entry Medicine

Total CAO preferences for our Graduate Entry Medicine (GEM) programme have increased by 46% since the programme's introduction in 2008. The UCD GEM programme is the most popular graduate entry medicine programme in Ireland attracting 47% of total GEM preferences across all Irish Medical Schools. 44% of students admitted to this programme place it as top preference choice and 92% place it among their top three preference choices.

Figure 12   **CAO Preferences for UCD Graduate Entry Medicine Programme**
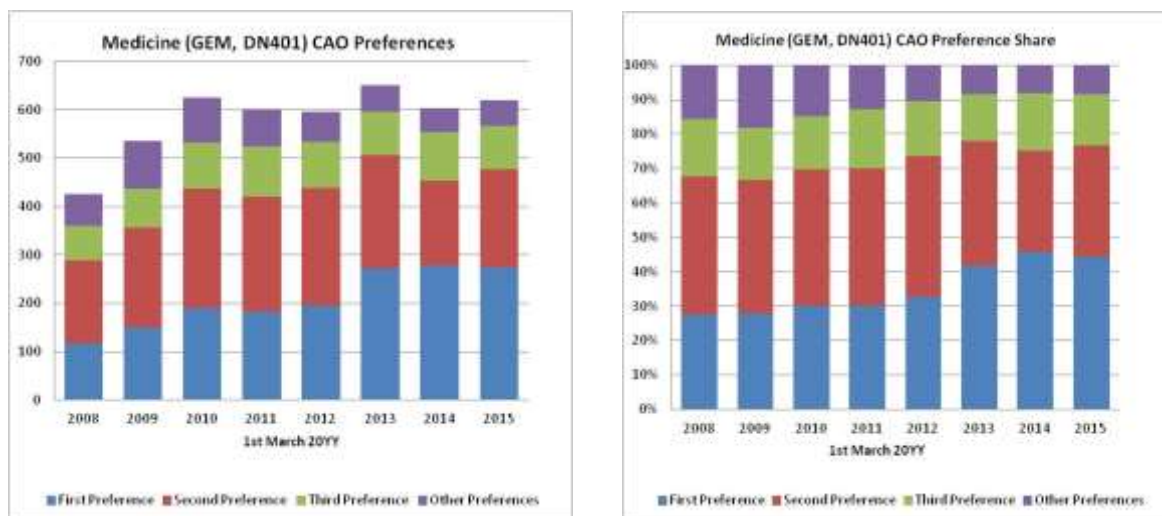
Radiography

UCD Radiography & Diagnostic Imaging offers the only undergraduate radiography programme in the Republic of Ireland. Although the total CAO preferences for the degree programme have varied over the years, the total number of preferences over 2002 – 2015 has remained largely unchanged. The number of students who place UCD Radiography as their first preference has increased by 146% over this time period. 46% of applicants place UCD Radiography within their top 3 preferences. Hence while the number of applicants has not significantly increased, the degree programme is increasingly a programme of choice among applicants. With 700 applicants chasing approximately 45 places, this programme is also highly competitively sought.

Figure 13   **CAO Preferences for UCD Radiography Programme**
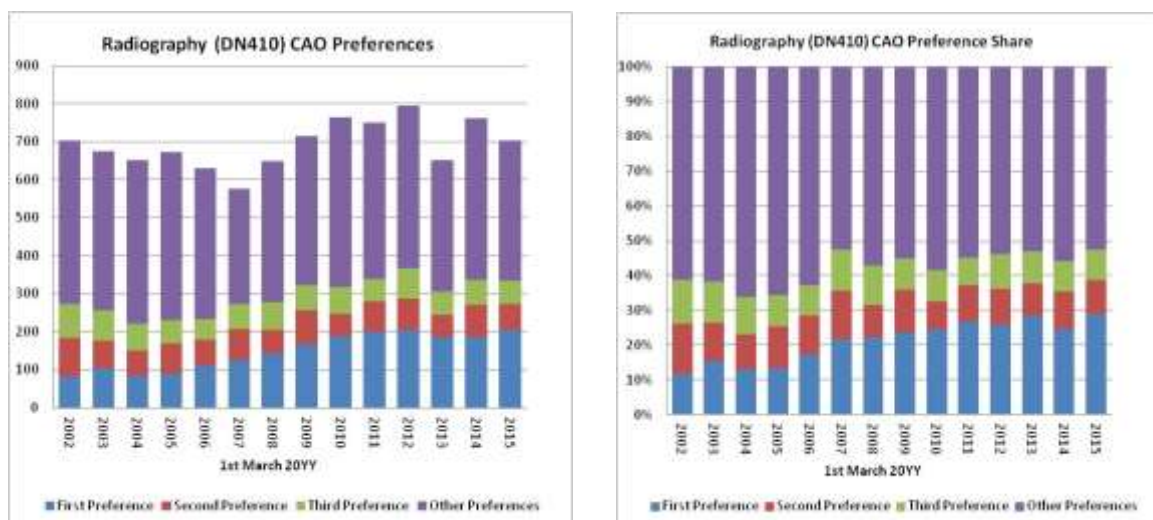
Biomedical, Health & Life Sciences

CAO total preferences for our Biomedical, Health & Life Science programme showed a significant decline following the introduction of Graduate Entry Medicine programmes in 2008. Although, in recent years, the position has reverted to typically 700 applicants seeking one of 40 places. However, the number of students who place this programme among their first preferences remains low (typically 10%) and among their top 3 preferences (28%). The significant attrition from this

programme to other undergraduate medicine programmes highlights how this programme is seen by many as a route towards graduate entry medicine.

Figure 14   CAO Preferences for UCD's Biomedical, Health & Life Sciences
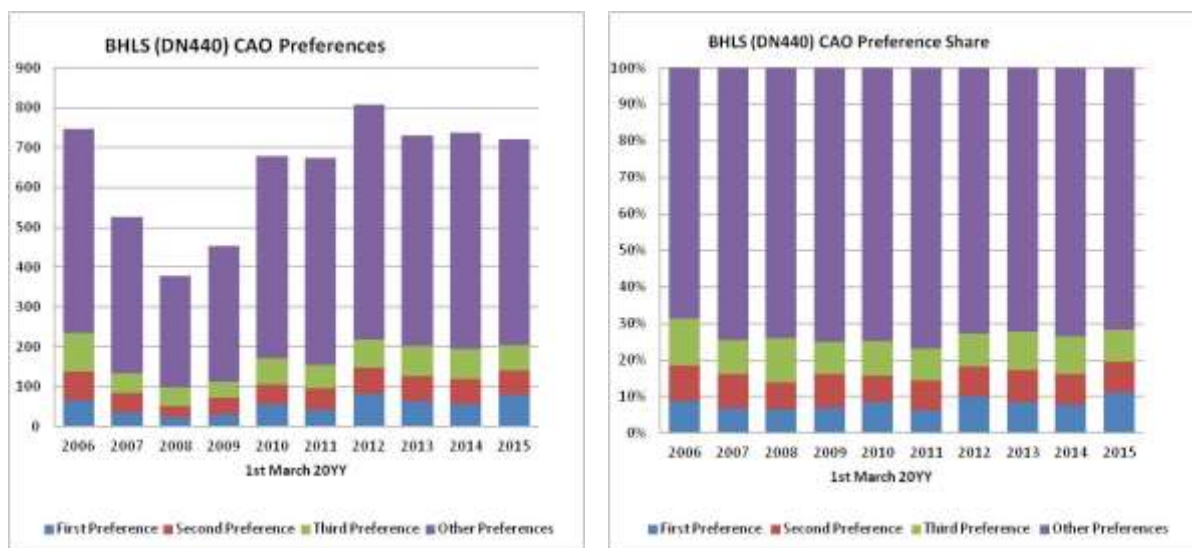
Table 10 Final Round CAO Points for Direct Entry Medicine

Undergraduate Direct Entry Medicine (UEM) Programmes						
Institution	2010	2011	2012	2013	2014	2015
UCD	725	735	745*	747	730*	736
TCD	731*	739*	746*	748*	731*	733
RCSI	721	732	740*	741*	724*	729
UCC	725*	733*	738*	742	722*	726
NUIG	719	728*	736*	739	720*	723*
UL	n/a	n/a	n/a	n/a	n/a	

Table 11 Final Round CAO Points for Graduate Entry Medicine

Graduate Entry Medicine (GEM) Programmes							
Institution	2009	2010	2011	2012	2013	2014	2015
UCD	60*	60*	58*	57	57*	57	58*
TCD	n/a	n/a	n/a	n/a	n/a	n/a	n/a
RCSI	60*	62*	59*	59	57*	56*	58
UCC	59	59*	56	55*	54	55*	56*
NUIG	n/a	n/a	n/a	n/a	n/a	n/a	n/a
UL	56*	56*	54*	53	53	53*	54*

4.8. Staff-Student Ratios

The School currently has 175 academic members of staff (147 FTE) in addition to an adjunct faculty comprising some 350 hospital consultants and over 300 junior doctors in training. The School has a full-time taught student equivalent of 1,841 students creating a staff student ratio of 1:12.5 which is significantly lower when research staff and/or adjunct faculty are considered. However, this ratio belies the fact that a significant number of academic staff are involved in full-time research. This raises the issue of functional staff student ratios and the ability to employ small group teaching.

For students of taught graduate and relatively small undergraduate programmes, the functional staff-student ratio is strong. For example, there could be a small taught graduate programme with 14 students, with two members of staff helping to deliver the programme. To these students, the ratio is 1:14, however, in our main undergraduate Medicine programmes, in the Biomedical Sciences Section, the staff : student ratio is at best 1:24. Staff : student ratios are particularly challenging for the Medicine programmes. In the early years of the Medicine programme, class sizes of between 200 and 300 students are commonplace among several modules. Students tend to spend two thirds of their teaching contact time in lecture-based sessions, and the small group teaching associated with many modules are challenged by growing student numbers, and the University maintenance of a relative staff recruitment embargo during the economic recession. Staff : Student ratios are managed better in the clinical years as typically 240 students are split into four groups of 60, and then having small numbers of students associated with teams for the majority of their learning.

For reasons of practicality, there has been a drift in some pre-clinical modules away from small group teaching. For example, the average non-lecture contact time of students with any staff (demonstrators, tutors or academic), may be less than two hours per week in some parts of the Medicine degree programmes. This is a concern as it is recognised that smaller student groups can more effectively promote data acquisition skills, problem solving, development of comprehension, communication skills, and team work.

This has been noted, and an interim corrective plan has commenced. There are really only two solutions. Either there has to be an increase in teaching staff or existing staff are permitted and incentivised to use more of their workload engaged in student centric activities such as small group tutorials, practical's and mentorship sessions. Both mechanisms are being pursued.

4.9. Student Attrition

Student attrition across the non-medicine programmes has been higher than in medicine. One of the reasons for this has been the number of students entering BHLS or Radiography who subsequently obtain a place in a medical programme, often in UCD. Generally, in Medicine programmes beyond Year 1 (where deferral, leave of absence or geographical issues can sometimes deter taking up a place or completing a year), the attrition rates tend to be low. Note the rates reporting centrally to do not identify those who leave the programme permanently from those who take a leave of absence.

Table 12 Student Attrition from Undergraduate Programmes

Including Leave of Absence & Early Withdrawal from Programmes

Programme	Stage	2011/12	2012/13	2013/14	2014/15
Biomedical Health & Life Sci's	1	15.00%	12.50%	12.50%	13.16%
Biomedical Health & Life Sci's	2	12.12%	21.43%	18.52%	16.67%
Biomedical Health & Life Sci's	3	3.45%	3.03%	-	8.33%
Biomedical Health & Life Sci's	4	-	-	-	3.70%
Medicine – Undergraduate Entry	1	16.28%	3.75%	5.95%	7.53%
Medicine – Undergraduate Entry	2	1.96%	2.21%	3.85%	3.68%
Medicine – Undergraduate Entry	3	0.66%	2.58%	0.72%	-
Medicine – Undergraduate Entry	4	-	-	0.65%	0.70%
Medicine – Undergraduate Entry	5	1.05%	0.72%	0.70%	1.02%
Radiography	1	14.29%	12.50%	11.36%	6.82%
Radiography	2	10.26%	19.44%	7.89%	5.00%
Radiography	3	-	2.70%	-	2.70%
Radiography	4	8.33%	5.71%	-	5.13%
Medicine Graduate Entry	1	15.31%	2.06%	11.00%	1.04%
Medicine Graduate Entry	2	1.22%	2.33%	3.19%	-
Medicine Graduate Entry	3	3.66%	6.58%	1.68%	12.28%
Medicine UCD Penang	2	4.00%	1.33%	-	-
Medicine UCD Penang	3	1.59%	1.64%	-	-

4.10. Research-Teaching Linkages for Staff and Students

All academic staff are expected to maintain an academic workload that incorporates teaching, research and contribution. Maintenance of research activity is key to knowledge renewal and contributes heavily to the evidence-based practice and principles that cut across all School of Medicine programmes. Staff are also encouraged to embed aspects of their research as appropriate into their teaching materials.

All BHLS, Radiography and Physiology students undertake a 10-20 credit research module in addition to undertaking preparatory module(s) in research methodologies and statistics. All students are encouraged to take up research during their undergraduate programme through the high profile Summer Student Research Awards (SSRA) projects. Typically 85 students per annum participate in the SSRA initiative completing supervised 8 week research project, at the end of the summer they present their work in oral and poster presentations to faculty. These projects can be used to gather credit towards the students' degree. Research projects typically involve undertaking an eight-week research project in clinical settings, translational laboratories or within charitable institutions that are associated with our PACE programme (Patient & Advocate Centred Education). In addition, in recent years, a strand of educational research has commenced in association with the membership of TLSG

and the educational development team. Three scholarships are also provided for intercalated MSc opportunities which now have the capacity to develop into intercalated PhDs.

Table 13 Research Modules within Undergraduate Programmes

Research Module/Programme	2010	2011	2012	2013	2014
SSRA Programme	56	45	70	62	71
Intercalated MSc	1	1	3	3	4
PATH40220 (BHLS) *20-credits*	9	22	27	30	29
PHYS40060 (Physiology) *20-credits*	12	10	13	*13*	12
PHYS40070 (Physiology Jt) *10-credits*	4	2	4	*4*	0
RDGY30090 (Radiography) *10-credits*	36	36	34	*35*	39

The School's increasing activity in Medical Education Research is evidenced by increasing research output through publication and conference presentation, Irish Network of Medical Educators (INMED) Annual Scientific Meeting.

Table 14 Increasing Medical Education Research Outputs

	2012	**2013**	**2014**	**2015**
Host Institution	Royal College of Physicians in Ireland	University College Dublin	Queens University Belfast	University of Limerick Graduate Medical School
Conference Title	Continuity of Education from Undergraduate to Postgraduate with a focus on Professionalism	Patient-Centred Medical Education: Human Factors, Patient Safety, Learning from Patients	Creating Supportive Learning Environments	NEW HORIZONS IN HEALTH PROFESSIONAL EDUCATION: Complexity, Culture and Communication
UCD Abstracts	n/a	57	8	15

One of the key mechanisms for developing research-teaching linkages is the use of teaching methodologies that are enquiry-based. Examples of these across our modules include the use of problem based learning, case based tutorials, vignette-based dissections, assignments, grand-round style presentation of case and associated topic, journal clubs, journal article presentations, group projects and the production of patient-information leaflets and posters.

4.11. Student Feedback and Teaching & Learning Evaluations

In the past, the key mechanism for student feedback has been through the Staff-Student committees both on campus and in clinical sites. This is no longer the case. Students are now invited to attend all of the committee meetings that feed into programme board, in addition to the formal staff-student committee and programme board itself. While this multitude of pathways for including the student voice is welcomed, it has proven difficult for students to fully engage with all of these fora. This issue is currently under review with an aim to have an enhanced and fully engaging mechanism in place for September 2016.

Figure 15   Key Programme Governance Structures
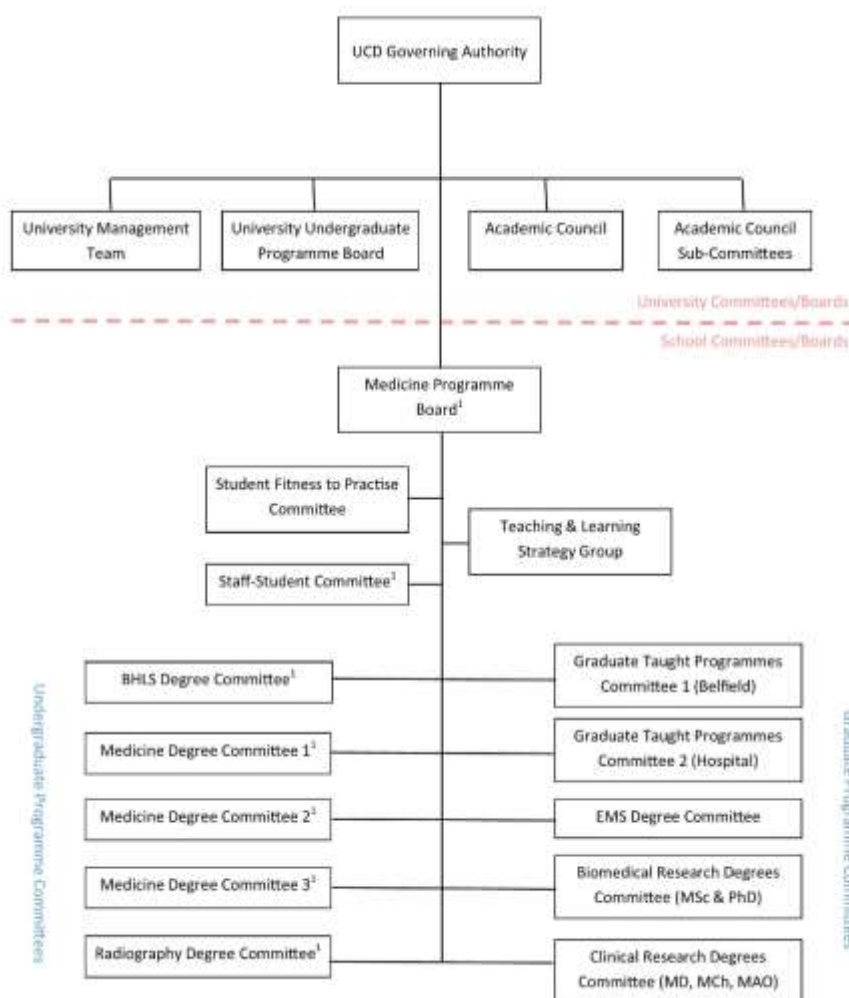
[1]*Board constitution includes undergraduate student representatives*

Every medical and BHLS student entering the university is invited to one of a series of breakfast meetings with the Dean and all radiography students have lunch meetings with the Senior Academic Staff within *UCD Radiography & Diagnostic Imaging*. This is an opportunity to engage at an early stage of the programme with students who may already have identified some opportunities for improvement. In addition, there is an annual student representatives lunch and meeting with the Programme Office to the staff of the programme office and to provide the students with an outline of the governance structure and the committees to which they will be invited. The main focus of this

event is to encourage students to engage with committees and contribute their opinions that inform change and development. In all cases, where class sizes are small, and students have an more direct relationship with module and course coordinators, the risk of missing issues is reduced. In clinical sites, our module leads, tutors and administrative teams provide very useful avenues for student feedback that would otherwise be missed.

Modules that align well to the semesterised and modularised structures of the university are linked to the University's module feedback system. Modules that run multiple times per year or during the summer are not easily captured by this system. Recognising this factor, many of the clinical disciplines within the medical programme have engaged with different forms of student feedback mechanism episodically during the final two years of the programme. This is not automatically fed into the School but becomes useful when other direct and indirect forms of feedback suggest that there might be an issue.

Table 15 demonstrates aggregated feedback for the last two years. The University feedback systems collects data from Likert scale questions as follows:

Q1   I have a better understanding of the subject after completing this module

Q2   The assessment was relevant to the work of the module

Q3   I achieved the learning outcomes for this module

Q4   The teaching on this module supported my learning

Q5   Overall I am satisfied with this module

In addition, the module coordinator invites free text responses from the students. The free text responses are only visible to the module coordinator, but once again become useful if red flags are raised by some other mechanism. The Likert scale scores, plus standard deviations, are visible to the module coordinator, the Head of School and the Head of Teaching and Learning or equivalent.

The routine within the School of Medicine is to encourage all module coordinators to review their own module evaluations, and where there is an issue, to discuss these with the module contributors, the head of subject, and where appropriate, the programme committee. In addition, the Associate Dean for Programmes and Educational Innovation reviews the module and aggregated outcomes. Where scores are lower than expected, the Associate Dean makes contact with the module coordinator directly. In addition, during the annual meeting with the Head of Subject to discuss the External Examiners report, any modules that score lower than expected are reviewed in that conversation. In both cases, low scores have inevitably been looked into and resolved locally. The most frequent reason for scoring low has been a mismatch between module content and module assessment. Modules that involve softer sciences have also tended to score slightly lower.

Table 15 Summary of Student Feedback by Module

Year	Semester	Subject	Invitations	Responses	Resp %	Q1	Q2	Q3	Q4	Q5
2014/15	S1	Anatomy	1,550	474	30.6	4.44	4.32	4.09	4.24	4.13
2014/15	S1	Clinical Pharmacology	129	41	31.8	3.95	3.31	3.78	3.63	3.54
2014/15	S1	Forensic Legal medicine	377	51	13.5	4.14	3.96	3.96	4.1	3.98
2014/15	S1	General Pratice	306	79	25.8	3.86	3.81	3.87	3.81	3.78
2014/15	S1	Clinical science (MDCS)	507	47	9.3	4.3	4.06	4.09	4.28	4.17
2014/15	S1	Medical Science	760	175	23	4.23	4	4.02	4.06	4.02
2014/15	S1	Medicine	317	54	17	4.06	3.25	3.62	3.58	3.47
2014/15	S1	Medical Informatics	145	33	22.8	3.67	3.91	3.85	3.76	3.67
2014/15	S1	Obstetrics	122	17	13.9	4.29	3.82	3.88	3.82	3.76
2014/15	S1	Paediatrics	121	23	19	4.7	3.91	4.35	4.57	4.48
2014/15	S1	Pathology	1,598	395	24.7	4.3	4.15	4.01	4.15	4.06
2014/15	S1	Physiology	704	194	27.6	4.25	3.79	3.98	4.22	4.03
2014/15	S1	Psychiatry	150	16	10.7	4	3.5	3.63	2.5	2.69
2014/15	S1	Radiography	932	228	24.5	4.12	4	3.95	3.93	3.78
2014/15	**S1**	**School Total**	**7,718**	**1,827**	**23.7**	**4.3**	**4**	**4**	**4.1**	**4**
2013/14	S1	Anatomy	1,510	552	36.6	4.33	4.25	4.04	4.1	4.08
2013/14	S1	Clinical Pharmacology	93	29	31.2	4.1	4.03	3.97	3.45	3.66
2013/14	S1	Forensic Legal medicine	255	35	13.7	4.66	4.41	4.29	4.69	4.54
2013/14	S1	General Pratice	306	123	40.2	3.24	3.27	3.43	3.29	3.02
2013/14	S1	Clinical science (MDCS)	415	50	12	4.58	4.44	4.44	4.56	4.38
2013/14	S1	Medical Science	878	263	30	4.13	3.97	3.86	3.92	3.88
2013/14	S1	Medicine	316	41	13	4.29	3.8	3.88	3.83	3.71
2013/14	S1	Medical Informatics	174	63	36.2	3.95	3.95	3.79	3.7	3.75
2013/14	S1	Obstetrics	115	20	17.4	4.85	4.3	4.45	4.6	4.7
2013/14	S1	Paediatrics	115	16	13.9	4.31	4.06	4	4.31	4.25
2013/14	S1	Pathology	1,519	453	29.8	4.1	3.91	3.91	3.83	3.85
2013/14	S1	Physiology	731	265	36.3	4.04	3.76	3.84	3.92	3.74
2013/14	S1	Psychiatry	153	16	10.5	4.69	4.38	4.25	4.44	4.38
2013/14	S1	Radiography	846	266	31.4	4.34	4.11	4.14	4.21	4.1
2013/14	**S1**	**School**	**7,426**	**2,192**	**29.5**	**4.2**	**4**	**4**	**4**	**3.9**
2014/15	S2	Anatomy	360	95	26.4	4.27	4.14	4.02	4.15	4.02
2014/15	S2	Clinical Pharmacology	253	35	13.8	3.8	3.17	3.71	2.71	2.97
2014/15	S2	Forensic Legal medicine	15	1	6.7	3	3	3	3	2
2014/15	S2	Clinical science (MDCS)	353	89	25.2	4.32	4.05	4.22	4.2	4.19
2014/15	S2	Medical Science	2,446	430	17.6	4.24	3.92	4.04	4.05	4.01
2014/15	S2	Medicine	569	57	10	3.47	2.6	3.09	3.18	2.63
2014/15	S2	Medical Informatics	48	12	25	4.08	3.75	4	3.42	3.58
2014/15	S2	Medical Microbiology	358	94	26.3	4.57	4.27	4.28	4.43	4.42
2014/15	S2	Obstetrics	124	11	8.9	4.55	3.45	3.82	3.73	2.91
2014/15	S2	Paediatrics	124	6	4.8	4.33	4	4.17	4.17	4.17
2014/15	S2	Pathology	823	199	24.2	4.32	3.96	4.01	3.99	4.01
2014/15	S2	Physiology	533	143	26.8	4.17	4.34	4	4.12	4.01
2014/15	S2	Psychiatry	167	7	4.2	4.43	4.14	4.14	3.86	3.86
2014/15	S2	Radiography	670	180	26.9	4.29	4.17	4.11	4.04	3.92
2014/15	S2	Surgery	243	27	11.1	4.22	4.11	3.85	3.56	3.74
2014/15	**S2**	**School**	**7,086**	**1,386**	**19.6**	**4.2**	**4**	**4**	**4**	**3.9**
2013/14	S2	Anatomy	337	98	29.1	4.08	3.99	3.94	3.54	3.61
2013/14	S2	Clinical Pharmacology	253	44	17.4	4.4	4.48	4.07	3.89	3.93
2013/14	S2	CPD	476	14	2.9	3.21	3.21	3.29	3.07	2.93
2013/14	S2	Forensic Legal medicine	12	2	16.7	4	4	4	4	4
2013/14	S2	Clinical science (MDCS)	169	37	21.9	3.86	3.41	3.61	3.59	3.65
2013/14	S2	Medical Science	2,520	464	18.4	4.15	3.72	3.85	3.93	3.83
2013/14	S2	Medicine	500	61	12.2	3.51	3.1	3.38	3.26	3.02
2013/14	S2	Medical Informatics	39	7	17.9	4.43	4.14	4	3.71	4.14
2013/14	S2	Medical Microbiology	370	102	27.6	4.51	4.22	4.22	4.37	4.27
2013/14	S2	Obstetrics	117	2	1.7	4.5	4.5	4.5	4.5	4.5
2013/14	S2	Paediatrics	117	4	3.4	4.75	3.75	4	4.25	4
2013/14	S2	Pathology	932	214	23	4	3.41	3.65	3.77	3.49
2013/14	S2	Physiology	570	187	32.8	3.99	3.83	3.69	3.79	3.52
2013/14	S2	Psychiatry	144	14	9.7	4.64	4	4.14	4.43	4.29
2013/14	S2	Radiography	661	240	36.3	4.2	4.14	4.02	3.96	3.87
2013/14	S2	Surgery	240	40	16.7	4	3	3.5	3.03	3.05
2013/14	**S2**	**School**	**7,457**	**1,530**	**20.5**	**4.1**	**3.8**	**3.8**	**3.8**	**3.7**

4.12. Review by External Examiners and Statutory or Professional Bodies

Many programmes are accredited by regulatory bodies such as the Irish Medical Council, Irish Institute of Radiography & Radiation Therapists (IIRRT), the Health and Social Care Professions Council of Ireland (CORU), the Prehospital Emergency Care Council (PHECC), Malaysian Qualifications Agency (MQA), a cluster of Irish and European psychotherapy organisations and indirectly the Educational Commission for Foreign Medical Graduates (ECFMG) and Federation of State Medical Boards (FSMB). Samples of formal accreditation visits in recent years are represented below. These are available within the appendices.

Table 16 Feedback from External Accreditation Bodies on Undergraduate Programmes

Programme & Accrediting Body	Review Date	Commendations	Recommendations
Undergraduate Entry to Medicine (UEM) *Irish Medical Council (IMC)*	Nov 2011 (Full) Jan 2015 (Annual) *Next: Nov 2016 (Full)*	• Student-centred programme incl. White Coat Ceremony and Breakfast with the Dean • Clinical pathways structure • Research and elective opportunities • PACE-R programme • Use of e-learning facilities • Large number of medically qualified staff in pre-clinical programme • Student awareness of the IMC's Eight Domains of Good Professional Practice. • Professional Completion/Sub-Internship module. • Promotion of a research background for academics	• Enhanced communication and IT linkage between the Belfield campus and clinical sites • Improved access to library from clinical sites • Increased feedback to students following formative and summative assessments • Provision of a cross-section of clinical attachments • Ensuring clinical site staff had access to same information and initiatives as Belfield staff. • Clarification on a strategy for continuous programme renewal • Information on students' performance in relation to academic background, conditions and criteria were requested
Graduate Entry to Medicine (GEM) *Irish Medical Council*	Nov 2011 (Full) Jan 2015 (Annual) *Next: Nov 2016 (Full)*	• Commitment to quality (Programmes Assessment Review Group) • Willingness to respond to student feedback • Tailoring curriculum for students with a non-science background • Emphasis on importance of professionalism and communication skills • Professional Completion/ Sub-Internship module. • Plans to track GEM student performance as a quality assurance measurement tool	• More formative feedback required • Development of a smoother transition from pre-clinical to clinical years • Enhanced pastoral care • Provision of opportunities for more active participation during clinical attachments.
PMC Twinning Programme *Malaysian Medical Council*	Oct 2010	• Dublin based programme was well received, in particular basic sciences and anatomy dissection • Orientation for students to the Dublin sites	• Perception that RCSI-PMC students receive more clinical exposure than UCD-PMC. • Grading and credit system adopted in the Dublin sites was found to be at variance with the MQA accepted system
Malaysian Qualifications Agency *Irish Medical Council*	2012 *Next: 2017 (full)*	• Strong co-operation and integration between the UCD and RCSI programmes and support of PMC	• Clarification re policy for access to UCD and RCSI VLE's for students returned to PMC
BSc Radiography *Irish Institute of Radiography and Radiation Therapy (IIRRT).* *Radiographers' board of Health and Social Care*	2009	Professional Accreditation awarded subject to accreditation	• Strengthening of academic / clinical links. • Greater information for clinical staff training students. • Formalise clinical codes of conduct and clinical placement information for students. • Formalise peer review and staff mentoring process. • Ensure aims and objectives for DI are within the School of Medicine Strategic Plan • Review and ensure equity of student clinical experience across placements.

Programme & Accrediting Body	Review Date	Commendations	Recommendations
Professions Council (CORU)			• Ensure early clinical exposure from stage 1. • Ensure CPR training is complete before the 1st clinical placements. • Review healthcare elective options. • Document feedback from managers on graduate competency.
	April 2015	CORU Accreditation: Following review of the accreditation documentation and the site visit the accreditation team concluded that the BSc Radiography Degree met the Radiographers Registration Board's Criteria and Standards of Proficiency. No actions were required howver a small number of recommendations were made.	• Increased input of Radiography students at Radiography Degree Committee meetings. • Formalisation of the input of Radiography Service Managers (RSMs) in curriculum development • Formalisation of assessment feedback policy for Radiography assignments. • Formalisation of clinical placement evaluation process including feedback mechanism to the Practice tutors and RSMs.

4.13. External Examiner Feedback

In line with a university initiative to revise the recruitment and management of external examiners and review of reports, a revised process has been developed. There is greater transparency across the School regarding external examiners and enhanced standardisation of communication with them. The reports are formally received quite late, but most of the feedback has already been incorporated as necessary through the direct feedback that takes place between the External Examiners and the academic teams during the External Examiners visit. In order to close the loop, and ensure that no comments have gone unnoticed, the Registrar now asks that each School comment in brief on the impact of any significant comments. This year, a document that summarises the actions taken will pass through the Medicine Programmes Board to the Registrar.

4.14. Assessment

All modules in all programmes are required to list learning outcomes and to describe an appropriate assessment strategy for those outcomes. Unlike large integrated programmes and assessments, the presence of 5 credit modules already assists in assessment blueprinting.   All modules are further required to have continuous assessment which may be summative and/or formative in nature.

Additionally, there are no high stakes assessments in our programmes in comparison to the large exit exams of previous curricula which determined the degree award on the basis of small number of high stakes end of course examinations. Degree awards are essentially based on performance in modules through the final two years of each Bachelor degree programme. Since the last review, compensation and/or condenation has also been removed, so that students must obtain a passing grade in every module taken that leads to a degree award.

There are three processes of review taking place currently to enhance assessment practices:

1. *Assessment Audit for the Medicine Programme*

A full report on the findings of the audit so far is available on request. As part of overall quality review and in response to Medical Council request in their 2011 report, the School has undertaken a comprehensive review of assessment across the Medicine Programmes. The process has been designed and is led by Dr Suzanne Donnelly, Director of Clinical Education and is ongoing through the period 2013-2016.

The review has been structured as an audit, which facilitates continuous quality improvement. Cycle 1data collection took place during the academic year 2013-14 and cycle 2 is currently in the process of data collection. As no clear and applicable audit standards for assessment in Medicine programmes have been published, Dr Donnelly has drafted and proposed a set of 7 audit criteria which were ratified by the Programme Board in 2013. These were based on publications by the General Medical Council 2009 & 2011(UK).

Criteria for each audit standard were also proposed and adopted, and methods of data collection from faculty and students were designed, piloted, statistically validated and utilized by the review lead. Students were first surveyed mid programme (mid Stage 4, 2013), as were academic staff. Very recent graduates (about to start internship) were surveyed in 2014 & 2015. Cycle 2 data collection will again survey mid Stage 4 students and faculty in semester 2, 2016 & starting interns will be surveyed annually for five years.

One of the consistent issues identified by the audit through the Medicine programmes has been the lack of assessment feedback. This is now the priority issue. In addition, the review of programme outcomes and the assessed curriculum that is concurrently taking place should address other issues raised regarding clarity of goals and the system of assessment.

(*An assessment audit has also been completed for the Radiography programme. Further details are available on request.*)

2. *Review of Assessment Load for Modules within the Biomedical Sciences Section*

On the basis of external examiner feedback, audit outcomes and external accreditation, modules were deemed to have too many assessments. In addition, mid-term summative continuous assessments that took the form who class exercises were driving students to miss classes in order to prioritise assessment outcomes. To address this issue, module coordinators alongside heads of subject were asked to review their module assessment strategies. This has resulted in summative midterm examinations become formative, a prioritisation of true continuous assessment in practical, tutorials or similar and reduction of summative assessment load on students during the early years of both Medicine programmes and to some extent the Biomedical, Health and Lifescience programme.

3. **University Programme Enhancement Initiative**

As referenced previously, the University has embarked on process of review of all programme outcomes with a focus on ensuring the assessment strategies are in line with both module and programme level outcomes. All programmes within the School of Medicine are currently engaged in this exercise.

5. Curriculum Development and Review

5.1. Programme Renewal

The School has previously demonstrated the structures and processes that routinely promote continuous renewal. These include, but are not limited to, staff feedback, student feedback, annual teaching forum, periodic quality reviews and external accreditation reviews. The terms of reference of the Programmes Board and its constituent committees ensure that change occurs in a structured and coordinated manner. Furthermore the process of external accreditation by the Irish Medical Council, the Malaysian Medical Council, Malaysian Quality Authority and other quality assurance bodies as outlined above is complementary to our internal mechanisms. The Medical Council report welcomed a number of School projects including the review of the current six year programme with relevant exemptions structure, programme mapping, assessment review, programme orientation, clinical tutor induction, our PACE (Patient and Advocate Centre Education) initiative and plans to review our student transition to the clinical environment (outlined below). These development projects enhance, but do not replace, the routine review and continuous renewal processes.

Medical Education Development – Spotlight Review of Clinical 1

The Clinical 1 programme, in Stage Four of the UEM programme, acts as a transition from Belfield-based student learning to a wholly clinical environment. It currently consists of six modules, two of which are introductions to clinical specialties and four of which pertain to clinical skills, therapeutics and professionalism. In 2014/15, the programme ran over Semester Two and the Summer Semester (totalling 20 weeks incl. 2 weeks of assessment) and, in the final 9 weeks, students undertook 3 x 3wk clinical attachments in affiliated hospitals. After a series of consultations with the student body and Belfield and clinically-based based academic staff, a number of difficulties with the current programme configuration became apparent including:

- Assessment - Undergraduate medical students currently undertake 16 summative assessments (including OSCE shared between two modules and a Long Case shared between three modules). Students can also currently fail clinical assessments and still progress into the intensive clinical curriculum in the final two years.
- Increasing pressure on major teaching hospitals - Increases in student numbers in both undergraduate and Graduate Entry Medicine has led to increased pressure on our two major teaching hospitals, St Vincent's University Hospital (SVUH) and the Mater Misericordiae University Hospital (MMUH).

Following a robust review process led by a steering group in consultation with the student body and key academic stakeholders within the School of Medicine and our teaching hospitals, two major changes have been proposed as follows:

- Modular Reform - Flattening of a number of existing modules (without change to overall semester credit value) to allow for more efficient teaching and assessment of complimentary content. Such changes will allow for reconstruction of assessment strategies, specifically to reduce the number of summative assessments and increase opportunity for formative assessment and feedback through clinical skills workshops and clinical attachments.
- Small Group Teaching - Introduction of increased small group teaching and earlier clinical attachments through usage of the extensive general practice and community hospital network already existent in the School. Increasing earlier clinical attachments will reduce the

student clinical time required later in the semester therefore reducing student numbers in the major teaching hospitals of SVUH and MMUH. An opportunity for remediation will be offered to those who fail the final clinical competency assessment.

Clinical Tutor Induction Programme

In response to the process of continual renewal and corresponding changes to programmes, together with the ongoing turnover of clinical staff at hospital sites, underlines the need for proactive communication, the School introduced a Clinical Tutor Induction Programme which runs annually and also distributes an electronic clinical tutor handbook.

Module Design and Review

The University's electronic tool for the creation and dissemination of module descriptors aims to ensure clarity and validity of module descriptors for our courses and module descriptors are reviewed within normal University procedures. The School encourages feedback from clinical academics and students across all sites in an effort to monitor the consistency of the educational experience and percolate best practice.

Issues associated with programme development and renewal that the School has identified for resolution include:

- **Failure to close the feedback loop**: A systematic way of feeding forward to students and stakeholders regarding issues that they have raised has not yet been found. The feedback from students is often at a module level, and by the time the module coordinators have seen the feedback, the students have moved on to new modules that often don't involve the same staff.   A mechanism for closing the loop is being piloted in the current academic year.

- **Curriculum drift**: Through the process of modularisation, the programmes of the School now comprise mostly 5-credit modules with a single module leader. Even though within this School, stage and/or programme committees have been established, there is still a potential for small incremental changes at the module level to go unnoticed and therefore for curricula to change over time without adequate supervision. Across the University, it has also been noted that programme outcomes are not systematically mapped. For the School's professional programmes, programme outcomes / graduate attributes have been defined through a process involving significant international review of best practice and deep consultation within the School. In terms of curriculum drift, which remains a possibility, the plan is to introduce a more systematic approach to curriculum refinement after the major Programme Enhancement project (see below) that commenced in October 2015 and is due to end in February 2017 is complete.

5.2.   Programme Enhancement Project

Under the auspices of the University Registrar, all taught programmes across the institution are being progressed through a programme enhancement project. Each programme board has nominated a programme enhancement champion, which in the case of this School is Dr Stuart Bund. The champion is tasked to lead a process within the School that identifies programme outcomes, maps them to existing modules and stages, identifies gaps in the taught, learned and assessed curriculum and refines the programmes accordingly.   Dr Bund has constructed a number of review teams that correlate to the major undergraduate and graduate taught programmes currently delivered by the School of Medicine. Having established the structures, each group is tasked with identifying the vision and values of their programmes before moving onto identifying programme outcomes. The process involves stakeholder consultation at the earliest stage.

Figure 16   **Overview of Programme Enhancement Process**
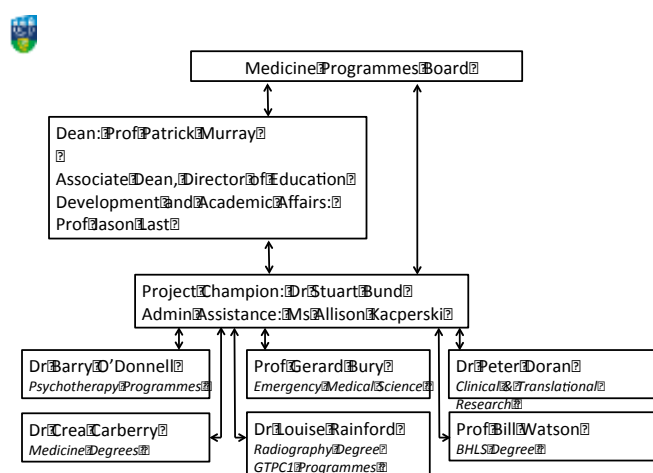
5.3.   Student Progression

The School of Medicine has developed a policy to manage progression of students through the programmes, Unsatisfactory Academic Progress Policy. Students are identified at the Pre-Examination Review Committee and recommendations regarding their progression. The Examination Board will approve and/or amend these recommendations and the student will receive a formal communication. All students identified with failing grades are assigned an academic mentor and requested to make an appointment to see this mentor to plan a remediation strategy. These meetings are recorded and forwarded to the Programme Office for filing.

For students with significant challenges i.e. more than 10 credits outstanding they will also be scheduled to meet the Dean of Medicine to review their progress to date and agree a remediation plan. These meetings are also recorded and saved on file. At this point a student may be referred to the Fitness to Practise/Proceed Committee for ongoing mentoring and support.

All students are made aware of the supports available to them which include an academic mentor, the student advisor, student health and the counselling service. There is a strong focus on the early stages as students approach the 180 credit limit after which they are eligible for an exit degree.

Trends in progression are now being monitored and this informs recruitment initiatives. A cohort of students has already been identified as more likely to struggle and a meeting with the admissions group has informed the recruitment criteria for this group of students in the future.

The Programme Office meet the Student Advisor after Examination Boards to review communication with students who have been identified as having progression issues to ensure any factors which may impact on academic performance have been addressed. The student advisor is then in a position to give advice in the context of their academic performance and engagement with academic staff and mentors.

For students returning to PMC to complete their degree a member of academic staff who leads a PMC focussed module provides detailed feedback on the returning UCD cohort. In particular students who have had difficulties are identified and appropriate support structures are agreed.

5.4. Timetabling

Students have highlighted timetabling problems in the past, many of which have been subsequently resolved:

- A significant piece of work has been completed by the Programme Office on timetabling. Specifically accuracy has been exponentially improved and academics have collaborated with a revised mechanism for confirming timetables and processing any changes required should they arrive. In 2015, 11,000 points of data to the central timetabling office with only 2 errors identified which, for a complex timetable, has been acknowledged as an enormous improvement
- Students have reported multiple attachments to the same specialty during clinical placements and the Programme Office is leading on a project with IT to develop and on-line timetable which enables cross checking and identifies duplication. The output from this system will feed directly into a Diploma Supplement which outlines a full clinical transcript.
- Access to timetables via mobile devices can be unreliable. Additional advice on synchronising devices has been provided. Unfortunately not all mobile software synchronises reliably and students are now more alert to this.

5.5. Review of Awards and Scholarships

In 2014/2015 a review of all scholarships and awards was completed and resulted in a standardised approach to the development, calculation and awarding of all medals, prizes and scholarships in the School. As a result, the Programme Office has developed a catalogue for students which outlines the scholarships and awards available at every stage thereby encouraging excellence in our high performing students.

5.6. Technology Enhanced Learning

Within the Schools educational development team, there are now three educational technologists. Although the activities of this group span teaching and learning, programme development, programme delivery and general AV support, a growing proportion of the activity is associated directly with the development of e-learning assets that either existing programme provisions. In the taught graduate programme arena, the developments tend to go one step further often campus based activities are being replaced with more accessible asynchronous and synchronous activity online learning.

6. Research, Innovation & Impact

6.1. Introduction

The School has substantially grown research activity over the past ten years with annual research income growing from €2.75M (2004) to €20M (2014). Despite the challenging funding environment over the past five years, average research income is €12.5 million per annum with current grants under management valued at approximately €80 million. Over half of the School's academic staff are classified by UCD Research as being 'research active'. There are 155 research funded staff comprising 30 research fellows and 56 postdoctoral scientists. Over the past seven years, the number of Graduate Research Student registrations (285 in 2014/2015) has risen by 75%, of which 62% are PhD students.

Table 17   Summary of School's Research Profile

Research Proposals & Awards Source: InfoHub	2011	2012	2013	2014
No. of Proposals	107	150	140	179
Proposal Value* (€,M)	€43.8	€46.8	€96.9	€156.7
No. of Awards	67	57	74	93
Value of Awards (€,M)	€11.2	€9.2	€14.3	€16.3
% Overhead	20.7%	15.9%	16.5%	20.0%

Research Staff Source: InfoHub	2011	2012	2013	2014
Academic Staff FTE's	110.8	96.1	95.6	102.2
Research Active FTE's	53.3	50.3	52.8	54.2
% Research Active	48.1%	52.3%	55.2%	53.1%
Total FTE's	280.8	289.3	295.7	324.7

Research Students Source: InfoHub	2007	2011	2012	2013	2014
PhD Students	93	111	136	149	176
MD/MCh/MAO	50	61	64	69	71
MSc	20	11	19	26	38
Total	163	183	219	244	285

Our School comprises scientists - clinicians, molecular biologists and technologists - who are united by the goal of improving patient care and health in society. Each approaches this shared objective from their particular professional perspective be it disease presentation, biological process or technology capability.

The School has a large and dynamic research portfolio extending from *in silico* bioinformatics, molecular laboratory investigations of disease to clinical research evaluating new therapeutic strategies.

Figure 17   **UCD Medicine Research in Numbers**
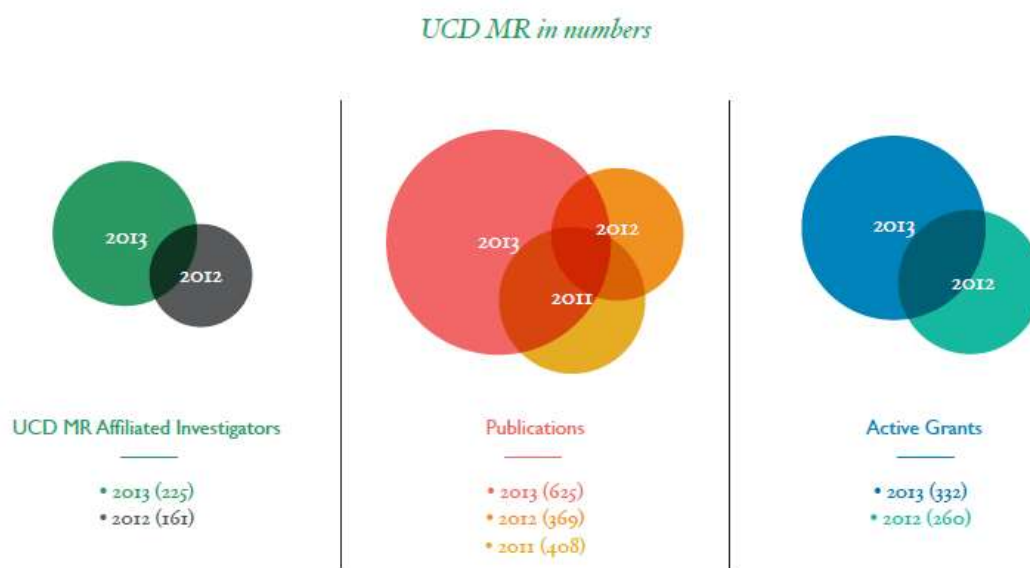
6.2.   Research Strategy

The current School research strategy was introduced in 2012/2013 and aims to be supportive of our research community rather than directing which areas of research should be pursued. Phase 1 of the strategy sought to encourage the self-assembly of strong multi-investigator groups around coherent research themes.   Several of these groups have secured Research Centre designation and have increased their national and international profile, enhancing the School's reputation in research.

Table 18   **Summary of Research Strategy Phase 1 (2012 – 2015) Objectives**

Research Strategy Objectives (Phase 1 : 2012 – 2015)
Identify and support high calibre research centres and groups
Establish the necessary infrastructure supports
Build a strong international research profile
Develop new individual- and multi-investigator-led research programmes
Develop a cohort of translational research scientists

Implementation of Phase 1 (2012 – 2015) of the School's research strategy has largely been successful and there is now a recognised structure around which research can be developed and Phase 2 (2016 – 2020) can commence. There has been unprecendented levels of engagement by our research community with the School's research strategy. Our forum of research leaders and centre heads (effectively the School Research, Innovation & Impact Group) will inform the implementation of Phase 2 (2016-2020) of our research strategy which will seek to drive innovation and impact through targeted investment and disruptive innovation. This next phase will involve a combination of investment in strongly performing existing research groups, strategic recruitment in specific areas and innovative early stage researchers.

6.3. Research Activity & Highlights

Creating Research Centres

The School has added new and formalised existing Academic Research Centres including:

- Academic Centre for Rare Diseases (approved)
- Academic Centre for Paediatric Research (approved)
- Academic Centre for Bioinformatics (approved)
- Academic Centre for Human reproduction (approved)
- Centre for Research in Infectious Diseases (ongoing)
- Centre for Arthritis and Rheumatic Diseases (submitted; EULAR Centre of Excellence already approved)

Strategic Investment

The School has targeted strategic investment in a number of key areas including:

- Start-up supports for strategic research recruits
- Expanding UCD Clinical Research Centre team
- Purchase of strategic equipment (e.g. Nanosight, Dako Autostainer instrumentation)

Facilitating Research Collaborations
- Innovative inter-school engagement
  - School of Engineering research integration meeting
  - EI Innovation Awards (Frank Lyons)

Table 19 Summary of Academic Research Centres & Groups

Academic Research Centres:	Research Groups
Centre for Emergency Medical Science	Clinical Bioinformatics Group
Diabetes Complications Research Centre	Diagnostic Imaging Group
Centre for Research in Infectious Diseases	HIV Molecular Research Group
Academic Centre on Rare Diseases	Maternal & Fetal Health Group
Centre for Human Reproduction	SVUH Neurology Group
Academic Centre for Paediatric Research	Obesity & Immunology Research Group
UCD Centre for Biomedical Engineering	Tissue Engineering Research Group
UCD Centre for Bioinformatics	Biomedical Proteomics Research Group
UCD Charles Institute for Dermatology	gHealth Research Group
UCD Conway Institute (cross-School)	Centre for Colorectal Disease
UCD Systems Biology Ireland	Rheumatology Research Group
	SPHERE Research Group

Emerging research themes also include psychiatry & mental health, fibrosis and translational oncology.

6.4.   Research Strategy Phase 2 Priorities

The key themes of our research strategy Phase 2 implementation include:

- Continued engagement of the research community
- Targeted investment based on defined investment principles
- Consolidation and Growth of strong research areas
- Building Networks & Collaborations
- Driving Innovation

<u>Engagement</u>

The existing research strategy has resulted in unparalleled levels of engagement with School of Medicine. Now we need to invite active participation of recognized research leaders in shaping strategy, designing strategic initiatives and assist with implementation. This has been initiated through the Centre Heads Advisory Board Committee and will continue through the School of Medicine Research Innovation and Impact Group (RIIG). Main outputs include:

- Proposal for Clinical Translational Unit (CTU)
- Draft Research Investment Scheme
- Disruptive innovation initiative

<u>Investment</u>

The School will strategically invest a proportion of revenues into supporting research. This research investment will be clearly disengaged from OIP contributions and clearly linked to education/teaching activities. The School will take a clear lead in directing important health research initiatives, targeting and supporting identified PI's rather than the direct research applications of PI. Three broad categories of Research Incentive Schemes include:

- Active Investigator Incentivised Awards Scheme
- Research Proposal Incentive Fund
- Starting funds for new entrant academics / clinicians

<u>Consolidation & Growth</u>

Our research strategy seeks to consolidate existing areas of strength and grow new areas of research that are aligned with the College's 'One Health' and UCD's global University ambition. These will likely include, but are not limited to:

- Global Health (gHealth Research Group)
- Infectious diseases (CRID, HMRG)
- Maternal health (2 proposed centres)

<u>Network</u>

The School will encourage greater interaction and collaboration with international research groups, the pharmaceutical / device manufacturer sector and with policy makers.

<u>Innovation</u>

During 2016, *UCD Medicine Research* will seek to advance a disruptive Innovation initiative to improve further research outputs.

6.5.   Supporting Research

The School seeks to create an environment which supports world class translational research by providing excellent laboratory and clinical facilities resourced with expert support staff and efficient administrative processes which facilitate research productivity.

School supports include post-doctoral fellows, research nurses, laboratory technicians, data managers and administrative staff. Through these staff, the School provides considerable financial and organisational support to our investigators and their teams to allow them compete for external research funding. In addition, as an independent research track record is a key requirement for most new academic staff appointments, the School has provided strong supports to assist the establishment of new research groups by incoming senior investigators.

Our staff have access to over 15,000m2 of modern research laboratory space within the UCD Health Science Centre, the UCD Charles Institute, Systems Biology Ireland and the UCD Conway Institute. Also, the School has established modern clinical research facilities at our two main teaching hospitals; the Mater Misericordiae University Hospital and St Vincent's University Hospital, to support our translational research ambition.

The UCD Clinical Research Centre facilities are available for clinician scientists to undertake investigator-led or industry-led observational and investigational clinical studies. The UCD Clinical Research Centre has been in operation for seven years and has developed a cohort of experienced research nurses, data managers and laboratory technicians, who are available for deployment on approved studies. State-of-the-art biobank facilities, consultation and minor procedures rooms are available alongside laboratory facilities for sample preparation and routine instrumental analysis. The UCD Clinical Research Centre also provides expert support in protocol study design, ethics and regulatory approval as well as study, data and patient management. This evolving research administration support role is a key focus for strategic investment in research by the School.

As part of our strategy to drive research productivity, the School assembled a coherent set of supports to assist high calibre groups of investigators achieve their full potential. These supports have been focused within a single hub; UCD Medicine Research (UCDMR). This unit is led by Dr Paddy Mallon, Associate Dean for Research, Innovation and Impact and acts as a central hub to connect our geographically dispersed group of investigators to practical University support for grant writing, programme management, industry liaison and international collaborations.

7. Management of Quality & Enhancement

7.1. Leadership in Quality

Prior to the School's previous Quality Review, the School had appointed Ms Kate Matthews, Senior Lecturer in Diagnostic Imaging as a part-time Director of Quality. Ms Matthews led the School's efforts in the previous quality review, coordinating the preparation of the Self-Assessment Report and preparing both the School Quality Improvement Plan (QIP) and a progress report on the QIP.

This role has not been continued beyond the initial three year appointment. The School is keen to ensure that Quality remains a priority for all staff but with specific priorities for the Dean, Associate Deans and Section Leaders. In advance of the current Quality Review cycle, Professor Walter Cullen was asked to direct the Quality Review Self-Assessment Process supported by the School Office.

External Accreditation
The School undergoes regular, periodic critique by external accreditation bodies including the Medical Council of Ireland, the Irish Institute of Radiography and Radiation Therapy (IIRRT) and CORU, the statutory body regulating health and social care professionals and whose mandate covers the Radiography profession.

Over the past five years, the School has undergone the following quality assurance evaluations by these bodies:

Table 20 Major Quality Assurance Evaluations by External Accreditation Bodies

Date	*Review Body*	*Format*
September 2010	Medical Council of Ireland	Self-Assessment Report & Questionnaire
December 2010	Medical Council of Ireland	2-Day Site Visit by External Review Team (Cancelled by Review Team)
January 2011	Medical Council of Ireland (*Graduate Entry Medicine Programme*)	2-Day Site Visit by External Review Team (Rescheduled from December 2010)
November 2011	Medical Council of Ireland (*Undergraduate Medicine Programme*)	Self-Assessment Report & Questionnaire, 2- Day Site Visit by External Review Team
March 2012	Medical Council of Ireland (*Graduate Entry Medicine Programme*)	Self-Assessment Report & Questionnaire, 2-Day Site Visit by External Review Team
March 2013	Medical Council of Ireland	Self-Assessment Report & Questionnaire
May 2014	UCD / RCSI Cross Institutional Review	Self-Assessment Report & Questionnaire, 2-Day Site Visit by External Review Team & 1 Day Site Visit to both UCD & RCSI
March 2015	Medical Council of Ireland	Self-Assessment Report & Questionnaire
April 2015	CORU Radiographers Registration Board (BSc in Radiography Programme)	Self-Assessment Report & Questionnaire, 3-Day Site Visit by External Review Team

7.2.   Teaching & Learning Quality Enhancement

Student Feedback on Modules

The School invites student feedback on all modules using the standard University student feedback tool. Response rates over the past five years have remained constant at between 20 – 25% of students surveyed.

Table 21   Summary of Student Feedback on Modules

Academic Year	Semester	No. of Modules	Number of Distinct Students Invited	Average Response %
2010/11	Semester 1	118	2237	19.1
	Semester 2	121	2132	19.6
2011/12	Semester 1	104	2207	27.2
	Semester 2	123	2271	19.9
2012/13	Semester 1	107	2280	26.2
	Semester 2	122	2414	19.6
2013/14	Semester 1	120	2413	29.5
	Semester 2	96	2301	20.5
2014/15	Semester 1	126	2605	23.7
	Semester 2	107	2353	19.6

Student Feedback by Module Grouping

A summary of Student Response Rates by Module Grouping is presented below. In this analysis, response rates were only considered for those modules where more than 30 students were surveyed. A detailed summary of Student Response Rates for individual module and individual module coordinator is available.

Average response rates range from 20 – 30% across most modules. Response rates for the Radiography modules are higher than for the Preclinical or Clinical Medicine modules. Response rates for Semester 1 modules are generally higher than for Semester 2 and response rates also decrease with increasing programme stage. Response rates for clinical medicine modules are significantly lower (15%) than for preclinical medicine (25-30%), again reflecting later stage modules having a lower response rate.

Table 22 Average Student Response Rates by Module Group

Module Group	Semester 1	Semester 2	Grand Total
Preclinical Medicine	28.3	26.9	27.7
Clinical Medicine	19.8	11.2	14.6
Radiography & Diagnostic Imaging	29.1	32.3	30.3
Forensic & Legal Medicine, Quality	16.6		16.6
Psychotherapy	11.1	3.3	7.2
Grand Total	**26.0**	**21.9**	**24.1**

(Only modules where >30 students were surveyed have been included in this analysis)

Cohort Analysis & Year-on-Year Comparisons

Under the direction of the Associate Dean for Programmes & Educational Innovation, periodic analysis of specific cohort performance and year-on-year comparisons are undertaken by the School's Education Development team.

New Programme Development & Changes to Existing Programmes

All new modules and proposed new programmes are reviewed by the relevant Head of Subject, Section Leader and either the Teaching & Learning Strategy Group and/or the Medicine Programmes Board with the final approval by the Dean of Medicine/Associate Dean for Programmes & Educational Innovation prior to review and approval by the College and University processes.

Student Survey of University Facilities and Supports

Our Health Science Programme Office on behalf of the College of Health Science Student Experience Working Group undertook a survey of all students within the College during Semester 1 of the current academic year (2015/2016). This survey sought to assess infrastructural supports, the student experience and the learning environment and is not specific to the School of Medicine. The results of this survey have not yet been reported.

8. Support Services

8.1. University-led Student Supports

While University-led student support services are, for the most part, very useful, there is a trend towards the devolution of administration from central service and support units to individual Schools. The Health Science Programme Office has collaborated with Student Support Services to enhance the following student services:

- Registry
- IT Services
- Estate Services
- Student Health

- Student Union
- Access and Disability
- Careers Office
- Library

8.2. School-led Student Supports

Health Science Programme Office
The Health Science Programme Office is the School's student-facing Belfield office, providing direct support for students at all stages as well as programme management support to academic staff. The office's commitment to student support is evident through the systematic evaluation of Programme Office activities and through regular consultation with stakeholders, students and staff to identify best practise.

Pastoral Support
The School Student Adviser provides support for all students, particularly first years, during their university experience providing access through an open door policy to students who wish to discuss any personal, social or practical issues.

The student adviser runs the successful Peer Mentoring Programme. All first year students from Medicine, BHLS and Radiography programmes are assigned a Peer Mentor for their first year. Peer Mentors are students who went through the first year of their programme. Their role is to help students settle into University and help provide information to any questions first year students may have.

During Orientation week Peer Mentors will act as guides to first year students. The Schools student adviser has also begun proving pastoral support to students based in hospitals which has not been available to students until this academic year.

Academic Support
Students are invited to attend Degree Committee meetings and places are made available to students at all Programme Board meetings. Class representatives are invited to attend thus ensuring students voices are heard at this level. Module coordinators are on hand to provide assistance with remediation solutions for IX applications to all students. The School acknowledges the ongoing need for this level of support.

The Programme Office conducted a research report into English Language Supports for PMC students, for whom English is not their first language, to best identify how to support these students during their time in UCD. The report was presented to Programme Board 26th November 2015 and particular English Language modules on offer in the Applied Language Centre were identified to be offered as electives to these students.

Module Level Support

Student feedback and module issues are discussed at Module Committees in subject/programme areas. Changes implemented as a result of student feedback are put into the module descriptors for the next year.

The School has expressed concern over potential bias in online module feedback arising from low response rates. With students in the School of Medicine taking a large number of modules there is a risk of student fatigue if asked for feedback in all modules. A selection of certain modules for feedback in different years may provide more balanced feedback.

Communication with students

- A new Programme Office Blackboard page for students has been established.

- Student enquiries are responded promptly in person, phone and by email.

- The School works closely with class representatives, Student Advisors and MedSoc to ensure student feedback is maintained throughout the academic year.

- As part of the Student Experience Group in the College of Health Sciences the student experience survey (9th-27th November 2015) seeks student's feedback in the areas of:

  1. Facilities
  2. Commute
  3. Campus Accommodation
  4. Library facilities and opening hours
  5. Printing Services
  6. Students Union
  7. Career Development Centre
  8. Student Health Service
  9. Administrative Support
  10. Access Centre Supports

Access to information

The Programme Office has worked with central University support services to improve access to critical student- and programme-level information including student credentialing, on-boarding for new international admissions, orientation, calendars, health screening, timetabling and event booking.

8.3. Student Support Objectives

The School's strategic objectives for improving student support services will be informed by feedback from the recent Student Survey. In the meantime, the School will continue to;

- Respond to the need to engage with students
- Work to establish the programme of pastoral care for students in hospital sites
- Systematically follow up students with academic and/or performance difficulties in a bid to provide supports before students reach clinical sites

9. External Relationships

The School of Medicine has an extensive array of external relationships which are important to both its teaching and research programmes. These are described briefly below.

9.1. University Relationships – College

Over the past ten years, the School has existed within a variety of college structures ranging from a large, non-executive College of Life Sciences through to a more focused College of Health Sciences. In September 2015, the School was placed within the College of Health & Agricultural Sciences. The School welcomes the recent clarification that Schools represent the fundamental academic unit with College structures acting to seed collaborations between Schools and to provide an oversight function. In recent years, the absence of a clear role resulted in the College of Health Sciences attempt to represent the business of the School outside of the normal School structures and without a clear understanding of School business. This resulted in considerable confusion and frustration across the School (e.g. College structures that did not include School leadership).

The establishment of the College of Health & Agricultural Sciences (CHAS) represents an important development in the health ecosystem within which the School operates. University Education / Research, Innovation & Impact / Global Engagement Groups have been established to provide high-level oversight and coordination of the development and implementation of University strategy in each domain. The CHAS has established a Working Group in each of these domains to maximize collaboration and synergies across Schools. The School is represented on each Working Groups by its respective Associate Deans. In addition, the Head of the School of Medicine is a member of the College Senior Management Team, which in turn reports to the University Management Team. In sum, there is a clear and robust framework through which School activity and capacity, can be informed by and input to University Strategy.
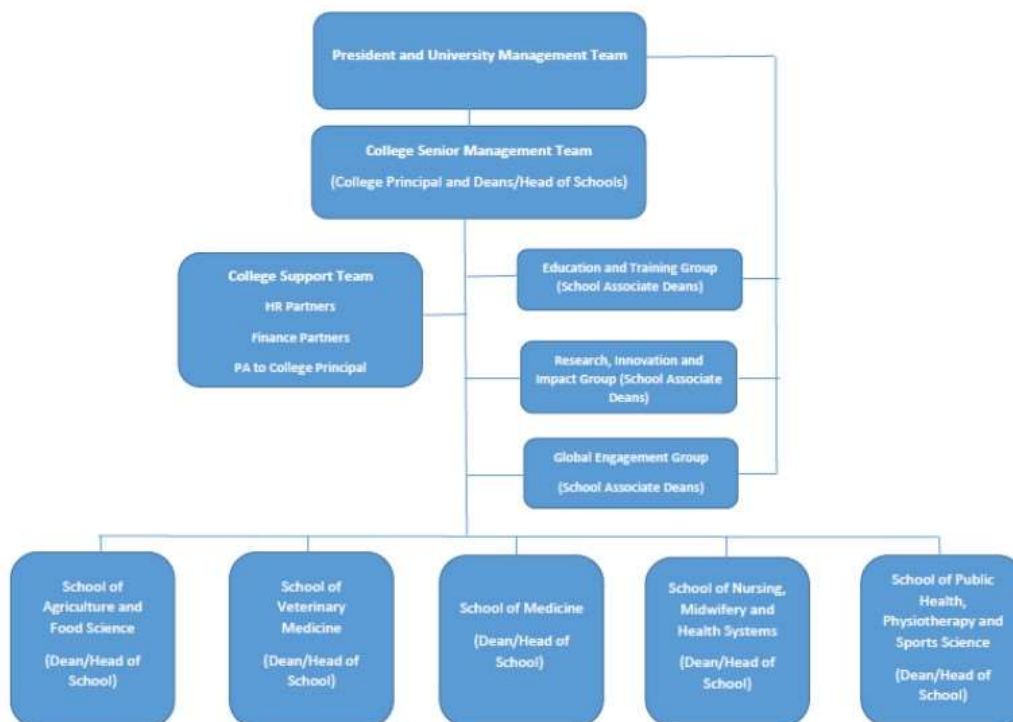
By way of example, in terms of future research priorities (programmes, capacity, infrastructure), the CoHAs is proposing six core themes which will form the focus of its developmental priorities in the medium term

- One Health
- Personalised and Translational Medicine
- Food & Health
- Health Systems & Health Services Research
- Early Childhood & Reproductive Health
- Public Health & Health Promotion.

It is envisaged that the School will continue its efforts to align its activity with those of CHAS as appropriate. Additionally, the University capital development plans involve the creation of a CHAS-led 'Health District' and it is envisaged that future School capital and capacity development will form part of this development.

9.2. University Relationships – Other Schools & Colleges

The School enjoys good collaborative relationships with a number of Schools including Biology & Environmental Science, Biomolecular & Biomedical Science, Chemistry, Physics, College of Engineering & Architecture as well as other Schools within the College of Health & Agricultural Sciences (Nursing, Midwifery & Health Systems and Public Health, Physiotherapy & Population Science).

Example collaborations include, but are not limited to:

- BSc in Biomedical, Health & Life Sciences degree (with the School of Biomolecular & Biomedical Science)
- Preclinical Medicine programmes (with Schools of Biology, Chemistry & Physics)
- Public Health module in Medicine programme (with School of Public Health)
- MSc in Child Welfare & Protection (with Schools of Nursing, Midwifery & Health Systems and the UCD School of Social Policy, Social Work & Justice)
- Healthcare Leadership Training (with School of Business)
- Research collaborations with the College of Engineering (anatomy, Charles Institute, surgery)

9.3. University Relationships – Research Institutes

The University continues to maintain an ambiguous relationship between Schools and Research Institutes where the latter are either research investment vehicles by the former or where they exist as independent, competitor structures. Nevertheless, the School of Medicine, as a major stakeholder within the UCD Conway Institute, strongly supports the development of multidisciplinary research institutes with or without centralised core technologies. For example, the UCD Conway Institute has a strong track record of multi-investigator research collaborations and has brought a clear research focus. Nevertheless, absence of clarity around the reporting relationships, has resulted in a competition for resources and an absence of strategic investment in both Schools and Research Institutes.

9.4.   University Relationships – Office of VP for Health Affairs

This office was established in September 2015 with a UCD Vice President for Health Affairs who acts as formal University representative on a number of hospital and healthcare boards including the Chief Academic Officer of both Ireland East Hospital Group (IEHG) and Dublin Academic Medical Centre (DAMC) and a Director of Penang Medical College (PMC).

9.5.   University Relationships – Support Units

The School has a multitude of essential ongoing relationships with a variety of central University support units. In most instances, these units provide highly responsive, professional services. However, a source of some frustration for a large School such as the School of Medicine is that Support Services seek to provide an equal support to all Schools with little regard to size of unit. The School's Biomedical Sciences Section is larger than many other Schools within the University.

9.6.   UCD Radiography & Diagnostic Imaging External Relationships

As the single education centre providing undergraduate education in Radiography in the Republic of Ireland relationships with both the *Health Service Executive* (HSE) and the *Irish Institute of Radiographers and Radiation Therapists (IIRRT*), the professional body for Radiographers in Ireland, are particularly important to the *Radiography & Diagnostic Imaging* Section. Two staff members currently sit on IIRRT Council, one member holds the education seat and is a member of the IIRRT CPD subcommittee.

Relationships with the HSE are maintained through meetings with their Health and Social Care Professions Education and Development Unit. Students from the BSc Radiography degree programme attend eight principal training centres across Ireland, namely five centres in Dublin: Mater Misericordae, St Vincent's, St James's, Beaumont and AMNCH University hospitals and three centres form regional placements for the Radiography students: Limerick, Galway and Cork University Hospitals. In addition students are placed in several paediatric and specialised centres across a number of further sites such as Our Lady's Hospital for Sick Children, Crumlin and the Blackrock Clinic for PETCT experience. Therefore the *Radiography & Diagnostic Imaging* Section not only has relationships with UCD affiliated centres but also a broad spectrum of centres beyond the *Ireland East Hospital Group (IEHG)*. Relationships are maintained with the Radiography training centres through Radiography Service Manager (RSM) meetings and RSM representation on the UCD Radiography Degree Committee (RDC). The *Radiography & Diagnostic Imaging* Section has two identified clinical placement coordinators who liaise directly with the RSMs and their Radiography practice tutors for clinical matters related to the BSc Radiography degree programme.

State registration became mandatory for Radiographers from October 31st 2015 in Ireland. In December 2015, Dr Louise Rainford was re-elected, following a previous three year term, to represent Radiography education on the Radiographers Registration Board (RRB), the Irish Health and Social Care Professions Council (CORU). Two further staff members from *Radiography & Diagnostic Imaging* are CORU qualification assessors for the RRB. Further external relationships exist with government tasked groups, with a *Radiography & Diagnostic Imaging* staff member sitting on the Radiation Safety Committee on Population Dose and on the National Advisory Group for: Nurse X-Ray Prescribing.

At a European level two staff from *Radiography & Diagnostic Imaging* hold senior positions within the European Society of Radiographers Societies (EFRS), as an EFRS board member and one as a member of the management team of the EFRS Educational Wing. The EFRS represents over 120K radiographers and 10K students and this organisational activity is an important aspect of focus for the Section of *Radiography & Diagnostic Imaging*. Within the breadth of activity within the EFRS, several *Radiography & Diagnostic Imaging* staff are involved in European funded projects and are actively working with other key professional groups on research projects and in the formulation of guideline and best practice recommendations for the clinical delivery of medical imaging.

One example of this activity is current work with the European Society Radiology and several other professional societies on the European Commission funded PiDRL Working Group. The presence of *Radiography & Diagnostic Imaging* staff in European funding call preparation activity is important to Radiography focussed research and one senior staff member is active in Joint Programme 'CONCERT - European Joint Programme for the Integration of Radiation Protection Research' (EC under contract No. 662287). Equally in the dissemination of research findings the Section of *Radiography & Diagnostic Imaging* needs to maintain an international presence and currently two staff are part of the editorial board for "Radiography Journal: Elsevier Publications, one being Associate Editor - Clinical Imaging (UK and Europe).

Further breadth of external relationships involving *Radiography & Diagnostic Imaging* includes a number of staff who are active members of European and International conference scientific programme committees. Staff are also involved in a range of professional societies for example one staff member is a founding member of the International Society for Forensic Radiology and Imaging, this activity aligns to postgraduate programmes delivered by Diagnostic Imaging in this field. It is important to note that *Radiography & Diagnostic Imaging* employs professionals from a range of backgrounds including Nursing and Midwifery and one staff member is part of the Bereavement Care Sub-group as part of the HSE National Implementation Support Group / Galway HIQA Investigations to develop a national guideline for bereavement support for pregnancy loss.

This brief summary of *Radiography & Diagnostic Imaging*'s relationships with external groups is not exhaustive but demonstrates the scope of activity within the Section.

9.7. Healthcare Relationships – Hospitals

Across all its programmes, the School has a network of clinical training sites comprising over 25 acute, general and specialist hospitals including:

Acute Hospitals
- AMNCH Tallaght*
- Beacon Hospital
- Beaumont Hospital*
- Cork University Hospital*
- Galway University Hospital*
- Limerick University Hospital*
- Mater Misericordiae University Hospital
- Mater Private Hospital
- Midlands Regional Hospitals (Portlaoise, Mullingar, Tullamore)
- Mid-western Regional Hospital*
- St Columcille's Hospital
- St James's Hospital*
- St Michael's Hospital
- St Vincent's University Hospital
- Wexford General Hospital

Maternity Hospitals
- Coombe Women & Infants University Hospital
- National Maternity Hospital, Holles St

Paediatric Hospitals
- Children's University Hospital, Temple St
- Our Lady's Children's Hospital, Crumlin

Specialist Hospitals & Care Centres
- Cappagh National Orthopaedic Hospital
- MMUH Charter Medical Urgent Care Centre
- National Rehabilitation Hospital, Dublin
- Our Lady's Hospice
- Royal Hospital Donnybrook
- Royal Victoria Eye and Ear Hospital
- St John of God Hospital
- St Luke's Hospital
- St Mary's Hospital

The formality of the relationships with these hospitals varies considerably and includes both public and private hospitals. Although the Health Service Executive is seeking to create hospital groups aligned to individual Universities, the School's hospital relationships extend far beyond the *Ireland East Hospital Group* which is the designated partner of UCD. Through our Radiography degree programme, the School has essential relationships far beyond this hospital group. Specifically, six of the eight radiography training sites is outwith the Ireland East Hospital Group. The HSE provides a Practice Tutor position at each hospital and the School provides the essential coordination of these individuals with the School and Programme.

9.8. Healthcare Relationship – General Practices

Through a succession of teaching and research collaborations, the School has ongoing relationships with over 190 primary care centres across the country. These relationships are principally managed through the School's General Practice group.

9.9. Healthcare Relationships – Other Organisations

In addition to formal relationships with individual hospitals, the School is actively involved with a number of other health service relationships including:

- Department of Health & Children

- Health Service Executive

- Dublin Academic Medical Centre, an alliance established in 2007 between the School, Mater Misericordiae University Hospital & St. Vincent's Healthcare Group.

- Ireland East Hospital Group

  UCD is the designated academic partner for the Ireland East Hospital Group (IEHG), which includes Mater Misericordiae University Hospital, St Vincent's University Hospital, National Maternity Hospital, Midland Regional Hospital Mullingar, St Luke's General Hospital Kilkenny, Wexford General Hospital, Our Lady's Hospital Navan, St Columcille's Hospital, St Michael's Hospital Dun Laoghaire, Cappagh National Orthopaedic Hospital, and Royal Victoria Eye and Ear Hospital.

- National Paediatric Hospital Group comprising the three Dublin Paediatric hospitals and the vehicle for the creation of a new National Paediatric Hospital.

9.10. Other Academic Relationships

Coombe Healthcare Centre
The Coombe Healthcare Centre is a UCD-owned academic general practice located on the grounds of the Coombe Hospital, serving a socially deprived population of approximately 7,000 patients. The UCD General Practice group also has a network of practices throughout Ireland used for teaching. This is a growing and very successful resource.

UCD Centre for Emergency Medical Science
The *UCD Centre for Emergency Medical Science* was established within General Practice 15 years ago and is now a national centre of excellence for research, development, education and training in pre-hospital emergency care. It provides training and skills development for paramedics and advanced paramedics principally employed by the National Ambulance Service and Dublin Fire Brigade. It has forged links with Pre Hospital Emergency Care Council (PHECC), HSE and with ICGP.

Penang Medical College
The School and the Royal College of Surgeons in Ireland (RCSI) jointly own and run the Penang Medical College in Malaysia. Established in 1996, the programme graduates approximately 150 doctors each year. Students take the first half of their programme in Dublin, half in UCD and half in RCSI, and return to Penang in Malaysia for their clinical training. Although these operations provide significant and diversified revenue to the School, the programme has come under significant pressure in the past two years due to the sudden cessation of Malaysian government funding for overseas medical education, related to difficulties in the Malaysian economy. The PMC Programme underwent a formal quality review under a joint institutional quality review by RCSI and UCD in April/May 2014.

Study Group International

A small number of applicants from Saudi Arabia, Kuwait and Oman to undergraduate medicine come through the SGI programme which was developed as part of the UCD –TCD Alliance. Students in this programme take a pre-university programme which was developed jointly by UCD, TCD and SGI. TCD have withdrawn from this initiative in 2015 and at present there is no plans for intake via this route in September 2016.

International Exchanges & Electives

A number of Erasmus exchange opportunities exist within the final year of our Radiography programme however there has been no Erasmus exchanges within the Medicine programme due to difficulty in identifying suitable matching programmes.

The School has a number of elective exchange agreements with many North American medical schools and is currently establishing a small number in the developing world. These North American electives are particularly critical to our North American students but also to Irish students who may wish to train later in US or Canada.

Universitas 21

University College Dublin is a member of an association of 25 research-intensive universities and the School is an active member of the U21 Health Group. Our Dean, Prof Patrick Murray has recently completed a term as Chair of the U21 Health Group and UCD hosted a highly successful U21 Health Group Annual Meeting in 2013.

Other Academic Relationships

Other academic relationships include:

- Medical Council of Ireland, who are responsible for accreditation of Medicine programme
- CORU, the Health & Social Care Professionals Council who are responsible for accreditation of Radiography programme
- Irish Universities and Medical Schools Consortium, a collaboration involving NUIG, TCD, UCC and UCD Medical Schools.
- Council of Deans of Faculties with Medical Schools of Ireland, a forum of all Medical Schools within the Republic of Ireland including NUIG, TCD, UCC, UCD, UL and RCSI.
- Medical Graduates Association, a volunteer committee which coordinates annual class reunions and which includes a branch organization, the North American Medical Graduates Association.

9.11.   Recruitment Agents

The School uses a number of agents to recruit international students to our direct entry, twinning and graduate entry Medicine programmes.

- In Malaysia and Singapore, the School recruits through the IUMC consortium (in conjunction with TCD, NUIG and UCC).
- The University has established a Regional Office in Kuala Lumpur which once established is likely to become our principal office for recruitment in the future.
- The School uses the agency *Atlantic Bridge,* which has offices in California and Dublin, to lead its recruitment in North America. *Atlantic Bridge* have recruited for all the Irish medical schools for approximately 20 years and provide a reliable and competitive professional service. Atlantic Bridge liaises with US Federal Student Aid, an office of the US Dept. of Education, which funds most US students studying in Ireland.

10.SWOT Analysis & Overall Analysis

10.1. Overview

Given the size of the School of Medicine and the breadth of its activities, presenting a comprehensive description of its activity has necessitated a considerable quantum of detail in Chapters 2-9. Chapter 10 aims to highlight the key issues which might form the basis of reviews by panel, by presenting and discussing the results of recent SWOT analyses undertaken by the School, and a summary analysis of chapters 2-9.

10.2. Recent SWOT Analysis

The staff surveys conducted in preparing this Report highlighted issues which have featured in recent consultations with staff and students and which have informed the School Strategic Plan. Appendix 2 contains the full results of these surveys and these are further summarised in Table 23, which also incorporates results of SWOT analysis conducted as part of All School Meeting on 4/12/15.

The SWOT Analyses highlighted core strengths of the School and subsequent consideration of this report by both the SARCC and School Executive indicated these should be highlighted in any quality review / assurance / improvement mechanism, especially:

- The calibre of the School's students and the School's graduates
- The motivation, commitment and calibre of the School's staff
- The School's reputation within UCD and internationally (especially with regard to research), as evidenced by UCD being ranked 99th in the 'Clinical, Pre-Clinical and Health Sciences' category of the Times Higher Education Rankings (2015)
- The number, diversity of the School's educational programmes
- The number and diversity of the School's research programmes, research profile of principal investigators
- The number and quality of the Networks and Centres which support the School's academic activity.

In the SWOT analyses, we asked colleagues and students to outline areas where the school could further improve. In many instances, respondents repeated the same issues which they had also indicated were 'strengths', justifying this with comments such as 'we need to pursue excellence in this' or 'we can be the best'. Specific examples of areas for improvement which were also strengths included: 'small group teaching' (good, but need more of it), reputation (increase staff involvement in policy making), educational programmes (enhance collaboration between disciplines), research (further expansion of infrastructure, i.e. Centres / Networks). Other specific areas for improvement related to academic governance (e.g. Sections should have greater role in the management of academic activity), improved communication (e.g. within and between Sections), HR (e.g. retention and promotion of staff). Finally, the relationship with other structures within UCD emerged as a challenge, however not as prominent in more recent SWOT analyses, probably representing considerable recent focus on developing these relationships by the School.

The SWOT analyses were especially useful in identifying issues which might form a greater focus for the School's efforts in the years ahead. There was considerable overlap between 'Opportunities' and 'Threats' and hence are considered together:

Healthcare in Ireland is undergoing considerable transformation in both policy and its implementation. Although reforms such as the introduction of free GP care and the establishment of hospital groups may impact on the School's capacity to discharge its academic activity, nonetheless they generate considerable opportunities for research (e.g. to inform or evaluate these interventions) and education (e.g. to deliver the necessary to doctors and other healthcare professionals). Furthermore, the proactive involvement by staff in 'policy level activity' (e.g. professional bodies, HSE, HEA, hospital groups), and sharing the insights this might generate, with colleagues within the School is to be encouraged.

It is recognised that the adverse economic conditions nationally during the time period 2008-11 impacted considerably on the extent to which the findings of the School's 2008-9 Quality Review could be implemented. However, with a different prevalent economic climate in 2015-16, there is an expectation that the School will negotiate adequate resources from College and University to ensure the recommendations of this review will be resourced. In addition, the improving economic climate means the School should adopt an aggressive stance in the pursuit of exchequer and non-exchequer funding, especially where infrastructure (Centres / Networks) are concerned.

Table 23   Summary of SWOT Analysis 2013 – 2015

Strengths	Areas for Improvement	Opportunities	Threats
• Students: High performing, motivated and culturally diverse • Staff: Breadth, expertise, external leadership, clinicians • Reputation: Alumni network, position within UCD, national centres (e.g. EMS, Radiography) • Educational programmes: Integrated / modular / semesterised curricula; well developed SSRA / Horizons / clinical electives programmes, collaborative BSc in BHLS, educational technology has improved • Research: Large number of PIs, Centres, collaborative network, PhD programme in Translational Medicine, strong links with industry • Facilities and networks: Good teaching facilities on campus and at affiliated teaching hospitals / general practices[2], solid collaborative links nationally (e.g. CDFMSI) and internationally (e.g. U21). • General: Strategy articulated and aligned to UCD Strategy, strong economic activity, communication	• Student:Staff Ratios, small group teaching, better support for international students • Staff: Recruitment / retention / promotion, teaching loads, autonomy in recruitment, limited capability to contribute to School, competing priorities (e.g. practice) • Reputation: involvement in policy discussions • Educational programmes: multi-disciplinarily • Research: outputs could be better; research staff not involved in teaching; research infrastructure could further develop • General: Academic governance structures unclear / limited discretionary funding for sections, inter / intra - departmental communication and collaboration could improve, relationship with College unclear but improving	• Interface with Clinical Sites: Reconfigured Hospital Groups / Primary Care Networks can synergise with School activity, role of clinicians in School activity (e.g. clinical tutors, academic fellows) • Enhance multidisciplinary component of teaching and research programmes • Introduce new postgraduate programmes in strategic areas (e.g. 'omics', 'personalised medicine', health behaviours, primary care) • Align investment with School strategy • Improving economic climate nationally • Align quality review and strategic plan to high level investment	• Transformation and new policy implementation in healthcare in Ireland (e.g. Groups, 'free' GP care) • Finite capacity within health system to support academic endeavour • Investment needed in clinical sites and networks • Competition from other institutions for national and international funding and staff • Challenges encountered by international students (funding, registration) • Further decline in Exchequer funding • Introduction of Student fees

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[2] largest primary care teaching network in Ireland

10.3. Synthesis of SWOT Analyses with Chapters 2-9

In Chapters 2-9, this Report presents a comprehensive overview of the School's activity. Table 24 synopsises the detail of each Chapter and where it has been provided, outlines areas for improvement / priorities as provided by Writing Group members.

With regard to *Organisation & Management*, the size, scale, and diversity of the School (activities, sites, and people) is again highlighted as is the rigorous committee / management structure which supports and oversees this activity. Though the School has invested considerable effort in establishing structures to promote and facilitate communications, this is still an area where it wishes to become even better. With an improving economic climate, enhancing the financial autonomy of the School and indeed its constituent Sections will be important, especially where addressing the findings of this Quality Review and strategic infrastructure are concerned.

The large number of *staff*, and the gender / age distribution are a key asset of the School. However, as a result ensuring consistency in staff recruitment, induction, retention, development and promotion is a challenge; with interventions such as peer mentoring being worthy of consideration. The UCD campus and Health Sciences Building are recognised as excellent facilities for students and staff. The recent investment in academic facilities at some hospitals have been important developments and such investment in facilities at clinical sites and virtual networks that support the School's academic activity should clearly be a focus of any future investment by the School.

With regard to *Teaching, Learning & Assessment* and *Curriculum Development & Review*, robust academic governance, external accreditation are standard processes across the School. The School supports University-wide initiatives such as programme mapping / enhancement and to further develop a recognised strength, Technology Enhanced Learning. The School's continuing efforts to reduce group size in non-lecture encounters and to increase non-didactic curricular content (problem solving, data interpretation, presentation) educationally challenging interactive teaching encounters with expert academic staff, should be encouraged.

With regard to *Research, Innovation & Impact*, the School's activity and capacity have grown despite a challenging funding environment. Recognising the changing economic milieu in which it operates, the School aims to strategically invest a proportion of revenues into research support and to aggressively target future research funding.

With regard to *Management of Quality & Enhancement*, while the School is subject to frequent critique by external accreditation bodies, there is a sense that this is perhaps too frequent? Coordinating and synchronising accreditation / audit / quality assurance efforts has emerged as one solution to address any 'evaluation fatigue'. The School wishes that Quality will be a specific priority for the Dean, Associate Deans and Section Leaders; coordinated efforts to produce periodic reports from each might additionally attenuate any 'evaluation fatigue'.

With regard to '*Support Services*', while this Report was being undertaken the College has conducted an extensive Student Survey. While the results of this survey were not available at the time of submission, the School recognises addressing any findings to emerge from this survey will be a key priority in the coming years. In addition, the School remains committed to continuing to provide dedicated units and resources to support student experience.

Finally, especially with health systems internationally undergoing considerable reforms, it is envisaged that '*External Relationships*' will be a key focus for the School's activity. To this end, the School is committed to consolidating existing and developing new relationships, especially with clinical sites.

Table 24 Synopsis of Chapters 2-9 Using SWOT Framework

	Strengths	Areas for Improvement	Priorities (i.e. Opportunities / Threats)
Organisation & Management	• A large, diverse and geographically dispersed Unit • Comprehensive and elaborate committee / management structures	• Communications	• Financial autonomy
Staff & Facilities	• Large number of staff, gender balance across grades, young age, however… • UCD campus and Health Sciences facilities • Large number of clinical academic sites	• Recruitment, induction, professional development and career progression	• Formal peer mentoring programme? • Further strengthen a recognised strength of the School by formalising relationships and investment in clinical academic infrastructure (especially Centres / Networks)
Teaching, Learning & Assessment	• Diverse portfolio • Rigorous accreditation and governance		
Curriculum Development and Review	• Structures and processes that routinely promote continuous renewal (e.g. staff feedback, student feedback, annual teaching forum, periodic quality reviews and external accreditation reviews) • The Clinical 1 Project (e.g. integration, collaboration, and enhanced learning in general practice and the community	• Need for programme mapping across university	• Programme enhancement • Further develop a recognised strength - Technology Enhanced Learning
Research, Innovation & Impact	• Growth in research activity despite challenging funding environment • School research strategy • Academic Research Centres		• Strategically invest a proportion of revenues into research support
Management of Quality & Enhancement	• Frequent critique by external accreditation bodies	…perhaps too frequent?	ensure that Quality remains a priority for all staff but with specific priorities for the Dean, Associate Deans and Section Leaders

	Strengths	**Areas for Improvement**	**Priorities (i.e. Opportunities / Threats)**
Support Services	• Dedicated unit (Programme Office) to support programmes and student experience • Student advisor, peer mentoring programme		Implement recommendations of Student Survey
External Relationships	Extensive external relationships specifically: University (College of H&AS, Research Institutes, Office of VP for Health Affairs, Support Units etc), Hospitals, General Practices, Other Organisations, Penang Medical College, Study Group International, Electives, Universitas 21		Consolidate / strengthen existing and develop new relationships especially clinical sites

10.4. Conclusions

This report, prepared by a core 'writing group' and guided by the SARCC and School Executive Management Committee, has endeavoured to detail the School's activities comprehensively. Chapter 10 aims to outline strengths, areas for improvement and future priorities by reporting a number of SWOT analyses and reflecting on these findings in the context of the preceding chapters. Soon after work had commenced on the Report, external validation of its activities came in the form of UCD being ranked 99th in the 'Clinical, Pre-Clinical and Health Sciences' category of the Times Higher Education Rankings (2015). While welcoming this endorsement, the School remains committed to ongoing quality improvement and aspires to this ranking improving further.

To this end, the School is committed to the active implementation of the recommendations of the Quality Review, specifically early implementation of cost neutral recommendations and subsequent engagement with stakeholders to implement those which will require resources.

11. References

References

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6. *The Establishment of Hospital Groups as a transition to Independent Hospital Trusts* Dublin: Department of Health and Children, 2013.
7. *Ireland's Global University (UCD Strategy 20015-2020)*. Dublin: University College Dublin, 2014.

12. Appendices

Appendix 1. Self Assessment Report Coordinating Committee Membership.

Full Name	Constituency 1	Constituency 2
Dr Aoife Canney	Biomedical Sciences	Clinical Tutors
Dr Audrey Melvin	Medicine & Medical Specialties	Clinical Tutors
Dr Cliona McGovern	General Practice, Forensic & Legal Medicine	Lecturer & Senior Lecturers
Dr Karina Knight	Surgery & Surgical Specialties	Clinical Tutors
Dr Leo Lawler	Medicine & Medical Specialties	Clinical Faculty
Dr Louise Rainford	Diagnostic Imaging	Lecturer & Senior Lecturers
Dr Paddy Mallon	Medicine & Medical Specialties	Lecturer & Senior Lecturers
Dr Peter Doran	Research Institutes or Centres	Lecturer & Senior Lecturers
Dr Shane Foley	Diagnostic Imaging	Lecturer & Senior Lecturers
Dr Sinead Murphy	Women's & Children's Health	Lecturer & Senior Lecturers
Dr Stuart Bund	Biomedical Sciences	Lecturer & Senior Lecturers
Mr Gary Perry	Technical Staff	Teaching Support Staff
Mr Paul Harkin	Administrative Staff	Senior Administrative Staff
Ms Amanda O'Neill	Technical Staff	Research Support Staff
Ms Barbara Cantwell	Administrative Staff	Administration Managers
Ms Gina Mullins	Administrative Staff	SEA & EA Staff
Ms Jacintha Vallely	Administrative Staff	SEA & EA Staff
Ms Judy Farrell	Administrative Staff	SEA & EA Staff
Ms Kasia Guaghan	Administrative Staff	Administration Managers
Ms Margaret Tiuchta	Administrative Staff	Administration Managers
Ms Stephanie Begley	Administrative Staff	Administration Managers
Prof Denis Shields	Research Institutes or Centres	Associate Professors & Professors
Prof James Jones	Biomedical Sciences	Associate Professors & Professors
Prof Jason Last	Biomedical Sciences	Associate Professors & Professors
Prof John M Ryan	Medicine & Medical Specialties	Clinical Faculty
Prof Malcolm Kell	Surgery & Surgical Specialties	Clinical Faculty
Prof Michael Turner	Women's & Children's Health	Associate Professors & Professors
Prof Patrick Murray	Medicine & Medical Specialties	Associate Professors & Professors

Full Name	Constituency 1	Constituency 2
Prof Walter Cullen	General Practice, Forensic & Legal Medicine	Associate Professors & Professors

The Self Assessment Report Coordinating Committee (SARCC) was established in October 2015 and met in October 2015, January 2016 and February 2016 to oversee the preparation of the Report and its use in the Site Visit. Members of the School Executive (which includes Associate Deans and Heads of Academic Sections) and the School Management team were invited to nominate members to the Committee at meetings between July and October 2015. In addition to nominees identified through this process and to ensure the SARCC was representative of constituencies within the School, the Quality Team also invited colleagues to participate in its activities. At the first meeting of the SARCC, a subgroup was identified to prepare an initial draft of the Report for consideration by School Executive, Management Team and SARCC.

Appendix 2. Supporting documentation in respect of SWOT analysis.

SWOT ANALYSIS 2013-14

CONTEXT

The following analysis represents a distillation of outputs from a number of strategic consultations which have taken place across the School between November 2013 and April 2014 as part of the School's biennial strategic planning process. These consultations have taken the form of School-wide, Section-wide and specific committee meetings, small group discussion, as well as online staff surveys. As the output from the College of Health Science SWOT has only recently emerged, that document has not yet been extensively debated although we note that a number of School staff have been involved in its synthesis.

SCHOOL STRENGTHS

Our staff have identified the following key School strengths:

Student-Related

Large cohort of high performing, vocationally-driven students who are active university participants

Strong international representation and cultural diversity among student body

Highly motivated, dynamic and engaged student body

School disproportionately represented among *Ad Astra* academic, performing arts and sports scholars

Critical mass of high quality Graduate Research students at Masters and Doctoral level

Staff-Related

Calibre and expertise of academic staff spanning a wide range of subject areas

Senior clinical leaders within national and international healthcare systems

Commitment, dedication and professionalism of academic-support staff

Extensive worldwide network of alumni who support current graduates with elective opportunities

Experience post-doctoral community which supports the graduation of significant numbers of doctoral students annually

Extensive faculty of clinicians that are committed to teaching and deliver excellent clinical training

Strong patient support for clinical training and skills development

Strong clinical tutor induction training which aligns NCHD's to School's educational philosophy

Research-Related

Large research community that includes a number of world class investigator groups

Extensive network of national and international research collaborators

Enthusiastic participation of world class researchers in our teaching programmes and research-active teaching staff

Modern multi-disciplinary research institutes with sophisticated research-support technologies

High quality externally-funded thematic PhD programmes

Tradition of good postdoctoral training and development

Good examples of links with pharmaceutical, biopharmaceutical and medical device industries

Programmes-Related

Strong portfolio of high demand programmes which support career-long education

Modern integrated curricula which reflect current healthcare needs and priorities

Large portfolio comprising fundamental biomedical research and translational clinical research

Highly successful *Student Summer Research* initiative which seeds undergraduate student engagement in research with transitions into intercalated masters and PhD programmes

Benefits of innovative UCD Horizons education portfolio

Extensive international student study options including prestige placements (e.g. Paediatric rotations at Harvard Medical School)

National leadership in medical education and in technology-enhanced learning

Frequent external accreditation by regulatory and quality authorities

Cadaveric teaching supported by world class anatomy dissection facility and a human body donor programme

Highly prized, innovative *BSc in Biomedical Health & Life Sciences* delivered in conjunction with SBBS

Brand & Reputation

School's position as a leading Irish Medical School within an internationally recognised University

National centre for undergraduate Radiography education and internationally-recognised diagnostic imaging unit

National leader in the provision of emergency medical science education and training

National leader in clinical translational research with professional clinical research centre

National leader in a number of specialist subject areas (e.g. forensic medicine, psychotherapy)

Strong national reputation for engaging with charity and patient advocate groups which has resulted in the development of innovative modules and patient engagements (e.g. early patient contact, patient educators, rare disease module)

Facilities & Partnerships

Strong education and research collaboration between academic and clinical staff

Excellent teaching facilities on Belfield campus

Strong links to Ireland's two largest and leading acute teaching hospitals

Large clinical training network of acute, specialist and general hospitals as well as primary care centres

High quality research infrastructure at Belfield campus and emerging clinical research facilities are principal teaching hospitals

Attractive campus with excellent student study and sports facilities

Location within vibrant European capital city with easy access to city centre

Strong collaboration with other Schools

Strong collaboration with other Irish Medical Schools (IUMC, CDFMI)

Business partnership with Royal College of Surgeons in Ireland in *Penang Medical College*

Academic staff hold national and international leadership roles

Leadership role in Universitas 21 Health Science Group

Leadership in *Irish Universities & Medical Schools Consortium*

Staff leadership in postgraduate training colleges

Other Strengths

School business routinely scheduled from 7am – 7pm and at weekends

Significant annual operating surplus

Track record of consistently delivering on financial targets set by University

Clear sense of strategic priorities / alignment of staff to strategic objectives ⬚   School strategy aligns closely to University strategic plan

SCHOOL WEAKNESSES

Our staff have identified the following areas of deficient or requiring further development:

Organisation

Lack of clarity in the relationship between School and associated Research Institutes

Lack of distinction between School business and College activities

School management structures being undermined by College processes ⬚   Large School under-represented in University governance structures

Sense that parts of the University are working against School objectives

College activity is distracting School from its own priorities and plans

Little added value identified at College level

Negative/mis-representation of School and its relationships by College (considerable anger)

Student-Related

Challenging timetable logistics

Declining staff : student ratios across all programmes

Declining opportunity for small group teaching

Some modules contain very large student numbers

Difficult in giving individual student feedback due to class sizes

Tendency to increasingly use MCQ exams due to class sizes

No support for foreign language students

Need for better support of cultural diversity among student body

Significant competitive pressures on students

Staff-Related

Loss of experienced staff of all types and levels through incentivised early retirement

Significant number of vacant posts (particularly clinical leadership posts)

Challenge in filling vacancies (especially academic consultant posts) due to uncompetitive salaries

Little opportunity for staff mentoring and personnel development

Some staff carrying excessive teaching workloads

Inconsistent engagement by peripherally located clinical staff

Growing dissatisfaction among / lack of University recognition for contribution by clinicians not employed by UCD

Dissatisfaction with HR research policies especially the postdoctoral research career pathway

Failure to leverage teaching resource from among very large consultant body

Increasing sense of disempowerment among academic staff

Staff being dissuaded from engaging external experts for occasional lectures

Many expert staff not obviously linked to School of Medicine

Considerably School resource consumed in support of non-strategic recruitment

Little integration of recent research recruits into School

Expert talent not adequately showcased

Medicine considered a place where research staff disappear

Dissatisfaction expressed by occasional lecturers in payment, orientation, feedback ⬚ Lack of control over key HR processes

Academic workload model not recognise all academic duties / activities

Clinical service pressures and priorities impact upon meaningful engagement with University

Programme Related

Constant tension between subjects for available curriculum time

Declining numbers of laboratory practicals, tutorials and small group teaching ⬚ Little multi-disciplinary engagement

Challenge in getting 'Omics involved in vocational education (relevance of increasing specialties in general medical/science/healthcare education)

Education technology not fully deployed across School

Research

Staff and students not aware of School's research leaders who can inspire to greater achievement/discovery

Significant number of staff recruited by University strategic themes not relevant to School strategy

Success rate in securing national grants not consistent with School size

Poor success in securing EU grant funding

Significant exposure to policy changes by small number of research funding agencies

Research profile not reflective of School activity due to large number of competing research brands

Lack of innovation outputs (Invention Disclosures, Patents & Spin-out company)

Research staff disconnected from the business of training doctors and healthcare professionals

No plans for sustainability of large research investments (other than underwrite by School)

Difficulty in getting research staff engaged in complex teaching programmes

Impenetrable curriculum (difficult to access ; difficult to engage current research into programme)

Reputation

Danger of complacency in leadership position / Should benchmark ourselves against international best not national leadership

School not seen as a leader in health/education policy discussions

Environment

Increasing resource pressures within clinical arena impacting upon educational activities

Complex University processes / modularisation system not conducive to occasional engagement

Sense of frustration at need to justify obvious business decisions to an organisation that is increasingly managing defensively

Lack of organisational agility

Geographical spread of staff makes effective communication difficult

Sense that communication is one-way / General lack of proactive response

Many staff within swipe accessed buildings reducing opportunity for casual engagement
    Absence of staff common area

Few dedicated academic meetings in the School / School meetings tend to be administrative/business

Bike and car parking an issue (particularly for staff visiting from clinical sites)

Almost no links between Human and Veterinary Medicine Schools

Little School leadership of wider health agenda

Adversarial relationship between Govt and our clinical partners (anti-voluntary hospital bias?)

Resources & Finance

Very small discretionary budget available to School and/or Section Leaders

Lack of re-investment in key School priorities

Sense of having to fight to retain own resource

OPPORTUNITIES FOR SCHOOL

Use re-configured hospital networks to reduce student numbers at principal clinical sites

Engage large untapped cohort of clinical staff in educational programmes

Develop specialist clinical fellowships exploiting centre of excellence expertise

Refine academic workload model to benchmark expected contribution by all staff to teaching

Multi-disciplinary engagement with engineering, veterinary medicine, business, etc

Develop clinical simulations, situational awareness, multi-disciplinary team working

Create a distinctive Medicine programme by developing a 'minor' option that leverages Horizons portfolio

Further increase patient and advocate engagement

Grow student numbers in intercalated masters programmes to support progression into graduate research programmes

Continuous professional development for healthcare professionals

International opportunities within Diagnostic Imaging

Online/occasional min-modules aimed at needs of healthcare professionals

New modules which exploit research expertise (personalised medicine, 'omic technology) ⬚
Harness powerful connections of alumni

Cross-disciplinary education

Align investment with key School priorities

Present coherent School leadership role in national health/education debates using current expertise

SCHOOL THREATS

Increased national and/or international competition

Changes in international governments' policies wrt medical education and training

Significant exposure to currency fluctuations / international markets

Confused College engagement with clinical partners could damage delicate clinical relationships

Loss of intrinsic goodwill among clinical community through lack of visible investment

Loss of expert staff due to poor progression opportunities (promotion quotas)

Alarming shortage of quality NCHD's on whom School relies to realise clinical teaching opportunities

Increased service pressure on clinical staff reduces willingness/availability to participate in teaching

Continued adversarial attitude by HSE to our key partners

School reputation for excellence suffers from failure to invest in clinical training sites

Changes to US and Canadian legislation makes it increasingly difficult to repatriate NA students

Continued drift of Irish funding agency focus away from biomedical or clinical research towards applied research

Reputational damage by association with an under-resourced or poorly performing hospital network

Government decision to split traditional UCD affiliated hospitals to networks connected with other Medical Schools

Loss of influence through the establishment of a hospital network trust that prioritises service over research and/or education

EDUCATION CONSIDERATIONS FROM SMMS RETREAT MARCH 2014

Attendees were asked to consider the following questions in the context of the strategic priorities of the school:

In your own individual educational practice, what three enhancements would you like to make in the next three years?

In your subject area / discipline, what three enhancements would you recommend happening in the next three years?

What ambitions do you have for your section / school over the next 5 years that are related to the educational priorities? What are the barriers to achieving these ambitions?

In addition, attendees were invited to comment briefly on the potential educational training courses that they would value being made available to colleagues. The written responses and discussions are summarized below:

PERSONAL TEACHING IMPROVEMENTS

Developing new modules and programmes: CPD x 2, personalized medicine x 2, biomedical modules aimed at health professionals

Assessment – international validation, increased diversity, generally improve assessment methodologies x 3, develop MCQ writing skills x 2, improve OSCE assessments

E-learning and online learning skills development x 4

Teaching enhancement – increased prep time x 2, improved student engagement in lectures x 2, understand the curriculum x 2, increased small group teaching x 2, increased practical's x 2, teach more in my area of expertise

SUBJECT LEVEL ENHANCEMENTS

Module delivery changes – improve clinical learning environment, engage postdoctoral researchers in teaching, engage research professors in teaching, use laparoscopic and interventional radiology based teaching tools in anatomy, interdisciplinary input

Module content changes / new modules – personalized health, genomics, bioinformatics, connected health, medical devices

Programme changes – greater integration with other subjects whilst maintaining subject identity, develop BSc's in more medical science disciplines, anatomy and physiology collaboration in BSc physiology

SCHOOL AMBITIONS

Learning environment and student experience

Prioritise the student experience

Develop clinical education and student support spaces in all clinical sites

Review capacity management across clinical sites

Make tutor posts more attractive in clinical sites associated with the UCD clinical training network

Educational enhancements

Develop an international SSRA summer school

Develop a strategy that improves the writing skills of students across all programmes

Re-develop the portion of the medical programmes that transitions students from the early curriculum to the final two years of the programmes

Ensure coherence of the educational experience for students across programmes

Increase AV/IT / Online support

Upskill academics in the areas of assessment and online learning

Develop CPD programmes for the IEHG

Use the principles of action research to investigate assessment methodologies and embed changes in practice accordingly

Develop an education unit / medical education research unit

Assessment enhancements

Develop a bespoke clinical assessment / examination space based in a clinical site

Investigate the use of automatics electronic assessment methodologies

Develop MCQ analysis expertise

Consider remote assessment tools

SUGGESTED CONTENT FOR 'TEACHING THE TEACHER' STYLE COURSES

Giving effective feedback to students

Student mentorship

Online learning methods

Practice based modules with reflection of actual teaching

Accessing networks of knowledge about teaching

Use of feedback tools during class – clickers polls etc

Training in MCQ design, implementation, analysis online marking

Academic regulations

Roles and responsibilities of research supervisors

Online delivery

Curriculum alignment

Assessment methodologies and standard setting

Synopsis

The personal, subject and school level ambitions align in the areas of the student experience in clinical sites, online learning and assessment. These areas will need to be further prioritized in the School's educational plan. The majority of suggestions reflect that most attendees are aiming to improve the existing programmes; driving the quality imperative. The only areas for suggested new course development are CPD or similar small programmes that bring the campus based biomedical expertise to clinical sites / IEHG.

SWOT Analysis conducted as part of School Survey, November 2015

List one strength of the School	*List one thing about the School that could be improved*	*List one opportunity for the School*	*List one threat the School might face*
• Staff • Reputation	• Clarify academic governance structures • Improve Interdepartmental communication • Improve Intradepartmental communication • Increase collaboration	• Create Innovative programmes • Increase collaborative research across university • Improve organisational structures • Ensure all teaching staff contribute equally to teaching • Build on strong reputation	• Staff recruitment, retention and promotion • Reduced small group teaching • Uneven teaching workloads

Critique of College SWOT Analysis by UCD School of Medicine & Medical Science

REVIEW OF COLLEGE OF HEALTH SCIENCES SWOT ANALYSIS

Having operated successfully for a number of years as an Executive School within a virtual College, it is perhaps not surprising that a persuasive rationale for the College has not yet emerged. The School of Medicine is a large School with several of its constituent Sections larger than some other UCD Schools. Hence the School currently performs the executive oversight role which the College currently seeks.

Strengths

It has been noted by the School staff that the strengths and opportunities identified by the College are opportunities which exist within the Schools whilst many of the threats and weaknesses arise as a result of the failure to define as yet a compelling role for the College. Specifically the calibre of academic staff, the existence of specialist areas (Public Health, Diagnostic Imaging) existing large programmes, flexible provision of new programmes (including Graduate Entry Medicine), innovation in teaching and learning have all emerged from Schools prior to the formation of the College.

It is a stretch to claim that the College of Health Science has a strong brand, international profile or a strong alumni network. Alumni connections are generally not well developed within constituent Schools and if they were, these would be mediated at a School level or below. The opportunity for, and enthusiasm to pursue interdisciplinary training is overstated also. The inclusion of a number of research institutes (Conway) and business units (NVRL) highlights the prevailing governance confusion.

The College does not generate a surplus income but rather is a charge to the surplus generated by constituent Schools. Nevertheless, the School of Medicine & Medical Science would be prepared to support this overhead charge if a persuasive case for the College can be established where there was clear 'value add'.

Weaknesses

The School would agree with the contentions that a purpose of the College needs to be clearly articulated and that the governance relationships between Research Institutes v Schools v Colleges needs to be resolved. Many of the weaknesses described thereafter flow from these fundamental existential considerations. The lack of enabling structures, burdensome central admin processes and poor communication cited in the CoHS SWOT further question the College 'value add' proposition.

We would question the repeated negative statements with respect to clinical training sites. These are at times overstated and in danger of becoming self-fulfilling prophecies. Also we would reject the statement that there is no engagement with primary care or community medicine. The School of Medicine has the largest primary care training network within the country (120+ practices), hosts two GP training schemes, has student rotations at several community nursing homes and delivers a highly commended 'Medicine in the Community' module which integrates primary care and geriatric medicine.

Having led the establishment of the *Dublin Academic Medical Centre,* the School would have a somewhat different analysis of the Ireland East Hospital Group opportunity. The hospital networks represent a government-led rationalisation of clinical service delivery which will impact upon how and where we train our students. We would agree that the politics of health (not education) are

likely to drive developments. It would appear that the Dept of Health sees only a peripheral role for the Universities. We have not advanced that academic medical centre initiative sufficiently toward our own ambition of an internationally recognised academic health science system. We believe that establishing a credible academic medical centre is fundamental to justifying the University's involvement more broadly in Health.

The over-reliance on exchequer research funding is a point well made and we concur with the need to change our focus to increasingly European and industry funding. The School would agree that research performance has not yet delivered the return on the investment made to date. We would question the comparison of research income with RCSI. However we need to set our expectations higher than RCSI who are not positioned as a research-intensive institution. We agree that Horizons 2020 presents a significant opportunity to participate in large scale EU research collaborations. The College could lead such engagement but it is likely that it could only credibly lead 1-2 such initiatives. As it currently stands, Molecular Medicine Ireland occupies part of the space which the College envisages for itself. MMI currently provides the vehicle for research collaborations involving TCD & RCSI (as well as UCC, NUIG and potentially QUB).

The absence of Schools of Pharmacy or Dentistry do not constitute relevant weaknesses since these discipline were rationalised many years ago as part of a national re-configuration. We would question the wisdom of pursuing a Pharmacy programme opportunity given the recent worldwide expansion in such programmes. This opportunity would appear to be driven by financial considerations rather than to exploit a particular academic strength.

Opportunity

The School sees its multi-disciplinary activities primarily through collaborations with engineering, veterinary medicine, science and business and is not convinced by the scope or value of integration across the College of Health Sciences. Both Medicine and Nursing programmes are large in size and face increasing curricular pressures as medical knowledge increases. We would support targeted multi-disciplinary learning opportunities (e.g. working in teams, basic life support) but recognise that each profession has its own particular role and skills. The principal driver internationally for inter-professional education appears to be to address deficits in physician numbers rather than to re-configure how healthcare is delivered. The debate on 'generalists' v 'specialists' within both Nursing and Medicine professions is perhaps a more relevant than cross discipline education.

In our experience, enduring clinical relationships are established through close subject-level partnerships and are not forged through service level agreements or Hospital-University corporate partnerships.

Threats

We would agree that the uncertainty over third level funding, government education policy and increased international competitiveness represent three of the biggest threats to the University. The School has substantially reduced its reliance on exchequer funding to an extent that the performance of international economies now represents a significant risk exposure.

Recommendations of 2008-9 Quality Review and focus group on their implementation.

The Self Assessment Report Coordinating Committee were asked to consider recommendations from the 2008-9 Quality Review and to indicate whether they had been implemented (+1), not implemented (-1) or no change (0). The composite score for each recommendation is listed below

Theme	Theme	Ref	Recommendation	Score[3]
Streamline	Organisation	14	School v College	-3
Streamline	Organisation	16	Section - Function & Set-up	6
Streamline	Organisation	17	SMT v Executive Differentiation	1
Streamline	Organisation	18	Review Committee Structures	1
Streamline	Organisation	19	Reporting structure for technical staff	-4
Streamline	Organisation	20	Expand T&L Strategy into GT programmes	-1
Streamline	Organisation	21	Improve its engagement with central University functions	-2
Streamline	Organisation	22	Dialogue within School, School v College re Admin functions	-3
Streamline	Organisation	25	Director of Quality be on key committees and boards	-3
Streamline	Facilities	37	Better resourcing of AV/IT + Technical Forum	-3
Streamline	Facilities	41	Technical Forum for AV/IT	-3
Streamline	T&L	51	Different deliver model for several modules	1
Streamline	T&L	52	Formal comprehensive document for students on programme	6
Streamline	T&L	53	GT Modules should be of a similar std to UG and resourced	2
Streamline	T&L	55	Only return final grades to gradebook	6
Streamline	T&L	56	Coherent Assessment Strategy and review assessment loads	0
Streamline	T&L	57	Clear policy on how students get feedback	-1
Streamline	T&L	59	Assessing and disseminating External Examiner reports	-2
Streamline	T&L	60	Explicit recognition of different disciplines within medicine module	0
Streamline	T&L	61	Inter-disciplinary education	1
Streamline	T&L	62	Expand Radiography Studies Advisor Scheme	1
Streamline	T&L	65	Implications of Bologna agreement for its programmes	1
Streamline	T&L	66	Use University templates for module descriptors	2

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[3] Positive score indicates has been implemented; negative score indicates not implemented

Streamline	T&L	68	Learning Objectives for each programme (programme mapping?)	5
Streamline	T&L	69	Continue vertical and horizontal integration	1
Streamline	T&L	72	Apply plagiarism policy consistently	5
Streamline	Research	73	Better strategic planning and management	4
Streamline	T&L	73	How it develops new programmes	1
Streamline	Research	80	How strategy is influenced by appointment of Research staff	-2
Streamline	Support	89	Review Pastoral Mentoring	1
Streamline	Support	90	Formalising Peer Mentoring programme	4
Streamline	Support	91	Develop AV/IT Strategy	-1
Streamline	Support	92	School Librarian Representative for each programme	2
Streamline	Support	93	Liaison group for Technical staff	0
Streamline	Ext Rel	95	Engage SMT to find optimal level of autonomy	0
Streamline	Ext Rel	96	Relationship School v Conway	-3
Streamline	Ext Rel	97	Consider use of student exchanges	0
Streamline	Ext Rel	98	Monitor student experiences of overseas electives	2
Streamline	Ext Rel	99	Improve external profile with industry & private sector	2
Streamline	Facilities	100	Lobby Central University to improve their services	-1
Dialogue	Organisation	15	Formal strategic plan following staff consultation	2
Dialogue	Organisation	16	Consultation on Sections	0
Dialogue	Organisation	18	Review School Communications	1
Dialogue	Organisation	26	Address low staff engagement ; Consider staff consultative forum	-5
Dialogue	Organisation	28	Standardise communications with students	-2
Dialogue	Facilities	42	Establish staff common room	-6
Dialogue	T&L	52	Improve student communication at programme level	3
Dialogue	T&L	53	Interactive portal on blackboard and use discussion forum	1
Dialogue	T&L	54	Staff portal and document repository	-5
Dialogue	T&L	63	Establish a Staff/Student forum	1
Dialogue	Research	78	Reduce isolated working by researchers	-2

Dialogue	Research	83	PhD Student portal on Blackboard & PhD Meeting group	-2
Dialogue	Quality	86	Ensure all staff see the SAR and have chance to input	0
Dialogue	Support	89	Consider expanding pastoral services	1
Dialogue	Support	93	Consider technical liaison group	-3
Support	Organisation	19	Develop technical reporting structure	-2
Support	Organisation	31	Protected time for clinicians	1
Support	Organisation	32	Use of Clinical Pathway for DI Staff	1
Support	Organisation	33	Alternative promotion pathway for clinical staff	4
Support	Organisation	34	Promotion pathway for Admin staff	-5
Support	Organisation	35	Promotion pathway for Technical staff	-6
Support	Organisation	36	Mentorship within PMDS	-8
Support	Organisation	38	Balance academic workload	-2
Support	Facilities	42	Establish staff common room	-6
Support	T&L	55	Review exam timetables to allow more examiner time	-1
Support	T&L	56	Review assessment workload for all staff	-6
Support	Research	79	Research strategy that recognises academic workloads	-2
Support	Research	83	Better support to research supervisors	-3
Support	Research	93	Formal technical line management	-3
Performance	Quality Improvement	0	T&L Evaluation	-2
Performance	Organisation	15	Key Performance Indicators	1
Performance	Organisation	21	Better liaising with Central Admin groups	-3
Performance	Organisation	24	Outstanding Medical Council recommendations	-2
Performance	T&L	58	Curriculum mapping to graduate attributes	2
Performance	T&L	63	Peer evaluation system extended	-1
Performance	T&L	63	Better evaluation of quality of procedures	1
Performance	T&L	64	Independent Review of Radiography programme	3
Performance	T&L	70	Overarching programme objectives explicitly mapped to WFME	1
Performance	Research	74	Better external benchmarking of research	-1

Performance	Research	75	Evaluation of research investment	0
Performance	Research	76	Is level of research income per investigator adequate?	-3
Performance	Research	77	Ranking of our research areas internationally	-2
Performance	Research	82	Completion rate for PhDs	1
Performance	Quality Improvement	86	Overall quality improvement process	1
Performance	Quality Improvement	86	Key Performance Indicators	2
Performance	Quality Improvement	87	Radiography self assessment report	2
Resource	Organisation	23	Decreasing resources	0
Resource	Organisation	31	Five vacancies of senior personnel	4
Resource	Facilities	37	Improve AV/IT Resource	0
Resource	Organisation	39	Significant Admin staff shortage	3
Resource	Facilities	41	Coordinate e-Learning technology across sites	5
Resource	Facilities	45	Student facilities at SVUH	6
Resource	Facilities	46	Open DI facilities at SVUH to all	0
Resource	Facilities	47	Library facilities at SVUH - expand	-1
Resource	T&L	52	Consistency of GEM and UEM modules	2
Resource	Research	80	Strategic research recruitment and consequences thereof	-2
Resource	Research	81	UCD Research funding model	-2
Resource	Quality Improvement	85	Expand Director of Quality role	-2
Resource	Quality Improvement	86	Quality enhancement process for all modules	0
Resource	Support	88	Address vacancies in School admin	4
Resource	Support	91	Better technical AV/IT support	0
Resource	Support	91	Extend video-conferencing facilities	4

Appendix 3: Diagnostic Imaging Input to SAR – External Relations and **SWOT Analysis**

External relationships

As the single education centre providing undergraduate education in Radiography in the Republic of Ireland relationships with both the Irish Health Service Executive and the Irish Institute of Radiographers and Radiation Therapists (IIRRT), the professional body for Radiographers in Ireland, are important to the *Section of Diagnostic Imaging.* Two staff members currently sit on IIRRT Council, one member holds the education seat and is a member of the IIRRT CPD subcommittee.

Relationships with the HSE are maintained through meetings with the Health and Social Care Professions Education and Development Unit of the HSE. Students from the BSc Radiography degree programme attend eight principal training centres across Ireland, namely five centres in Dublin: The Mater Misericordae, St Vincent's, St James's, Beaumont and AMNCH University hospitals and three centres form regional placements for the Radiography students: Limerick, Galway and Cork University Hospitals. In addition students are placed in several paediatric and specialised centres across a number of further sites such as Our Lady's Hospital for Sick Children, Crumlin and the Blackrock Clinic for PETCT experience. Therefore the *Section of Diagnostic Imaging* not only has relationships with UCD affiliated centres but also a broad spectrum of centres beyond the Ireland East Hospital Group (IEHG). Relationships are maintained with the Radiography training centres through Radiography Service Manager RSM meetings and RSM representation on the UCD Radiography Degree Committee (RDC). *The Section of Diagnostic Imaging* has two identified clinical placement coordinators who liaise directly with the RSMs and their Radiography practice tutors for clinical matters related to the BSc Radiography degree programme.

State registration became mandatory for Radiographers from October 31st 2015 in Ireland. In December 2015 Dr Louise Rainford was re-elected, following a previous three year term, to represent Radiography education on the Radiographers Registration Board (RRB), the Irish Health and Social Care Professions Council, CORU. Two further staff members from Diagnostic Imaging are CORU qualification assessors for the RRB. Further external relationships exist with government tasked groups, with a Diagnostic Imaging staff member sitting on the Radiation Safety Committee on Population Dose and on the National Advisory Group for: Nurse X-Ray Prescribing.

At a European level two staff from Diagnostic Imaging hold senior positions within the European Society of Radiographers Societies (EFRS), as an EFRS board member and one as a member of the management team of the EFRS Educational Wing. The EFRS represents over 120K radiographers and 10K students and this organisational activity is an important aspect of focus for the *Section of Diagnostic Imaging.* Within the breadth of activity within the EFRS several *Diagnostic Imaging* staff are involved in European funded projects and are actively working with other key professional groups on research projects and in the formulation of guideline and best practice recommendations for the clinical delivery of medical imaging. One example of this activity is current work with the European Society Radiology and several other professional societies on the European Commission funded PiDRL Working Group. The presence of *Diagnostic Imaging* staff in European funding call preparation activity is important to Radiography focussed research and one senior staff member is active in Joint Programme 'CONCERT - European Joint Programme for the Integration of Radiation Protection Research' (EC under contract No. 662287). Equally in the dissemination of research findings the *Section of Diagnostic Imaging* needs to maintain an international presence and currently two staff are part of the editorial board for "Radiography Journal: Elsevier Publications, one being Associate Editor - Clinical Imaging (UK and Europe).

Further breadth of external relationships involving *Diagnostic Imaging* includes a number of staff who are active members of European and International conference scientific programme committees. Staff are also involved in a range of professional societies for example one staff member is a founding member of the International Society for Forensic Radiology and Imaging, this activity aligns to postgraduate programmes delivered by *Diagnostic Imaging* in this field. It is important to note that *Diagnostic Imaging* employs professionals from a range of backgrounds including Nursing and Midwifery and one staff member is part of the Bereavement Care Sub-group as part of the HSE National Implementation Support Group / Galway HIQA Investigations to develop a national guideline for bereavement support for pregnancy loss.

This brief summary of *Diagnostic Imaging's* relationships with external groups is not exhaustive but demonstrates the scope of activity within the *Section of Diagnostic Imaging*.

Appendix 4 - UCD Radiography & Diagnostic Imaging SWOT Analysis

Strengths

Education:

- National Training Centre for Radiography Education in Ireland with a HSE funded Practice Tutor scheme, the Radiography Degree Programme: professionally re-accredited (2015): five year period.

- Highly skilled academic staff who are recognised as leaders in Radiography education.

- Our graduate programme portfolio has grown by over 50% over the past five years with a continuing increase in income to the University, 31 programmes comprising over 100 modules which are delivered to over 300 students under the direction of 21 academic staff.

- Our CPD development has commenced with Safe CT (English and Italian), Dental Radiography and several stand alone lectures will be ready for Jan 2016 and taster CPD across a range of topics is also planned.

- Annual delivery of focussed study days, with extreme success e.g. "CT Academy" and increased relationship with external agencies e.g. The British Medical Ultrasound Society.

Research:

- The Radiography profession is developing research activity. Research-active academics has increased over the past five years as increasing numbers attain PhD status. Currently 11 permanent staff have completed PhD study, a further 5 are actively pursuing PhD research, two having submitted recently.

- Our international reputation as education providers has supported annual recruitment of international PhD students following on from MSc study, to our PhD programmes in order to lever non-exchequer / non-conventional research funding and maximally exploit our research strengths.

- Very strong international publication record and international recognition as a leading international Radiography research centre.

Professional Activity and External Relations:

- The Head of Section is a member of the Radiography Service Managers Group providing a forum to liaise with clinical departments.

- Several DI staff are members of the Professional Body the IIRRT and sit on IIRRT Council. The Head of Section sits on the CORU Radiographers Registration Board and several staff hold senior management positions in the European Federation of Radiography Societies (EFRS).

- Existing diverse student/staff exchange agreements upon which education and research activity can be built e.g. Quinnipiac Radiography Exchange, Radiography Erasmus Network; University of Bologna Erasmus+, Erasmus + programme University of Padova; University of Johannesburg.

Weaknesses

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Education:

- Diagnostic Imaging has a staff of 21 FTEs including Graduate demonstrators (plus 2 staff on LOA) however 36% of all academic staff are employed on temporary contracts (exclusive of LOA staff). With respect to administration staff, 2 out of 3 staff are on permanent contracts. Many of these 'temporary staff' are in fact recent recruits to continuing posts as a result of the application of the Employment Control Framework which has prevented appointment on an indefinite basis.
- Clinical training is reliant on centres nationally, and practice tutors employed by the HSE. Many centres are outside the UCD affiliated network.

Research:

- There is a need to increase grant funding and set targets for research grant applications submissions but this needs to be allocated for in staff time, staff having in many cases in excess of 100% workloads.

Professional Activity and External Relations:

- As the national training centre we have alumni across clinical centres nationally and internationally and currently activity in formally engaging them is insufficient and requires attention.
- The identity of Radiography is not clear under the collective title of "Diagnostic Imaging" this needs to be replaced with the title "Radiography and Medical Imaging".
- The position of Dean of Radiography needs to be established.

Opportunities

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Education

- Re Branding - External Marketing: UCD Radiography and Medical Imaging: A national centre delivering excellence in Radiography education globally.
- Diagnostic Imaging is recognised in Radiography as an international leader and needs to continue to seek new revenue growth through higher value programmes, with online learning options to reach students internationally.
- Develop on-line learning content: multiple programmes: Technology of US; CT Radiotherapy education;
- Development of multidisciplinary positive programmes: MSc Child Protection; Image Analysis advanced programme of study for clinician and biomedical science researchers; MSc Radiation Safety and Risk Management /Safety focussed offerings.
- Potential for education initiatives that will impact positively on health service delivery include:
  - Head CT angiography protocols and study programme
  - Introduction of FAST imaging programmes of study
  - Innovative US Training to meet local and national needs (US Training Proposal SMMS 2015)

> CT Academy/ MRI Academy delivery for early stage CT/MRI radiographers

Research

- Alternative mechanisms to maintain PhD student levels have been actively worked upon to include recruitment of PhD students on internationally funded scholarships, which have incorporated funds to undertake clinical research to include patient imaging (6 students) with current an income of in excess of 420K annually paid to UCD. To date no marketing beyond the Graduate Taught Programme mechanism, potential to actively market to increase activity.

Professional Activity and External Relations:

- Correct investment in the highly skilled academic staff will support the ongoing expansion of their activity with external government agencies and European organisations
- Tremendous potential for further international collaboration with respect to taught programmes, CPD and research activity however this requires appropriate resourcing.

Threats

Education

- A threat to Diagnostic Imaging exists due to the flat structure of current academic appointments. Diagnostic Imaging is unique in UCD in that previously a School of Radiography it has now merged to sit within a School of Medicine. All other allied healthcare professions within UCD have a Dean and professorial chair. The absence of a Professor for Radiography is detrimental to its ability to compete on an international stage for research opportunities and absence of Associate Professor/Professorial positions undermines the extent of responsibility and success of staff members in Diagnostic Imaging with lead roles.
- Several staff are tasked with responsibilities beyond the level of college lecturer or senior lecturer and no current prospect for promotion. The grading structures need review that the grades staff are on align to tasks requested of them and have had these responsibilities for several years.
- Current reliance on staff's professionalism to work above an FTE level to progress the profession of Radiography.
- Most academic staff exceed the current academic workload model and increased student numbers have forced a reduction in the incidence of, or an increase in the size of small group teaching.
- The years invested in building academic and clinical expertise, studying to PhD level and the broad team in DI would be under threat should a competitor launch UG or PG offerings, principally due to the lack of promotion prospects in UCD.
- The clinical practice tutor role requires review following its inception in 2006 to encourage their retention in the position.

- Currently 7 academic staff are on temporary contracts and two graduate demonstrators on fixed term contracts. Diagnostic Imaging also provides successful postgraduate offerings and research activity and there is a need to increase the number of permanently employed staff to further stabilise staffing across all activity.

- Clinical sessions for teaching staff in all imaging areas need to be ensured to maintain clinical skills and knowledge.

- Professional accreditation of graduate programmes is a key focus and re accreditation of the MRI and CT MSc programmes

Research

- Developing researchers is difficult when they have heavy teaching and administrative roles.

- Diagnostic Imaging space is now full with respect to staff offices and any further expansion will be problematic with the location of offices. Also as student and faculty numbers have grown there is increasing pressure on both small group teaching, office space and research desks.

- Capital investment in X-ray equipment and other equipment is required in this area of healthcare where technology develops at a rapid rate.

Professional Activity and External Relations:

- Practice tutors supervising Radiography students are employed by the HSE in the 8 training centres. Due to clinical pressure the time allowed by managers for Practice Tutors to actively be with their UCD students is known at times to be compromised.

- The capacity of our clinical training network is limited by the HSE and the provision of Practice Tutors. It is well verbalised that there is a shortage of Radiographers in Ireland and despite repeated requests for increased student numbers there has been no move by the HSE to facilitate this.

- The Health Service Executive has consistently prioritised clinical service and service development over research, clinical staff development and professional training programmes. It has no discernible research strategy and has only resourced modest health services research and/or clinical audit exercises. The shortage of radiographers and the HSE recruitment moratorium has impacted upon our teaching programmes. Clinical staff have no protected academic time to undertake research or occasional lecturing and despite their goodwill have reported at times that they are not be in a position to support the UCD programme. HSE priorities which may not align to professional priorities.