



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

School of Medicine

Strategic Plan 2015-2020

Introduction and Overview

Trinity College Dublin launched its Strategic Plan for 2014-2019 in September 2014 with a stated vision that **“as a university of global consequence, we will be known for realising student potential and for research and scholarship that benefits Ireland and the world”** and a supporting mission to **“provide a liberal environment where independence of thought is highly valued and where all are encouraged to achieve their full potential.”**

The three components of the mission are broken into nine goals as detailed below:

A	01 Strengthen Community	02 Promote Student Life	03 Renew the Trinity Education
B	04 Activate Talents	05 Build Valuable Partnerships	06 Research for Impact
C	07 Engage Wider Society	08 Demonstrate Institutional Leadership	09 Secure Trinity’s Future

Key elements of this plan as relevant to the School of Medicine include:

- The planned increase in student online learners to 1000, focussed primarily on postgraduate and continuous professional development (CPD) students
- Pursuing opportunities to create campuses abroad
- Promoting a research-inspired curriculum and ensuring that this is enhanced through the adoption of new technologies
- Recruiting international leading academics to key posts in the School who can drive our teaching and research excellence
- The development the Trinity Health Ireland academic health sciences centre and its alignment with the Dublin Midlands Hospital Group
- Establishment of the Trinity Translational Medicine Institute (TTMI) and the Institute for Population Health (IPH)
- Working together with St James’s Hospital to create a Trinity Cancer Institute
- Working with Trinity EngAGE to channel the School’s research expertise in ageing

School of Medicine achievements under the College Strategic Plan 2009-2014

The substantial and unparalleled change in the external economic and governmental strategic environment in Ireland since the School Strategic Plan 2009-2014 was developed has had a significant impact on short- and medium-term planning, particularly in terms of progressing the recruitment and retention of key academic and clinical staff, as well as prioritising and identifying potential sources of research and educational funding. In addition, the transition in academic leadership at this crucial time, in terms of Head of School, as well as in key professorial Chairs such as Medicine and Paediatrics, impacted on our capacity to advance certain key objectives in the short-term. Notwithstanding these two overarching themes, the School's activity in quality terms over the duration of this plan was consistent with a dynamic, vibrant, highly productive and innovative School.

The School, through its educational programmes, strives to be innovative, research-driven, interdisciplinary and international. The School has undergone a period of unprecedented curricular reform over the last eight years, with notable achievements including the establishment of the Education Division in the School, the restructuring of the medical undergraduate programme to make it a five year programme, the addition of new programmatic elements, the expansion of student numbers in Medicine (nationally and internationally) and the Allied Health Disciplines (internationally), and the introduction of a new BSc in Human Health and Disease from which the first students graduated in 2013. Specifically, within the medical programme, we have expanded clinical teaching in primary care and in our flagship hospitals, introduced a comprehensive clinical skills curriculum and an undergraduate research stream. In keeping with the University's traditions, we have strengthened our programmes in the Behavioural and Social Sciences, the Medical Humanities and Global Health. In addition, new programme governance, quality assurance and evaluation processes are in place.

The School's core objective in education is the creation of graduates recognisable because they possess the unique qualities of scholarship, engagement and innovation associated with Trinity. This has been enhanced by developing innovative courses and programmes which are responsive to the needs of society, such as the postgraduate programmes in Medicine, Global Health, and the collaborative PhD Scholar Programme in Health Services Research. Overall, there is an extensive portfolio of Masters and Doctoral programmes, as well as opportunities for intercalated research periods within the undergraduate medical curriculum. Collaboration with Eurolife Universities in relation to flexible postgraduate programmes has been advantageous, as well as links with international partners such as Michigan University and the University of Makerere.

Overview of the School of Medicine

The School of Medicine is recognised as one of the world's top medical schools (QS world rankings 51-100, 2015). The School of Medicine is extraordinarily complex, with external reporting lines relating to the Medical Council, the Health Service Executive (HSE), the Department of Health (DOH), and the Department of Education (DOE). The School operates across multiple sites, both within the College and adjacent, in addition to several major clinical campuses including St James's Hospital and Tallaght Hospital, delivering multidisciplinary education across all levels of healthcare and carrying out world-class research. The main School Office is located in the Trinity Biomedical Sciences Institute. The School has over 1,000 staff (employed/affiliated) within 22 Disciplines/Academic Units, approximately 1,400 undergraduate students and 500 registered postgraduate students, with a wide range of additional formal linkages to key College and external Centres/Institutes.

The mission of the School of Medicine at Trinity College is to facilitate and provide medical education to the highest international standards; to train clinicians who are equipped to fulfil their professional roles in a caring, competent and patient centred manner; to produce individuals, who through critical thinking and outstanding professional and ethical standards, will become leaders in their field of practice.

The School aims to be a leading research-intensive institution that fosters life-long learning in its graduates in preparation for post-graduate training. It aims to integrate its educational obligations with other missions for high-quality patient care, research excellence and new knowledge generation.

The School embraces an ethos of social responsibility, accountability, public service and community involvement, and is dedicated to meeting the healthcare needs of the wider community by training doctors to practice medicine with integrity, and a deep understanding of the impact of psycho-social influences and inequity on health and disease.

It incorporates the many different Disciplines and currently offers the following degree courses:

- Medicine www.medicine.tcd.ie/education/undergraduate/curriculum/index.php
- Physiotherapy www.medicine.tcd.ie/physiotherapy/
- Occupational Therapy www.medicine.tcd.ie/occupational_therapy/
- Radiation Therapy www.medicine.tcd.ie/radiation_therapy/
- Human Nutrition & Dietetics www.medicine.tcd.ie/nutrition-dietetics/undergraduate/
- Human Health and Disease www.medicine.tcd.ie/physiology/undergraduate/human_health_disease/

The School is an international leader in postgraduate education and provides a vibrant environment for postgraduate study. The School offers over 20 taught MSc/Diploma programmes spanning a broad spectrum of medical and scientific disciplines, and research students work towards the degrees of PhD, MSc, MD or MCh.

Over the past years, the School of Medicine has consistently maintained its position as a leading Research School in Trinity College. This outstanding achievement has been possible through adherence to a focused approach to research in the biomedical sciences.

The following research fields have been developing as the areas of particular emphasis:

- Immunology and Infection
- Molecular Medicine
- Neuroscience
- Cancer
- Population Health
- Genetics
- Ageing

School Strategic Plan Development

The development of this School Strategic Plan takes its lead from the College Strategic Plan and a programmatic approach to implementation of key actions will be managed through the School Executive framework with working groups and committees based on individual areas of the Strategic Plan. The strategic planning process included the measurement of progress against the previous plan and the identification of challenges to continued momentum.

In choosing an approach to the Strategic Plan, we have taken our lead from the College vision that Trinity College Dublin will further strengthen its reputation as a University of global consequence. We believe that we can contribute to this vision in a number of ways:

In Education

- By creating graduates recognisable because they possess the unique qualities of scholarship, engagement and innovation associated with Trinity;
- By producing innovative courses and programmes which are responsive to the needs of society;
- By developing links and collaborating with international partners to create innovative programmes at undergraduate and postgraduate level

In Research

- Through focused excellence in areas of key strength;
- Through innovation in biomedical sciences and in patient care;
- Through innovation with due consideration to contribution to the knowledge economy

In Patient Service

- By academically driven healthcare within an academic health sciences centre;
- By constantly measuring outcomes and by innovating to provide better outcomes

In Policy

- By continuing to identify and target key policy needs emerging in Irish healthcare (such as ageing, chronic disease, obesity, etc);
- By grasping the opportunities to translate academic activity into policy outcomes;
- By taking a global view and addressing health problems on an international level as well as on a national level

In External Relations

- By engaging with society and communicating appropriately about all our functions;
- By engaging with our cognate partners including for example partners in health delivery, partners in non-governmental organisations and partners in industry

We will achieve this by

- identifying key targets for delivery within the School of Medicine Strategic Plan for the next five years;
- taking a focused approach in our areas of key strengths and in identifying new areas of key strength for further development;
- developing new structures which enable us to make rapid progress;
- rewarding productivity and excellence within the School through appropriate deployment of resources

Trinity Health Ireland and the Dublin Midlands Hospital Group

In July 2011, a collaborative agreement in relationship to the establishment of Trinity Health (Ireland) was signed by the three participating institutions, St James's Hospital, St. James's Hospital and Trinity College Dublin. The Coombe Women and Infants University Hospital joined in 2013. This allows for the incorporation of operational activities between the School of Medicine and its major teaching hospitals, in a manner designed to maximise the capacity for delivering high quality clinical care, providing excellence in medical education and training and delivering high quality biomedical research and contributing to the economic and social development in an integrated way. By working together as a group, we can develop priorities and identify areas in which we can maximise our opportunities both from a clinical, educational and research and operational way in order to provide economies of scale, but also to develop a focus of real strength within medicine in Ireland.

THI's vision is to measurably improve the quality of life of our patients by delivering a world class healthcare system which seamlessly integrates community, primary and social care with specialist hospital care and rapidly delivers the benefits of new research and therapies to the healthcare system.

The main objectives of Trinity Health Ireland are to:-

- deliver excellence in health care, incorporating evidenced-based service delivery of the highest quality;
- realise the health, social, economic and political benefits deriving from a full partnership to raise considerable intellectual capital and service delivery capacity;
- promote and deliver the provision, organisation, co-ordination and development of education and training in the health sciences within and between its constituent members;
- promote and deliver the provision, organisation, co-ordination and development of high quality research in the health sciences;
- promote and deliver the provision, organisation, co-ordination and development of the planning, delivery and evaluation of clinical and related services undertaken under the aegis of Trinity Health Ireland
- advance the standing of the University and the participating institutions in all matters relating to education, research and provision of medical services; and
- recruit and retain the premier medical and health care professionals necessary for the achievement of the foregoing objects.

This academic health sciences centre governance structure means that, while the existing Hospital Boards remain in place, authority and responsibility are delegated to the THI Committee (chaired by Sir Gordon Duff) which directs the joint academic activities of the four participating institutions via an Executive Committee. The academic health sciences centre concept also formed part of the model for the development of the new Hospital Group structure as recommended in the Higgins report and which is now part of Government policy.

This represents a very substantial change in the governance of our teaching hospitals and allows for the first time the development of academically-led service provision for the benefit of all of our patients.

Trinity Health Ireland can also facilitate the generation of higher quality human resources and business structures in order to underpin the development of both new research opportunities and high quality patient care. In the context of medical education, the Trinity Biomedical Sciences Institute, the new Trinity Translational Medicine Institute and the academic health sciences centre combine to provide us with a model of education in which excellent quality clinical and basic education in medical sciences is matched by an exposure to research at the highest level. This is consistent with College's objective of delivering outstanding research-led education. These structural developments have the potential to fundamentally and favourably influence the next generation of medical graduates from Trinity College Dublin.

In the future, and with the development and expansion of THI, we envisage a greater focus on regional medical education; research and service requirements related to healthcare delivery and increased interest in the relevance, quality, cost effectiveness and equity focus of our activities. We are ready to meet these challenges and have in place robust and dynamic procedures for reviewing, modifying and renewing our structures and activities which we will continue to refine during the timeframe of this Strategic Plan.

The School promotes an environment which fosters a team approach to the delivery of healthcare in the hospital and the community. This multi-professional ethos encourages mutual respect and understanding between professionals, the sharing of knowledge and skills and development of shared priorities particularly health services research. The link between research and service delivery will be critically important as the evolution of THI proceeds as it is essential that healthcare professionals within THI understand how to conduct and utilise service-based research to improve the quality of care provided to patients.

The structure and governance of the Dublin Midlands Hospital Group will continue to develop during the term of this plan as there movement to the planned independent hospital trust structure proposed by Government. During this period, it is planned that THI will continue to exist and function as an interdisciplinary multi-organisational academic health sciences centre and will work with the Hospital Group as it evolves to identify areas for collaborative and complementary working as they progressively align.

Actions:

- THI Committee and THI Executive to continue to meet until an alternative structure is identified
- Annual THI Work Programme to be developed, progress against which will monitored and reported on through the THI Executive
- THI to work with the evolving Dublin Midlands Hospital Group as they progressively align and to ensure that THI is influential at each stage of development
- Establishment of an administrative structure that supports the new academic health sciences centre model to include a multi-disciplinary research, translational and practice development agenda that is responsive to change, leads to improvements in the management of healthcare and informs the understanding of disease mechanisms and treatment delivery

School Structure and Governance

Review of School Structure

With the ongoing evolution of the School and the development of several new academic units over the last couple of years, e.g. Orthopaedics and Sports Medicine, Neurology, Nephrology, the School structure must be constantly reviewed to allow for effective decision making and flexibility in the utilisation of resources.

Actions:

- School structure to be reviewed and possible new structural models to be developed that would better support the School's functions and objectives. This could include the rationalisation and/or merging of Centres/Units/Disciplines
- Reporting lines for the School of Medicine within the overall College structures are now clearly defined and in place. This has allowed for School involvement in College Committees and decision making processes and should continue into the future
- The role of the new Chief Academic Officer in the evolving Dublin Midlands Hospital Group structure to be reviewed, in particular how it relates to the Head of the School of Medicine and the Chief Officer of THI
- Continued strengthening of integration of all Centres/Units/Disciplines through an expanded School Executive forum facilitating consultation with senior staff and management
- Regular Discipline meetings to be held with reporting of key achievement and issues arising through School Executive. Have regular "Focus on" sessions at School Executive and other School meetings to facilitate information sharing across the Disciplines

Accreditation and Quality Review

Given the professional and regulatory nature of the various healthcare professions represented in the School of Medicine, there is an ongoing cycle of accreditation processes involving various regulatory and professional bodies, e.g. the Medical Council and CORU, in addition to College quality review processes.

In recent years, the following College quality review processes have taken place:

- Discipline Review - Physiotherapy, Radiation Therapy, Occupational Therapy – 2012
- School Review - Medicine – 2013
- Programme Review - Human Nutrition and Dietetics (joint programme with DIT) – 2015

CORU is Ireland's multi-profession health regulator and it is made up of the Health and Social Care Professionals Council and 12 Registrations Boards, one for each profession named in the Act. CORU was set up under the Health and Social Care Professionals Act 2005 (as amended) (www.coru.ie).

The Health and Social Care Professionals Act, 2005 (as amended) makes provision for the approval of education and training programmes (Section 48) and monitoring the continuing suitability of education and training programmes (Section 49).

A key aspect of CORU's role as a regulator is to protect the public by setting, promoting and enforcing high standards of professional education, training and competence. This is done by:

- Ensuring that the relevant educational bodies deliver qualifications that prepare professionals to provide safe and appropriate care
- Assess and recognise qualifications gained outside the State
- Approve and monitor education and training programmes for entry to the register and
- Set the requirements for continuing professional development

Several programmes within the School have already been subject to review by CORU including Radiation Therapy, Occupational Therapy and Human Nutrition and Dietetics with a review of Physiotherapy planned for 2016.

Preparation for such accreditation and review processes is now taking up a significant amount of time across the School and we plan to work with the relevant bodies to ensure a more manageable timeline and schedule for such reviews over the next five years. We will also consider the need for additional support at key times to assist with these processes.

Actions:

- Liaise with regulatory and professional bodies to ensure that the timing and scheduling of accreditation visits across the School are managed in a more structured and planned way
- Assess the need for additional resources to assist with accreditation and quality review processes at key times
- Encourage the sharing of information across the School to share knowledge
- Ensure that all areas of the School are adequately prepared and informed in preparation for accreditation and quality review visits

Education

The School of Medicine, through its educational programmes, strives to be innovative, research-driven, interdisciplinary and international. Our undergraduate programmes utilise a combination of small group teaching, problem based learning, didactic and bedside teaching with a strong focus on clinical placement. Clinical and communication skills together with ethics are given an important place in our curricula. As the School is part of a larger University, all students are encouraged to broaden their education as an undergraduate student. The participation in sport and the multiple cultural activities in the University is encouraged.

The **Trinity Medical School Graduate** is distinguished by having;

- A **broad world view** informed by an education which encompasses **inter-disciplinarity through engagement with humanities** as well as within a broad range of **biomedical disciplines** and which provides a global perspective on determinants of health and disease;
- Demonstrable excellence in their ability to **communicate effectively** with individuals and externally with **society**;
- A willingness to **promote the health and wellness** of the most vulnerable in our society;
- A strong **commitment to the ethical dimension** of medicine and healthcare and an ability to use a comprehensive framework **to engage in ethical issues** both in their practice and in society;
- Enhanced **scientific literacy**, knowledge and understanding of **research methodologies**;
- A willingness and **capacity for leadership informed by an understanding of management principles**.

Student numbers in the School at both undergraduate and postgraduate level have grown in recent years, with a particular focus on increasing international student numbers. This has resulted in a student mix that broadens the student experience and enhances learning across a diverse student body.

Research-led teaching and lifelong learning

The School recognises the nexus between research and teaching and its importance to Trinity as a research-led University. The provision of research-led teaching and fostering an ethos of structured inquiry in our students is a stated priority across the School of Medicine. We consider these to be essential components of the life-long learning process. Key to the development of health professionals in the future is a familiarity and competence in clinical and biomedical research. To support that aspiration is the need to expose future practitioners to significant investigational experiences at an early stage, in order to embed an understanding and appreciation of the relevance of research to healthcare delivery. In consideration of the links between research and teaching, undergraduate students across all degrees are encouraged to question from the outset and have a number of research modules and assignments influenced by departmental research strengths in the Sophister years. There is a clear link between research and teaching in all Disciplines at both undergraduate and postgraduate level, and development of postgraduate courses in the area of research activity.

Specifically, in relation to the Undergraduate Medical Degree, the School is committed to graduating clinicians who value research and life-long learning and to developing the clinician-scientists of the future. Across all undergraduate programmes there are curricular components related to scientific method and research and these will continue to be developed including:

- Development of 2nd year medicine research project and involvement of the research community of the School involved in supervising projects or teaching scientific method
- Increase in peer-reviewed publications and international and national conference presentation from final year research projects in the Allied Health Disciplines
- Increase in the number scholarships and bursaries available to support students to undertake additional periods of research, e.g. HRB summer studentships
- Promotion of critical thinking is promoted from the beginning of the programme through the use of problem-based learning and small-group teaching

The School will work strategically to consolidate College as a global leader in biomedical education and professional development. This will involve the re-invigoration of existing postgraduate taught courses and working towards the development of novel courses and modules by providing transferrable skills that enhance career prospects and employability in the marketplace. This will drive research-led teaching and embrace technology-enhanced learning. We will work collectively to introduce flexibility into our existing and planned programmes, consolidating the disciplinary strengths on which our reputation for excellence is founded and expanding it to embrace 21st century skills. We will work to develop a repertoire of CPD courses to meet the educational requirements of the contemporary, diverse student body and will support flexible learning opportunities to target global demand (*College Strategic Plan Objectives A1.1-3 and A3.4*).

Undergraduate Education Actions:

- Focus on the development of interprofessional learning across all Disciplines in the School and within the Faculty of Health Sciences. The appointment of a new Assistant Professor in Interprofessional Learning within the Faculty is a welcome step in making such learning core to our curricula and merging research, learning, innovation and service delivery across the healthcare professions to solve healthcare challenges of the future
- Broaden the opportunities for elective practice through the development of international linkages, e.g. University of Mass, American University in Beirut. This provides an opportunity for personal and academic student development
- Explore options to extend the intercalated masters option to the Allied Health Disciplines and to other specialist areas of the School
- Give students the opportunity to have exposure to an **innovation culture and to entrepreneurship** and to reinforce this through the research modules which they take and to facilitate the introduction of innovation modules to undergraduate curricula in the School

- Refocus the BSc in Human Nutrition and Dietetics in light of the recent programme review to deliver a more focussed, employer-relevant curriculum with an enhanced practice placement programme
- Student numbers in the undergraduate Medicine programme have increased significantly in recent years to the current level of 180 students per year, with approximately one third of students coming from outside the EU. The School plans to continue with this student mix to ensure a broad student experience and enhance learning across a diverse student body. However, we must remain competitive in the area of non-EU student recruitment. The present constraint in relation to the provision of internship places for Non-EU students is untenable if we are to continue to attract high calibre international students
- Grow non-EU student numbers in the allied health undergraduate programmes across the School through focussed marketing campaigns and by developing linkages with international partners
- Promote Trinity College Dublin as university of choice for international students through continued involvement with the Irish Universities and Medical School Consortium (IUMC) and engagement with international recruitment partners
- Raise awareness of the **relationship between basic, translational and clinical skills** to enhance student capacity to confront complex problems.
- Strengthen the focus on **quality assurance and improvement** process through student and staff evaluation of the programmes
- Move towards a more blended learning approach using e-learning technologies to enhance curricula and learning
- Work with other Irish Medical Schools and related committees to review the entry mechanisms to Irish medical programmes, including a review of the current HPAT examination and consideration of possible alternatives

Postgraduate Education Actions:

- The School currently offers over 20 postgraduate taught programmes across a diverse range of areas, many of which have small student numbers. It is planned to rationalise and streamline postgraduate courses across the School through core module integration complemented by specialist streams. This will involve a reenergising and restructuring of existing programmes to ensure that they are relevant for the current healthcare environment and meet student and employer needs.
- Work with other postgraduate training bodies, e.g. Royal College of Physicians in Ireland, to develop joint postgraduate courses in key areas of research strength in the School/College and which are aligned to College research centres and institutes

- Increase the flexibility of postgraduate taught courses by offering single module options and allowing students to accrue modules over a longer period of time towards their MSc/PG Dip. This will encourage a new cohort of students into postgraduate education and will facilitate lifelong learning. Such module options could also be eligible for CME credits as well as ECTS credits. Work with College systems to assist with the development and roll out of such functionality
- Grow non-EU student numbers on our postgraduate taught programmes through focussed marketing campaigns and by developing linkages with international partners. Key courses of initial focus will be the MSc in Molecular Medicine, MSc in Translational Oncology, MSc in Medicine, MSc in Global Health and MSc in Neuroscience
- Focus on developing e-learning and distance education platforms for postgraduate teaching and engagement with organisations delivering e-learning to develop best practice in this area
- Further development of PhD programmes in the School by
 - Developing generic skills modules
 - Engaging with the Innovation Academy on innovation and entrepreneurial skills training
 - Developing new courses in areas of research strength and identifying academic leads to lead such programmes
 - Standardised quality assurance systems for courses and programmes including PhD and MD
- Enhance student evaluation mechanisms at postgraduate level, particularly for postgraduate research students
- Work with College IT and Academic Registry to develop systems to obtain more robust data on completion rates and percentage pass rates for postgraduate students
- Explore social media options for establishing a more coherent PhD community across all School sites

General Education Actions:

- In order for education and teaching in the School at both undergraduate and postgraduate level to flourish, expand and remain at the cutting edge of learning, it is imperative that curricula undergo continuous renewal to reflect innovation in research, technology and practice. As a consequence there is close alignment between the School's research and teaching priorities (*College Strategic Plan Objectives A3.1-4*).
- There is currently limited capacity across the College for accurate graduate tracking. This knowledge deficit impacts negatively on our ability to ensure the employability, progression and development of alumni and would benefit from a more programmatic approach. The School will work with College to develop this approach

- Involvement of the School in the implementation of the Trinity Education Project
- Work with College on the introduction of new educational metrics and tools
- Academic career progression remains intrinsically linked to research output, and School leadership is cognisant of the tensions which may arise as a result of teaching and research commitments. Accordingly, teaching quality is emphasised and, where present, acknowledged. Nonetheless, the career progression rates of high quality teachers and those who provide significant service to College through responsibility for academic administration is perceived to be reduced compared with those who prioritise research activity. Given external pressures, an approach which includes recognition of increased teaching load and the difficulties of maintaining excellence with less resources and staff is urgently required and the School will work with College to develop new structures in this regard
- Develop new areas for curricular synergies that will be unique to Trinity at both undergraduate and postgraduate levels. Such areas could include; Multi-morbidity, Rehabilitation, Interdisciplinary Care, Chronic Disease and Population Health. These are all areas of strength and expertise particularly across the allied health disciplines
- Continue with increasing awareness of global health and development issues and engagement with care in resource poor settings across the School in collaboration with the Trinity International Development Initiative (TIDI)
- Explore educational opportunities created through the establishment of the Institute of Population Health (IPH) in terms of research and the development of undergraduate and postgraduate programmes in areas related to population health and health service innovation
- Bring emerging work from new Institutes/Centres into the undergraduate curricula, e.g. IPH, MISA, TTMI, TCI, and integrating emerging research themes with current undergraduate research options including; developing new intercalated options; enhanced student research projects; supervision of final year dissertations; and the untapped funding area of student research electives
- Through the development of restructured and enhanced teaching agreements with our affiliated hospitals and other partner sites, develop a more coherent approach to the placement of students across clinical settings
- Introduction of more e-learning initiatives across the School and a move to a more blended learning approach through the development of online and standalone modules. This requires investment by College in online programme delivery, computerised assessments and enhancement of the virtual learning environment
- In conjunction with IT Services, strengthen IT links with affiliated hospital sites

- Facilitate the introduction of improved mentoring for students, in particular for medical students planning to undertake international licensing exams and for postgraduate research students
- Work with the Global Relations Office to explore opportunities for internationalisation
- Develop the School's education mission within the Eurolife network and the European-wide Joint Programme for European Medical Studies (JPEMS) and other strategic partnership programmes.
- Work with the Department of Health and HSE on securing resources for funded Clinical Tutors for Radiation Therapy and Human Nutrition and Dietetics in light of recommendations from recent accreditation and quality reviews

Research

Research is at the core of the mission and activity of the School of Medicine, resulting in a justifiable national and international reputation for excellence, particularly over the last decade. The School is the leading research School in Trinity College Dublin contributing approximately 20% to total College research income on a sustained basis in recent years (see Table 2) despite difficult economic conditions and a restricted external funding environment. It is currently in the top 100 Medical Schools in the world according to the QS World University Subject Rankings 2015.

The School has played, and continues to play, a major role in the development and implementation of the College's Strategic Plan in terms of both research and education with a strong focus on the key College research directions of health (Cancer, Immunology, Inflammation and Infection, Genes and Society), independence (Ageing, Neuroscience), technology (Next Generation Medical Devices), and sustainability and society (Trinity International Development Initiative) (*College Strategic Plan Objective B6.1*). Due to the nature and scale of the research and educational activity in the School, we work in close collaboration with our hospital partners through Trinity Health Ireland (THI) (*College Strategic Plan Objective B5.4*), with other Schools across College, with Trinity Research Institutes including TBSI, TCIN, CRANN and AMBER, and with the Wellcome HRB Clinical Research Facility at St James's Hospital.

In order to position the School and College to deal with the challenges of the future, the School is constantly evolving to prepare for future developments and the recent awarding of five "New Blood" Assistant Professorships to the School will support these initiatives. Recent developments in the School include the proposed establishment of the Trinity Translational Medicine Institute (TTMI), the Institute of Population Health (IPH), the Mercer's Institute for Successful Ageing (MISA) (*College Strategic Plan Objective C8.4*), ongoing development of the Trinity Health Ireland (THI) academic health sciences centre model, strengthening research within TBSI, progressing work on the Trinity Cancer Strategy with the goal of creating the Trinity Cancer Institute (TCI) (*College Strategic Plan Objective B6.2*), and developing opportunities to establish an SFI Centre for Precision Medicine. Precision medicine is an emerging approach in healthcare which uses an individual's genetic profile to guide decisions made in the prevention, diagnosis, and treatment of disease and represents the overarching framework for many of the School's strategic research priorities. The recent decision to locate the **National Children's Hospital on the St James's campus will also** underpin our planned future progress in paediatrics and child health research.

Research across the School is structured on an integrated cross-Discipline and cross-School frameworks in order to increase capacity to perform excellent research of impact, to develop and enhance global engagement in research and to foster innovation and entrepreneurship. This positions the College and the School in new and developing areas where there is potential to become a world-class leader (*College Strategic Plan Objectives B5.1 and B6.4*).

The School continues to deliver cutting-edge research in focused areas of excellence, reflected in both grant income and high impact publications. The current economic conditions are creating a demanding environment and whilst some of these matters are outside of the School's control, we are actively looking to other non-exchequer sources of funding, in particular EU/Horizon 2020 and

charities. Opportunities to maintain and improve the Schools' research standing in the next 5-10 years can be achieved through THI and Hospital Group developments. The School will focus on research excellence in key areas which are identified as the cornerstones of core College research themes, with targeted development and support from central College together with governance structures that are fit for purpose.

A major commitment to exploiting opportunities to translate academic activity into policy outcomes is present in the School. By continuing to identify and target key policy needs emerging in Irish society related to health (such as ageing, smoking), and by taking a global view and addressing health problems on an international level as well as on a national level, we have broadened the scope and depth, as well as quality, of our research agenda.

The School has taken the lead in building the Trinity Translational Research Pathway (**see Figure 1**) for all aspects of bench to bedside biomedical research and is now in a unique position to continue to develop world class clinical research across the entire spectrum from cradle to grave.

Our current strategic themes and priorities which support the achievement of College strategic objectives include:

- Cancer
- Precision Medicine including Genomics and Vascular Biology
- Neurosciences
- Translational Nanomedicine
- Ageing
- Immunology and Infection

While these strategic themes represent the guiding principles for research within the School, they are complemented by a substantial and multi-faceted series of activities across the clinical and University sites which seek to integrate traditionally distinct domains of research such as clinical trials, population health, longitudinal studies, health outcomes research, and laboratory-based biomedical investigation. The recognition that the School embraces multiple research domains and is seeking to relate and integrate these in novel ways is an important component of the ongoing research strategy, and will be crucial to successful future project design and funding proposals.

Several key developments in the School related to these themes and priorities are outlined in more detail below.

Trinity Translational Pathway Model *development of a Trinity Health Ireland Academic Health Sciences Centre model*

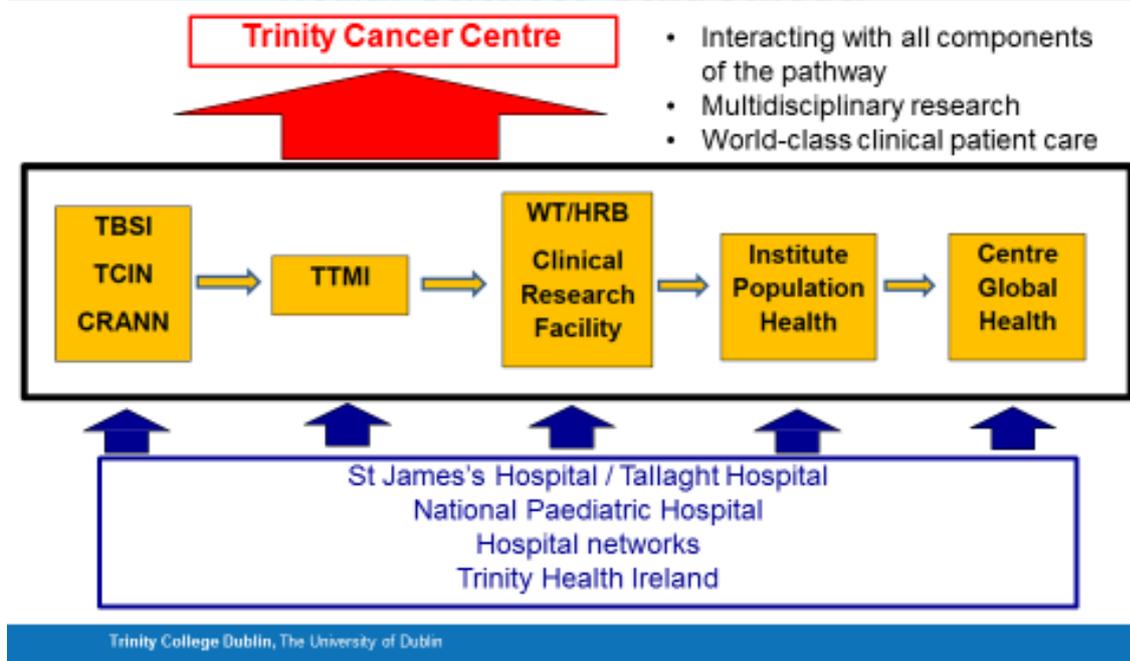


Figure 1. The Trinity Translational Medicine Pathway linked to the development of the Trinity Health Ireland academic health sciences model.

Trinity Translational Medicine Institute (TTMI)

The establishment of translational medical research infrastructure, staffing and governance within the proposed TTMI structure is a key step in the development and sustainability of Trinity Health Ireland, our academic health centre/system. This proposal assures an internationally competitive research facility directly co-located with a major clinical campus, in keeping with global trends in successful top-level academic health centres.

TTMI will house clinical translational researchers across the domains of Ageing, Cancer, Next Generation Medical Devices, Genomics, Immunology, Inflammation & Infection, Nanoscience and Neuroscience. TTMI will be positioned within the established Trinity pathway for translational medical research, and will provide a conduit for all biomedical researchers in College to utilize as appropriate in the area of translational therapeutics (drug development, cell therapy), with special emphasis on access to validated clinical biobanks, patient resources and datasets. In particular, TTMI complements the activities and mission of TBSI in respect of outstanding basic biomedical research. Close bidirectional engagement between TBSI and TTMI will enhance the aggregate funding opportunities and assure seamless delivery of our overall research strategy in this domain. In addition, this structure will underpin and support the development of Trinity strategic research initiatives including the proposed Trinity Cancer Institute, as well as our thematic emphasis on Ageing.

Trinity Cancer Strategy

The aim of the Trinity Cancer Strategy is to bring St James's Hospital, Trinity College Dublin, and their partners together to consolidate cancer activities with a view to establishing a comprehensive cancer centre, potentially the Trinity Cancer Institute. The aim is to improve outcomes for cancer patients by providing research-led diagnosis and treatment, by developing a better understanding of cancer through interdisciplinary research, and by educating the next generation of cancer clinicians, scientists and other healthcare professionals who will contribute to cancer care in the longer term.

We have the ambition to bring together clinicians, cancer carers, researchers and educators in a new facility on the St James's Hospital campus where patients will benefit from an integrated approach to cancer care which is new to Ireland while being a model used internationally. This approach will allow cancer patients access doctors, dieticians, physiotherapists, counsellors and social workers in a patient-centred environment. Patients will benefit from the input of multidisciplinary teams in assessing their cancer and will follow personalised treatment plans developed following molecular diagnosis. An enlarged clinical trial unit will ensure that patients have the opportunity to participate in studies evaluating new therapies and treatment modalities.

This will also sustain improvement in cancer care through educating and training the next generation of cancer professionals and scientists.

Institute of Population Health

The Institute of Population Health, a collaborative initiative between the Schools of Medicine and Nursing and Midwifery and the first primary care academic centre of its kind in Ireland, will become the focus for population-based research and advocacy for change once opened and will complement existing research activities at the three major physical locations of the School of Medicine. The College Strategic Plan encourages knowledge generation, education at all levels and wider engagement with society. The research agenda for IPH is a very good fit for these objectives. In addition, the School has prioritised the integration of health services research with health policy development and a focussed approach to illness prevention, in order to complement and translate basic science research into new health care delivery. The Institute of Population Health will be a key flagship development within Ireland to fill this gap. The Discipline of Public Health and Primary Care will be the anchor discipline within the Institute and the other centres and units mentioned above will be important components or collaborators also.

Global Brain Health Institute

The Global Brain Health Institute (GBHI) is a joint venture of Trinity College Dublin and the University of California at San Francisco (UCSF) that aims to train national and international Fellows and Scholars to become leaders in brain health, with a view to developing scalable interventions and policies that will reduce the incidence and impact of dementia worldwide. A total of eight new academic positions (four posts in the School of Medicine and four in the School of Psychology) will be appointed to supervise and train the GBHI fellows and scholars. The teaching and training programme will be developed jointly, predominantly digitally, between Trinity College Dublin and UCSF. Two of the posts in the School of Medicine, that of Biostatistician and Economist, are academic posts at Associate/Assistant Professor level, with the other two posts being clinical academic posts with relevant clinical sessions in our affiliated hospitals.

Research Strategy for Primary Care

At national level the Association of Academic General Practice in Ireland, through the Health Research Board, commissioned Professor David Mant from Oxford to review academic primary care R & D in Ireland in 2006. It led to the establishment of the HRB-funded Primary Care Research Centre which is a joint venture between Trinity College, Queen's University Belfast and the Royal College of Surgeons in Ireland. It has as one of its themes the health of children and through the involvement of Professor O'Dowd in the Growing Up in Ireland (GUI) National Cohort Study it is focussing on areas such as bullying and chronic illness, multiple morbidity in children, folate and cleft lip and palate. The Trinity strategy is to translate population data for the benefit of individual clinicians and their patients.

Academic development in primary care has significantly increased the amount of undergraduate teaching. We have incorporated a general practice training scheme into the Department of Public Health & Primary Care in Trinity which now involves 60 GPs in training. This programme attracts the brightest graduates from all medical schools in Ireland but few have got involved in post-training research due to a lack of academic opportunities. The research capacity of the GPs in the training programme has increased over the last 5 years and our strategy is to encourage their interest in the occasional clinical research fellowship in primary care that will lead to Masters and PhDs. The rate limiting steps are supervision due to lack of critical mass of GP academics and funding.

There is a need for capacity building in primary care at a number of levels including research as it is being called on to do more at policy, service innovation and evaluation levels. The Trinity academic department has influenced healthcare policy in primary care through academic publications and alliances with policy-makers. Nationally, academic primary care has expanded somewhat over recent years but a research strategy requires collaboration between medical schools, especially in the area of capacity building for MDs, PhDs and MSc's as supervision capacity is limited.

The expansion in teaching at undergraduate and postgraduate levels has stretched resources and the next phase of development is to secure funding for newly graduating GPs who will be able to work half-time in clinical practice and half-time in research.

Actions

- The formal establishment of the **Trinity Translational Medical Institute (TTMI)** which underpins our rapidly developing programmes in translational medicine represents a key organisational step required to advance our research agenda, particularly with respect to enhancing our capacity for funded laboratory-based research. The immediate appointment of a Institute Director is of critical importance to achieving this objective
- The opening of the Institute of Population Health (IPH) in 2016 to become the focus for population-based research, advocacy for change and a model for collaborative integrated working between the academic, primary care and GP communities
- School to review the potential to move to new research assessment models in line with emerging University and national thinking to allow for robust comparison and benchmarking exercises with other medical schools nationally and internationally, as appropriate.
- Align the research strategy of the School with the areas of clinical expertise

- Disciplines to strengthen research relationships with cognate Disciplines in other Schools
- Recognising the ongoing funding challenges facing medical research in Ireland, an enhanced focus on participation in major international programmes and consortia under the framework of the **European Union Horizon 2020 programme** is crucial. Other philanthropic and non-exchequer sources of research income will be pursued. Successful access to these funding streams will require a widening of the School's base of Principal Investigators who can attract peer-reviewed grant support. Accordingly, the School will continue to investigate mechanisms through which the grant application process can be simplified and stream-lined. Related to this, the School recognises the need to establish a more formalised and structured career pathway in order to support and encourage the emergence of talented young scientists and clinical fellows, who can compete successfully as independent investigators.
- In addition, the School has highlighted the need to adequately underpin the research capacity of our **large clinical faculty** not employed by the University. This group are highly committed to carrying out research despite holding full-time hospital service appointments. Analysis of metrics indicates high quality work by this large and key cohort of our staff, but unless new models are developed to provide "**protected time**" for a targeted subset of such staff (initially), this clinically-driven research will be increasingly difficult to sustain at current levels. Related to this will be the increasing challenge facing the School in the **recruitment and retention** of high class academic consultants who can perform successfully as academic medical investigators.
- Development of Discipline-level research strategies linked to School Research Strategy
- Increased use of research symposia in the School, Faculty and College
- Expansion of international collaborative arrangements with strategic research partners
- Establishment of a School Research Advisory Committee consisting of international external experts
- Exploration of research opportunities linked to the Old Anatomy Building and its collection in terms of medical humanities, medical history, anthropology, art, etc.
- Work with the HSE and our affiliated hospitals to construct a model for the two clinical academic posts linked to GBHI
- Within the Population Health strategic priority area, there is a focus on Health Systems Research and Implementation Science. The School will advance research and health policy impact in these areas over the coming years including:

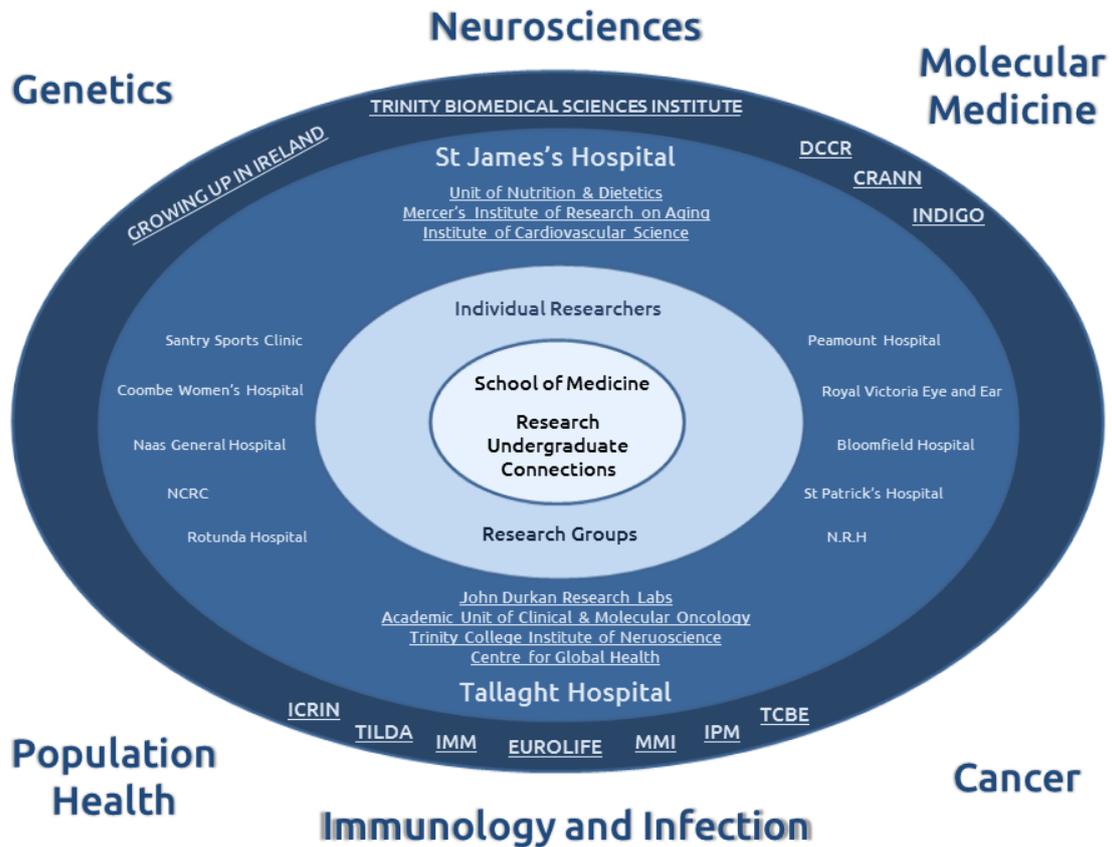
The Mapping the Pathways to Universal Health Care is a three year research programme which aims to provide an excellent evidence base that will inform the strategic direction and

implementation of universal health care in Ireland (October 2014 to 2017). This is being led by the Centre for Health Policy and Management in Trinity College Dublin in collaboration with staff from the Health Systems Strengthening Office of WHO Europe and the European Observatory on Health Systems and Policies with funding from the Irish Health Research Board. Ireland is unique in a European context in that there is no universal access to primary care and unusual in an international, high-income, country context as there is no universal access to healthcare. This project intends to map out a pathway or potential pathways to universal healthcare through the three components of the research project:

- Assessing the gap between current Irish health system performance and universal health care, using and adapting World Health Organisation (WHO) concepts;
- Evaluating the strengths and weaknesses of different models of universal health care and assessing their feasibility of implementation within the current context according to key criteria such as affordability, human resources and complexity of design.
- Assessing the organisational challenges of moving to universal health care by reviewing the experience of other countries and exploring the current capacity and constraints facing decision makers throughout the system.

The Postgraduate Certificate in Implementation Science course has been designed to improve the knowledge and skills of health, social care and education professionals in the area of Implementation Science (IS); provide an understanding of the core principles of IS and their application to the complex environment of the health and social services. This will focus on translating research results into more effective interventions and improved population health.

Figure 2 School of Medicine Research Connections (TO BE UPDATED)



LEGEND	
CRANN	Centre for Research on Adaptive Nanostructures and Nanodevices
DCCR	Dublin Centre for Clinical Research
EUROLIFE	Network of European Universities in Life Sciences
ICRIN	Irish Clinical Research Infrastructure Network
IMM	Institute of Molecular Medicine
INDIGO	International Doctoral School in Global Health
IPM/IPH	Institute of Population Health
MMI	Molecular Medicine Ireland
TCBE	Trinity Centre for Bioengineering
TILDA	The Irish Longitudinal Study on Ageing

Knowledge Transfer/Intellectual Property

As part of building Ireland's Smart Economy, the School of Medicine and its affiliated hospitals have prioritised research focused on technology transfer. Trinity and its affiliated hospitals are ideally situated to take advantage of strengths in key areas such as bioengineering and materials science. The key role of the Clinician in the innovation paradigm has been recognised. Clinicians and Allied Health Professionals are encouraged to become more involved in innovation and ideation, through the development of research networks with a multidisciplinary membership including Bioengineers, Medical Physicists, Scientists and Computer Scientists. Along with national bodies, Trinity and its clinical campuses are set to become a research hub for medical device innovation.

Overall, the School of Medicine research activity had a significant measurable impact in terms of tangible outputs and it is meeting its IP obligations in public policy (National IP Protocol "Putting public research to work for Ireland"). In the period from 11/12- 13/14, 18 IDFs were submitted (Invention Disclosure Form – a formal disclosure of invention to the Trinity Technology Transfer Office for evaluation of commercial opportunity and patentability for review), 5 new patent applications were filed, 2 technologies were licensed or optioned to commercial organisations and 1 new campus company was created.

Research Challenges and Opportunities

1. Peer-reviewed Grant Funding

Given the current economic climate, it seems likely that project grant funding opportunities will continue to be limited. As highlighted in recent calls from both Science Foundation Ireland and the Health Research Board, this is particularly relevant with respect to the future funding of basic scientific research. Moreover, it is envisaged that the amount of funding available from the pharmaceutical industry for such research will also reduce. Consequently, the development of world class **translational research** focussed on a number of key thematic areas is of crucial importance. In this context, the ongoing development of Trinity Health Ireland provides a unique opportunity for the School of Medicine. In particular, the establishment of TTMI, developing links with the HRB Wellcome Clinical Research Facility, and the large tertiary referral teaching hospital patient cohorts provides a critical mass and affords a major opportunity.

In addition to the importance of focussing resources on translational research, the School has also prioritised the need to attract an increasing proportion of its future research funding from funding agencies outside the Irish Exchequer.

2. Recruitment and Retention of Key Personnel

Within the School, a small number of leading PIs are responsible for generating a large proportion of both total research grant income, and high-ranking peer-reviewed publications. Given the high profile of these individuals in their respective fields, they will obviously be of interest to competing academic institutions. With respect to the future development of the School, the retention of such individuals is of critical importance. In terms of widening the base of PIs who can attract peer-reviewed grant support, the School will continue to investigate mechanisms through which the grant application process can be simplified and stream-lined. Furthermore, the School also recognises the

need to establish a more formalised career pathway in order to support and encourage the emergence of talented young scientists and clinical fellows.

The School has an extremely strong record in innovative research development and in attracting and retaining high calibre staff. We have been successful in obtaining funding for posts in the School from various research funding providers, endowment and philanthropic sources, the HSE and other Government agencies, and from our relationships with our teaching hospitals. We will continue with exploring and developing such opportunities and relationships in the coming years.

3. Declining Numbers of Clinician-Scientists

Given that translational research constitutes the focus underpinning our future research programme, the development of a cohort of world class Clinician-Scientists is also recognised as critical in terms of improving the quantity and quality of research within the School. Moreover, these individuals will also be essential in providing the critical academic leadership necessary for the development of a bona fide academic health sciences entre. Consequently, efforts to support the development and increase the current small number of such Clinician Scientists have been identified as a key priority. In particular, the School is prioritising the need to support dedicated research time for senior clinical staff committed to undertaking research through Trinity.

4. Biostatistics

There are currently no dedicated Biostatisticians working in the School of Medicine although several staff do have expertise and contribute to teaching and research in this area. As such, there is a completely inadequate level of professional support for the generality of medical researchers in the School. From time-to-time, a small provision has been made to fund a post-doc statistician to provide some basic level of support, but this has tended to be too little to address the very considerable (unmet) need, and insufficient to address the rapid developments in medical research requiring expert professional input. Nor have such *ad hoc* solutions encouraged the need for the biostatistician to be seen as integral to the health research team – instead he/she has been seen in a purely technical capacity to undertake basic analyses or power calculations.

Strategically, it would be important for the School to urgently remedy this deficit. It is expected that the new Institute of Population Health will go some way to addressing the problem by providing – as part of its business plan – for additional advanced bio statistical support for the conduct of health services research and of community and patient-based clinical trials. This approach affords the best possibility of avoiding further *ad hoc* solutions and will offer the biostatisticians continuity, career development and peer support. In the longer-term, and subject to adequate funds being available, the School has indicated that it expects to appoint a Chair of Biostatistics. This would be the first such appointment in the Republic of Ireland.

Engagement with Wider Society

One of the stated missions of the College Strategy is to “fearlessly engage in actions that advance the cause of a pluralist, just and sustainable society”. The School of Medicine over the years has made significant efforts to embed this approach at all levels of the School across teaching and research and involving both staff and students. Several of these initiatives are outlined in more detail below.

Context for Health Policy and Engagement (HPE)

The context for the development of a Health Policy and Engagement strategy for the School of Medicine is based on strategic developments at a number of levels including

- the College Strategic Plan 2014-19
- developments outside of the University in the health sector, particularly the **development of health services research within the HSE**
- the development and implementation of the “Healthy Ireland” national framework for action to improve the health and wellbeing of the people of Ireland launched by the Dept of Health in 2013.. Its main focus is on prevention and keeping people healthier for longer
- increased funding from the Health Research Board
- the encouragement of the health research agenda documented in the Innovation 2020, Ireland’s new five year strategy on research and development, science and technology. Innovation 2020 sets out the roadmap for continuing progress towards the goal of making Ireland a Global Innovation Leader, driving a strong sustainable economy and a better society

Developments within Trinity Health Ireland and the Institute of Population Health will form the basis for the progression of this strategy.

School-Wide Input to HPE

All academic staff have the potential and opportunity to input into the HPE agenda in the School. Historically, translational research implied transferring from the bench to the bedside. With HPE, the goal is to extend the translation spectrum to the community, population and policy making. All clinical initiatives being developed under the rubric of THI will have a HPE dimension so that the population and policy perspective will be built into all clinical developments. In addition, where major grants are being applied for the same principle will apply where appropriate. Contributions of members of the School community to wider society are collated into an annual School HPE Report with input from across the School.

Key areas of focus for the School include:

Chronic disease management

Aligning the School of Medicine's activities in **chronic disease management** with HSE priorities in order to position the School to play a leading role in the academic input to all aspects of disease measurement, management and prevention.

Health data

The School has actively engaged with the health **intelligence and evidence-based care unit** of the HSE, through teaching, service level agreements and joint grant proposals, as well as participation in School structures.

Implementation Science

The Postgraduate Certificate in Implementation Science course has been designed to improve the knowledge and skills of health, social care and education professionals in the area of Implementation Science (IS); provide an understanding of the core principles of IS and their application to the complex environment of the health and social services. This will focus on translating research results into more effective interventions and improved population health and will leading ultimately to **Masters and PhD opportunities in this area within the Insitute of Population Health**

Structures within the School to enable HPE include:

School HPE Committee

A School HPE Committee was established in the School in 2015 and includes representation from across the School.

Centre for Health Policy and Management

The Centre for Health Policy and Management carries out research on financing, organisation and delivery of health care and on evaluation of health interventions and provision. It has a strong focus on **economic analyses of healthcare and health systems**, including comparative analysis of health systems in other countries.

National Centre for Pharmaco-Economics and Health Technology Assessment

This national centre for pharmaco-economics and health technology assessment based at St James' Hospital, carries out the majority of assessments of new technologies, medicines and vaccines that are being introduced in Ireland. The national centre for pharmacoeconomics (NCPE) is responsible for the health technology assessment (HTA) of all pharmaceutical products prior to reimbursement under the Community Drugs Schemes in the Irish healthcare setting. The centre also conducts the HTA of some hospital medicines for the HSE and the assessment of vaccines for the National Immunisation Advisory Committee (NIAC).

Centre for Global Health

The Centre for Global Health is an interdisciplinary Centre whose primary focus is on strengthening health systems in low- and middle-income countries. The Centre's research programmes draw from a wide range of social sciences disciplines including public health, psychology, medical anthropology, social and health policy, economics and management. Its research portfolio addresses issues in access and delivery of health services, including contextual and environmental issues in scale up, effective use of human resources, barriers to access particularly for vulnerable and marginalised groups, and constraints to policy implementation and knowledge flows.

The Irish Longitudinal Study on Ageing (TILDA)

TILDA is a longitudinal study of over 8,000 people aged over 50 and older and living in Ireland. Between late 2009 and mid-2011, data was collected on these individuals through interviews, self-completed questionnaires and health assessments. The third wave of interviews have been ongoing since spring of 2015.

Key impacts so far from TILDA

1. Through TILDA Waves 1-3, a remarkably **rich data source on the economic, social and health circumstances of Ireland's over 50's** is now available to all research through Ireland and beyond.
2. The Wave 1 health assessments **led to innovations in the use of technologies** in population surveys.
3. The existence of the TILDA data has led **to successful grant applications** totalling €xxm, thereby enabling the TILDA team to further its research on cardiovascular disease, mental health and diabetes.
4. The existence of the TILDA data has allowed **a large number of papers to be written and accepted for publication** in journals such as the Journal of the American Geriatrics Society.
5. **Policy-makers are becoming increasingly aware** of the results from TILDA as evidenced, for example, by an invitation to appear before a committee of Seanad Eireann.

5.4.6 Growing Up in Ireland (GUI)

Growing up in Ireland is a longitudinal study of two cohorts of 9000 children each – one recruited at age 9 months and one recruited at age 9 years. Second wave data has been collected on the younger cohort and will commence shortly on the older children. The newly created Department of Children and Youth Affairs is actively involved in the planning study and much of the policy advice in the years to come will emanate from the findings of GUI.

Key impacts so far from GUI:

1. Provides **international comparators** for childrens' issues;
2. Findings used by Departments of Health, Children & Social Protection for guidance in targetting funding towards need;
3. **Use of data** by Universities & academic institutions for research;
4. **Use of data** by **NGOs** in relation to deprivation;
5. Used frequently in **media discussion** of children's issues.

School of Medicine Civic Engagement

The School currently has a strong level of outreach and engagement activities. This is driven by close interaction with the Health Service and the School has moved to strengthen links in areas such as Public Health and Primary Care and Global Health by **making adjunct appointments** of individuals who are cognate and who provide educational and research support to the School of Medicine. The School is also **establishing a forum with internal and external representation** to discuss how to better engage with the public.

Outreach and Partnerships

- The Medical School has extremely strong links with the **other medical schools in Ireland** (CDFMSI, IUMC), with the **Health Service Executive** and with a wide range of teaching hospitals and clinical settings - the majority of which are governed by teaching agreements
- The School has **utilised both the development of new teaching agreements with clinical sites** (Sports Surgery Centre - Santry, Bloomfield Care Centre, National Rehabilitation Hospital, Peamount Hospital) and the development of adjunct appointments where appropriate academically, to develop strong relationships within the external environment;
- The Discipline of **Occupational Therapy** is working with the **National Behaviour Support Service** with students with challenging behaviours in second level schools. Our students have been involved as peer mentors, and staff have developed an intervention programme to support children in managing themselves;
- Occupational Therapy also have shared offerings with the **National Institute for Intellectual Disability (NIID)** whereby students of Occupational Therapy fulfil learning objectives while supporting students of NIID to fulfil theirs;
- **Technology Research for Independent Living (TRIL)** is an active collaboration between researchers in academic, clinical and industry settings. Operating as a virtual centre with researchers based in University College Dublin (UCD), TCD, National University of Ireland, Galway (NUIG) and Intel, it tackles the problems associated with demographic ageing. The centre harnesses multidisciplinary ageing research, clinical expertise and enabling technology development and evaluation to support independent living;
- The Discipline of Public Health and Primary Care provide **continuing professional development for GPs and practice nurses**. Students sometimes attend these sessions also;
- The **Academic Unit of Nutrition and Dietetics** has developed **educational resource materials**, for public consumption, on the topic of community engagement in public health & nutrition intervention management
- An **outreach programme for secondary school students** is in place. A week long programme takes 4th year transition year students into the college and hospitals for experience in students and clinical life; as a prelude to recruiting the next generation of caring doctors;
- The Centre for Global Health collaborates **closely with Irish Aid, the Irish Forum for Global Health and Irish NGOs working in the health sector**. The Centre provides support to the health team at Irish Aid in terms of regular technical analysis of health systems issues around immunization, HIV/AIDS and human resources policy. Currently, the Centre is assisting with the Irish support for GAVI (the Global Alliance for Vaccines and Immunisation) and other initiatives. The Centre also has a member of staff on the Irish Aid Technical Advisory Group on HIV/AIDS and other global communicable diseases;
- The Centre for Global Health also has **strong collaborative partnerships with other universities** and aims to build long-term productive relationships with those which have similar interests and complementary expertise. There is a cohort of **Co-registered doctoral students of the International Doctorate in Global Health (INDIGO)**. This is a part of the **Trinity International Development Initiative (TIDI)** and associated 'Doctoral Training Programme'.
- The Centre for Health Policy and Management has been involved in a range of activities to encourage and **inform the debate on financing for health services and improving access**. This has involved collaboration with the Adelaide Hospital Society and support for the Expert Group on Resource Allocation and Financing in the Health Sector. The Centre has also been

working with the Jack and Jill Foundation on the needs of families with severely ill children, and with the Irish Hospice Foundation on ways to improve end of life care. Most students of the MSc in Health Services Management undertake their second year research project on potential ways of improving health service delivery;

- The **Discipline of Medical Gerontology** enjoys strong relationships with the Mercer's Institute for Successful Ageing (MISA) and the Dublin Ageing Research Network (DARN). With these partners, a wide breadth of research programmes have been established around Brain Ageing, Stroke, The Ageing Eye, Falls, Blackout, Syncope and Osteoporosis.

Volunteering

There is a strong ethos of volunteering at an international level, encouraged through our student body and this is most strongly exemplified by the involvement of our students in volunteering in the developing world. A number of undergraduate and postgraduate Physiotherapy students are involved in **SUAS**, (an ambitious, education-focused social change organisation that supports programmes in Ireland, India & Kenya (<http://www.suas.ie/about-us.html>);) and spend time volunteering on specific projects each summer.

Students continue to do great work in their involvement with **MOVE (Medical Overseas Voluntary Electives)**, a charity run by 4th year medical students under the direction of academic and clinical staff of the School. The members of MOVE raise money through street collections, bag packing, raffles, entertainment nights, corporate donations and donations from the medical alumni. In the summer after 4th year, the MOVE members travel to hospitals in the developing world. The money raised is divided among the members and used to buy equipment, supplies or medications for these hospitals. MOVE members spend a month in these hospitals learning about medicine and also helping to care for patients. The link with St James's Hospital has facilitated the involvement of student volunteers to **Operation Smile**, which repair childhood facial deformities while building public and private partnerships that advocate for sustainable healthcare systems for children and families. Operation Smile Ireland has focused its efforts on providing essential resources to its partners in Ethiopia, the Gaza Strip/West Bank, India, Jordan, Kenya, Morocco and Russia.

Trinity Med Day is an organisation run by 4th Year medical students, which hosts an annual one day event to raise funds for worthy healthcare projects. Since its foundation in 2002, Trinity Med Day has raised over €##### for vital local health services and has become an important day in the calendar of the School of Medicine; getting staff, students and consultants alike involved in the fundraising efforts. Further information is available via www.tcdmedday.com;

In recognition of the importance of volunteering in developing the advocacy role of the Doctor, the School has introduced a **complimentary multidisciplinary module on the "Global Determinants of Health and Development"** to provide students with improved preparation for the challenges such experience provide. In this way by assisting students to maximise their future potential we recognise and build on their achievement.

Service Learning

Service-Learning is an absolute requirement within the School because a major part of the clinical curriculum is spent within the hospital system. The opportunities for service-learning have been increased in parallel with an improved understanding of the models of health care service provision. The School now **provides clinical exposure** across a range of service models **including Acute Care, Chronic Disease Management Rehabilitation and Preventative Medicine.**

The student experience of service and work based learning is **sequenced to reflect the complex integration** of health care delivery from primary care, to community based settings to tertiary referral and specialised setting.

The Undergraduate Medical Curriculum promotes engagement with society **by the introduction of an advocacy module.** First year Medicine and Humanities students have the option of undertaking an Advocacy Module which incorporates a) academic theory, b) site visits and presentation coordinated, designed and delivered by a community partner St. Michael's House (Learning Disabilities), SAOL (Rehabilitation for drug using women in the North Inner City), UISCE (a peer support group of current and ex-drug users) and c) a piece of student writing.

Service to the Wider Community

As well as internal service to Trinity, members of the School community are active in a wide range of national and international bodies. These include training and accreditation bodies, professional groups and work for academic journals.

Actions:

- While this area was not previously a traditional strength of the School, a strategic focus on developing this as a priority over the term of the last Strategic Plan has led to focussed approach and has included the establishment of the role of Director of Health Policy and Engagement in the School, who is a core part of the School Management Team and the School Executive
- Advocate and consult with the Dept of Health on the development of the Health Information Bill as there is currently no national legislative platform for health data
- Development of a detailed research strategy for the Institute for Population Health due to open in Summer 2016
- Continue to work with the HSE on the Integrated Care Programme for Prevention and Management of Chronic Disease in order to improve the quality of life and independence for individuals with chronic disease by providing access to integrated care and support that is planned around their needs and choices
- Work with the Department of Health on the implementation of the "Healthy Ireland" strategy
- Promote the need to include a "policy relevant" component to research and grant applications and collect data at Discipline and School level to support this

- Strengthen external links with key partners and collaborators in related areas
- Promote policy and population agenda through the THI structures;
- Each Discipline and research grouping in the School to continue to produce an annual report on the impact of their research on policy and practice.
- School involvement on the College Engagement Group
- Increase the School's involvement in advocacy for patient groups

Resources: Human, Finance, Physical

Human Resources

The School, given its complexity and number of disciplines, has a reasonably balanced profile of staff (between full- and part-time staff and between clinical and predominately research and support staff), dedicated **to implementing the core themes of the Strategic Plan**; undergraduate education, postgraduate education, research and innovation, health service and health policy and the development of external links.

In general, the level of seniority in Disciplines/Centres/Units ensures that there is a strong leadership role to implement the core mission of the School relating to teaching, research and service.

Currently approximately **40% of staff are core funded** whilst the remainder are from other external sources of funding. In addition, the School has a large number of affiliated clinical and research staff who contribute to the undergraduate, postgraduate and research programmes of the School. The School introduced a stipend scheme to recognise the contribution of colleagues across clinical sites, however many other affiliated staff contribute without remuneration and do so on the basis of goodwill.

Of notable concern over recent years was the large number of key senior posts, at Academic Professorial Consultant level that remained vacant. However, significant efforts have been made by the School to recruit to these posts and several have been successfully filled including:

- Professor of Clinical Medicine, Tallaght Hospital
- Professor of Paediatrics
- Professor of Psychiatry, Tallaght Hospital
- Professor of Orthopaedics and Sports Medicine
- Professor of Neurology
- Professor of Molecular Rheumatology

In addition, recruitment is already underway for two further posts – Professor of Clinical Medicine St James’s Hospital and Professor of Translational Cancer Medicine – and the Ellen Mayston Bates Professor of Neurophysiology of Epilepsy, which is linked to a recent benefaction. These are key posts of strategic importance to the School. The focus in the coming years will be move to fill other vacant Professor posts and to work on leveraging additional external and philanthropic funding where possible to fund new posts. New post funding models linked to benefactions and/philanthropic funding will also be developed. In addition, there is a strong track record in the School of Medicine **in generating funds through** the development of new postgraduate courses and programmes.

Seven “Ussher” Lectureships for Medicine and two joint posts with other Schools were secured as part of the first call in 2010. Five additional posts were secured in the latest call, with the posts expected to be filled in mid-2016. These posts were established by College to deliver on the College’s Strategic Plan, to promote interdisciplinarity and will further deliver the School of Medicine

objectives in terms of education and research. **Mainstreaming however remains a challenge for the School** and could limit opportunities in the future.

The success of Trinity and its constituent Schools and Directorates is dependent on the quality of its staff. The vision of the College, according to its Strategic Plan is “to provide a liberal environment where independence of thought is highly valued and where all are encouraged to achieve their full potential”.

It is the policy of the School that **recruitment must support the implementation of the School of Medicine’s Strategic Plan 2015-2020**. Decisions on strategic staff recruitment are based on strategic staffing plans developed by the School on an annual basis. However, there has to be flexibility to adapt these plans as needs arise.

The level of expertise and balance of academic to non-academic staff and medical staff to non-medical staff required to deliver the programme, is determined at the staff planning stage. Cognisance is taken of the need to reinforce the academic staff base by recruiting high calibre staff to further extend the **College’s position as a research-led University**. Appointments emphasise current research strengths, enhanced teaching quality and planned academic expansion, particularly in the areas of postgraduate medical education and training.

Teaching and research are central to the role of School academic staff and each academic unit is given the autonomy of directing its resources to ensure the ideal teaching-research balance, whilst being cognisant of the School’s Strategic Plan and the overall requirements. The School is now at capacity in terms of student numbers and any further increases in relation to the delivery of educational programmes will need to be aligned with a review of the staffing requirements.

The ability to recruit at Lecturer/Registrar level is now very difficult due to the fact that these posts do not accrue credit. Of 85% of interns surveyed, only a small number indicated an intention to pursue an academic career path. It is critical that these graduates are supported in this by provision of an academic career model with dedicated time for research and teaching activities. This speaks directly to the School’s desire to develop the academic clinicians of the future.

Actions:

- In the context of Trinity Health Ireland, carry out an examination of budgets allocated to our affiliated teaching hospitals for education and research to maximise benefit
- Work in consultation with the Dept of Health to advise on **salary levels for academic consultants in order to** attract senior academic staff of international calibre to the School
- Through Trinity Health Ireland, review the construct and funding models for Lecturer/**Registrar** post, including liaison with the postgraduate Colleges (e.g. RCPI, RCSI) to establish recognition of academic posts within the postgraduate training continuum

- Work with College on developing academic progression pathways that recognise significant achievement in teaching and academic administration so that teaching excellence is better linked to academic career progression
- Develop and enhance specific models for the allocating resources to free up protected time for key clinicians and the identification of innovative funding streams to support this through the School, Trinity Health Ireland and the Dublin Midlands Hospital Group
- Work with College HR on the development of a new College PMDS in order to have a more robust performance management system in place
- Participation in College mentoring programmes at all levels, promotion of mentoring across the School and support for staff to become mentors
- Implementation of the new College clinical promotions process, with an annual cycle of clinical promotions arranged through the School
- Implementation of workload allocation model across the School
- Ongoing review of the hospital consultant teaching bursary process
- Development of a comprehensive School Communications Plan in conjunction with College PAC
- Explore opportunities to develop clinical academic posts in the Therapy Disciplines and Allied Health areas to promote a stronger link with clinical practice

Physical Resources and Capital Projects

The School of Medicine is located across the multiple sites and is very fortunate, **in most cases** to have excellent physical facilities for teaching, research and administration. While the School will continue to improve and develop its educational and research facilities both on campus and across hospital sites, there are currently no plans for any additional capital projects during the term of this Strategic Plan.

The focus during this period will be on:

- Establishment of the Institute of Population Health in Tallaght (due to open in Summer 2016)
- Reconfiguration of existing sites/services on the St James's Hospital campus to allow for establishment of the Trinity Translation Medicine Institute in 2016
- Developing linkages with the new Mercer's Institute for Successful Ageing due to open in 2016
- Involvement in the development of the new Children's Hospital on the St James's Hospital campus, in particular the new Education and Research Centre

- Working with the Director of TBSI to develop a student space in the Trinity Biomedical Sciences Institute
- Working with St James’s Hospital to plan for the development of a Trinity Cancer Institute on the St James’s Hospital site
- Exploration of opportunities relating to the Old Anatomy Building in terms of developing an exhibition and/or museum space

Financial Resources

Given the constrained financial environment in recent years, the School has undergone a period of consolidation in terms of financial management in order to operate within the reduced budgets available. However, through the sourcing of external and philanthropic funding, we have and will continue to identify areas of strategic importance for investment to further develop the School’s mission.

Actions:

- In conjunction with the College Financial Services Division, work to enhance the Oracle finance system to improve supplier management and ordering and associated business processes across the School
- The type and nature of **cost centres** across the School will **be dynamically reviewed to improve accountability and transparency and to facilitate improved reporting**
- Develop and implement a new School overhead policy to ensure the long-term sustainability of research efforts by the School and its investigators taking into account the **research institutes with linkages to the School**
- The move of curricular reform funding into core funding and the integration of the School’s non-EU funding into the overall College finances, with a subsequent loss of allocation to the School, has removed the School’s capacity to use this funding to support its development activities. One of the Medical Council’s main recommendations was that the “Resource Planning Model should be implemented and if this is not possible, the Medical School **should be allowed to utilise the funds that it generates**”. This will need to be considered further in light of upcoming Medical Council reviews
- Introduction of a new non-EU fee structure for undergraduate Medicine over the next five years
- Work to maintain and grow where possible non-EU

Conclusion

The mission of the School of Medicine at TCD is to provide medical education to the **highest international standard**, producing clinicians and allied health professionals who are equipped to fulfil their roles in a caring, competent and patient-centred manner. The ambition to produce individuals who embrace critical thinking and outstanding professional and ethical standards is underpinned by the embedding of education within an internationally-recognised leading research-intensive environment. The educational and research dimensions are to be fully integrated, and mutually enhancing. Work continues to advance the outward-looking global perspective of the School, in terms of international student recruitment, curriculum design, selection of research projects and questions, and international collaboration, with a particular emphasis on Global Health.

The School aims to foster lifelong learning in its graduates, combining its educational activity with its other missions for high-quality patient care, research excellence and new knowledge generation.

The School's ethos of social responsibility, accountability, public service and community involvement, and its commitment to meeting the healthcare needs of the wider community will be further developed within the framework of the academic health centre model. In this regard, the development of Trinity Health Ireland emphasises and facilitates the particular contribution of our clinical campuses and their staff to the research and education mission of the School. Innovations in primary care, population health, implementation science, clinical trial designs with correlative bio scientific modules, and health policy engagement are all essential to developing the School's **research-led education agenda**. Improved understanding of the impact of psycho-social influences and inequity on health and disease will shape the design of our multidisciplinary research programmes. The particular strategic emphasis of the School on health policy and engagement underpins the desire to deliver genuine societal gain at a national and international level.

During the period of this Strategic Plan, the School will continue to develop its research and education portfolio across multiple domains, with the ongoing curricular reform, increased research activity and funding, enhanced multidisciplinary collaboration, and ongoing organisational development.

The School's strategy for the next five years is to consolidate what we have to be the best we can be and to build for the future in terms of education, research, patient service, policy and external relations.