

UNIVERSITY OF ST ANDREWS SCHOOL OF MEDICINE

FIVE-YEAR STRATEGY

Ambition

1. **Foundations.** The School of Medicine (SoM) is navigating towards being a clinically facing medical school. We expect excellent NSS and league table results, our research grant income is growing briskly from all sources and the majority of our PG R students are externally funded. The staff headcount has trebled in a decade. We have appointed a Director to the Sir James Mackenzie Institute of Early Diagnosis.
2. **Context.** In a world characterised by uncertainty and challenges to the health workforce the SoM is well placed to identify new opportunities and be reactive to new Government funded research priorities and medical student training. The SoM has contributed at a national level throughout the pandemic, and we aim to be involved in the national recovery and future pandemic preparedness. In 2021 the St Andrews Primary Medical Qualification Bill reversed a 50-year constraint and unlocked the path towards clinical teaching and research. The first class of Scotland's only graduate-entry MBChB (**ScotGEM**) will graduate in 2022 and a new community Medicine focussed MBChB programme which will start in September 2025. We will engage with Scottish Government with regard to; the published expectation of 20% more GPs, 100 more medical students recruited over duration of next parliament, and the commitment to widen participation in medicine through a range of schemes, including Gateway.
3. **The mission.** By 2026 the SoM will have established itself as a Clinical Medical School. We will have built on our reputation for excellence in; focussed areas of research, UG education, and Learning Technology. We will strengthen our clinical focus with relevant translational clinical research encompassing laboratory through to population-based studies on early diagnosis and management of health. We will have established a PGT programme focussed on health service staff. We will have a partnership with our cognate health board, NHS Fife, as well as other partners:
 - a. **Short-term** (2021 - 2023). Identify and adopt the lessons learnt relating to novel ways of teaching and researching in COVID era. Establish the Mackenzie Institute. Develop a Medical Devices innovation centre. Develop a suite of health-related PG T programmes. Work with Government on their election manifesto commitment for 100 new places in Scotland. Work with NHS Fife in transition to Teaching Board and the establishment of a Joint Research office that will sponsor clinical trials.
 - b. **Medium term.** (2023-2026). Launch MBChB (ScotCOM). Commence the suite of PG T programmes and short courses. The Mackenzie Institute will have secured funding for early diagnosis and explore partnerships.
 - c. **Long term.** (2026 and beyond). By 2026 St A will be recognised as an excellent clinical medical school delivering quality teaching across multiple award levels with an international research reputation in a university of global standing.

Ends

4. **National and global Research Objectives.** In the short and medium term SoM will be conducting world-leading research with impact on a collaborative basis in the following three areas.
 - a. **Early diagnosis of disease.** The Mackenzie Institute will grow a programme of research that will draw together some of our existing research areas with other schools and those new areas that the nation needs, and that Government(s) will fund. We will build on our existing strengths which include; digital diagnostics (iCAIRD), emerging technologies (SLIC), diagnostic pathways (ECLS), translational science (BHF awards), biophotonics and the use of data science in early diagnosis (HDRUK awards).
 - b. **Digital and data-driven Health Science.** Our research groups will lead and collaborate on national and international projects using UKs digital health infrastructure and data. We will be a key contributor to the work of HDR UK, will create innovative data driven projects supporting patient care with NHS Fife, across Scotland and further afield and develop career pathways from UG to PGT to PGR to ECR to independent research fellow to develop a vibrant community of health data scientists.
 - c. **Innovation in Medical devices.** The Arclight suite, Molecular Bacterial Load Assay and other innovative medical devices in development will form the core of an innovation centre. Key to this development, which is part of the Mackenzie institute, will be access to prototyping facilities at the Eden campus. We have provided a list of suggested machinery and materials for consideration for the “makers space”, have toured the site, and will continue to collaborate with the Quaestor and his colleagues on this exciting development. The Arclight component will benefit from expert advice from St Andrews Applied Research Limited and others in the global eyecare community but the draft objectives of this organisation will be to produce and distribute innovative diagnostic devices that aid healthcare workers and generate sales of devices to fund further altruistic distribution of devices and fund further research.
5. Both the Mackenzie Institute and the work in digital and data driven health science have interdisciplinary collaboration and cross institutional connectedness at their heart. We have existing academic and clinical connections in Europe, North America and Africa and are exploring, with the help of the VP International, adding China to that list. Our partnership with the NHS in Fife and further afield will continue to grow in importance.
6. **Excellence in Teaching and Education Research.** Our excellence in teaching has been built on successful partnership working with four Scottish partner Medical Schools, Manchester, Barts, UHI, the University of Alberta and four NHS Health Boards. Our success is recognised in our NSS scores, in securing the competitive Scottish graduate entry medical programme and via the continued recommendations received by our external regulators for our programmes. We expect that the following main areas of teaching excellence will be nationally recognised in the short and long terms.
 - a. **MBChB Community Orientated Medicine.** A first for Scotland with an MBChB delivering much of the curriculum in a community setting.
 - b. **The BSc (Hons) Medicine.** A unique pathway in the UK, this degree gives greater grounding in basic science integrated with clinical teaching and full body dissection. We will continue to ensure our students transfer equipped and prepared for their partner Schools to complete their medical degree., We will continually adapt our programme to ensure students have contemporary knowledge, skills and professionalism for the future medical environment.

- c. **ScotGEM graduate-entry MBChB.** Scotland's only graduate-entry MBChB is built round innovative community medical education hubs where teaching and research interacts with GPs and other community health professionals. We will continue to develop this programme with our partners to ensure the programme meets the demands of the NHS in Scotland, equipping students with the skills to be agents of change within the healthcare environment.
- d. **Continued innovation in new programmes.** We will utilise our strengths and collaborations to capitalise on our renewed ability to award an MBChB to position ourselves for further Scottish medical student numbers. A programme of **Postgraduate Taught and Short courses** will be launched. This growth will allow expansion of our staff base.
- e. **Medical Learning Technology.** The current position as national leaders (NES support team of the year, 2020), embedded core of all taught programmes, will be further developed for the PGT programme, and will continue to enhance the learning environment of all programmes.
- f. **Pedagogical and staff excellence.** Mechanisms which encourage Education Focused staff development will include bespoke education research journal clubs, talks and training workshops to build internal networks and encourage research funding applications and professional accreditation (e.g. Advance HE fellowship applications). Development of educational research within the School is also supported by ongoing PhD studentship and intermediate fellowship programmes aimed at developing new principal investigators in educational research. In addition, the Service and Leadership working group within the Division focuses on the enhancement and equity of the availability of leadership opportunities for Education focused staff. Education focussed staff also able to apply for School-supported CPD funding and discretionary travel funds to support their development and opportunity to disseminate research findings. The School promotes networking and engagement via institutional groups (e.g. St Andrews Learning and Teaching Initiative, Centre for Higher Education Research) and externally through membership of the Association for the Study of Medical Education and the Scottish Medical Education Research Consortium as well as external visits and reviews.
- g. **Supporting our students and their diversity.** Students with a wide range of healthcare experiences and cultural backgrounds benefits all learners. The IFM programme for overseas students and Gateway for home students provides a global and diverse route into Medicine for applicants from about 25 countries who would not normally enter Medicine. The A990 collaboration with University of Alberta provides further diversity by adding a cohort of Canadian students. We will continue to build upon our widening participation and outreach activities to empower students from all backgrounds. We are committed to the British Medical Association's Racial Harassment Charter and decolonisation of our curriculum and will continue to ensure a breadth of opportunity and support for all students in a supported, nurturing environment.

Ways

7. **Achieving our Objectives.** The plan for development has 4 pillars for delivery:
- a. **A strong partnership with NHS Fife.** The existing St Andrews / NHS Fife joint working will be structured and strengthened through working with NHS Fife to establish teaching/nodal Board status, a joint research office and joint clinical academic recruitment committee. Clinical academic

recruitment will be undertaken as joint process to ensure that academic excellence matches NHS Fire needs. **Clinical Academic training** will also be developed with NHS Fife and include; [SCREDS lecturer posts](#), [Post-Training fellowships](#), [Clinical PhDs](#) and post-doctoral appointments.

b. **Mackenzie Institute.** The compelling demand for early, fast, accurate and affordable diagnosis to ensure improved health outcomes will shape the research strategy of the Mackenzie Institute. We will focus on a collaborative approach between SoM and other schools whilst driving innovative new collaborations in search of substantial grant income and philanthropic donation. We will further develop and share technical innovation and commercialisation through contributing academic and entrepreneurial presence at the Eden Campus where we will support the development of “makers space”. We will continue to the possibility of an extended, international version of Mackenzie, which would involve substantial investment by an international partner.

c. **New PGT programmes and micro-credentialed short courses.** These will be aligned to the needs of local and national health workforce, health service educators and the Mackenzie Institute research platforms. These accessible opportunities will be provided flexibly with portfolio learning and assessment to have regional, national and international appeal. The market is working health sector professionals looking for intellectual stimulus and experiential learning in clinical knowledge, leadership and / or education. Planning for courses in Health Service Leadership, Interprofessional Education and Early Diagnosis to start in 2023 is under way. Short courses will be aligned to the MSc Programmes or ‘stand-alone’; the current offer of anatomy short courses will be expanded, using our world-leading facility to best effect. Short Courses are also an opportunity to prepare and work with qualified professionals who may not currently have the time but are obliged to conduct development activity as part of their professional registration. Several audit methodologies will be employed to ensure that the programme is delivering the expected societal benefit; the Health Board / University education partnership will sample the needs of the workforce and ensure that the education meets the emerging requirements in healthcare and health research. In addition to standard impact measurement, we expect NHS Fife to sample the career impact of programme graduates to ascertain that these life-long-learning opportunities will improve the capability and morale of the individuals to the benefit of healthcare delivery.

8. **Differentiating Medicine at St Andrews.** It is anticipated that community focus and teaching infrastructure will positively differentiate this School from other Medical Schools:

a. **Community / Primary care focus.** This will be the underpinning focus for all our UG, graduate entry and future clinical programmes. We aspire to increase production of doctors to work in this area with enhanced exposure to primary care. It will also focus the work of the Mackenzie Institute, particularly round the pressing needs of those engaged in community oriented remote triage and diagnosis.

b. **Teaching Infrastructure.** Despite being 10 years young the school’s infrastructure remains first class. Specifically, the full body **anatomy** suite, purpose built and interlinking with the adjoining ward-simulating **Clinical skills** centre. The **eLearning** provision, bespoke and internally developed¹ using high quality learning technology.

¹ Medicine Learning Technology Team voted Health Education Support team of the year by NHS Education Scotland marking their unique and invaluable contribution to our strength.

Means

9. **School Configuration, Structures and Systems.** Academic staff are assigned to one of four [Academic Divisions](#): Population and Behavioural Science, Cellular Medicine, Infection & Global Health and Education. The Mackenzie Institute is a cross school and cross science faculty entity. The **Professional Services** review of 2020 reconfigured the ~50 staff and their job plans.
10. **People and expertise:**
- a. **Vision.** To ensure that our School is an outstanding place to work where the principles of fairness and opportunity are fully embedded in our operations and that our School and University are recognised internally and externally as a beacon of progressive, inclusive and fair practice and opportunity, where bias, bullying, discrimination and harassment are not tolerated. Full [Inclusion Statement](#)
 - b. **Recruitment.** New academic posts will have an overtly clinical function to reflect the strategic ambition of the school; for example we aim to recruit Chairs of Medicine.
 - c. **Culture.** We have inclusion and wellbeing as core values; manifest in open meetings, a Wellbeing Officer and Change Champions group. We will increase the number of women in chair positions by dynamic recruitment and supporting our existing staff. We will also recruit more clinical staff and ensure our staff base is more diverse. By the middle of 2022 we will have developed a settled approach to hybrid working which meets the team, task and individual needs in addition to infection control imperatives and reducing all collective travel carbon footprint.
 - d. **Achieving the aspiration.** The school has a solid base upon which to build; Athena Swan Bronze in 2014, high PG R completion and student satisfaction rates and improving trend in EDI staff surveys. The 2020 review of leadership, committee and Professional Services (PS) staff structure provides a transparent and fair job plan for all, improved line management structure and a pathway for advancement for PS Staff. By focussing on the advancement for staff through intermediate fellowships, buddy schemes, pre-promotion advice panel the school will continue to improve successful career development for school staff. Regular staff surveys will **demonstrate continued improvement** of work environment and staff wellbeing. Achievement of an Athena Swan Silver award will be the external accreditation.
11. **Diversification** (of income). We will increase diversification of income through education (PGT and short courses), Research (overhead recovery) and entrepreneurship (medical devices), all described above. Additionally, the joint research office and local sponsoring will enable **clinical trials research**.
12. **Constraints, obstacles, and enablers.** Although we are effective at **Widening Access** in Medicine, we recognise that attracting SIMD 20 students specifically, is challenging. A new community medicine MBChB may be a significant method of overcoming this challenge by generating a programme that allows students to live 'mainly at home' and study locally. The Workforce Directorate of Health and Social Care Management Board of Scottish Government is the **key enabler** to the School. The SoM continues to evaluate courses, programmes, centres and collaborations for viability with our developing strategy. When existing staff retire there is a review of their research profile to ensure that replacement academic posts are in aligned fields. Our plans will inevitably lead to expansion, which will be constrained, unless other sites are used.

Indicators of Success

13. We will be known and respected internationally in niche areas. The following indicators of progress and success are listed against the University's Strategy headings:

a. **Interdisciplinary.** The school will continue to collaborate widely; the **Mackenzie Institute** with other St Andrews schools, with the International **Health Behaviour of School Aged Children Study (HBSC)**, a WHO cross-national collaborative study that monitors and compares health of adolescents in 47 countries, with **Health Boards** in pursuit of excellent UG education. This will be tested by the **GMC's** quality assurance process, with **partner HEIs** for UG education, also reviewed by the GMC and with other science schools in the University to expand a culture of interdisciplinary research with translational impact at grant, group, and Institute level. We will improve on the number of grants with co-investigators from other schools (against 2021 values). Success will be defined by achieving at least 50% of all research in collaboration with others.

b. **Diverse.** The School's UG medical education offer is one of the most diverse in the UK; the BSc (Hons) Medicine includes opportunities for Canadians to study with Edinburgh and Alberta. We are co-leads of Scotland's only Grad Entry MBChB. The School's primary diversity agenda is to provide a broad range of PGT and short course opportunities for health service staff; meeting their needs for life-long education in a flexible manner that suits their work pattern. The School has already adopted the BMA race charter and will pursue Athena Swan Silver in the next year.

c. **Global.** Aligning to the University's global agenda we will build on a strong base of global research (leadership of two interdisciplinary international consortium investigating the drivers of antibiotic resistance in E Africa ([HATUA](#) and [CARE](#))) and leadership of [iCAIRD](#) (a pan-Scotland collaboration of 15 partners from world-wide industry, NHS, and academia). We have staff seconded to the Scottish Government [Global Health Coordination Unit](#) to initiate the Active Global Citizenship strand of work to provide global citizenship educational resources for NHS Scotland employees. The Government Revenue and Development Estimations ([GRADE](#)) project study the relationship between government revenue and health determinants to advocate for a reduction in lost government revenues. The [GRADE Malawi](#) project studies the revenue requirement for every Malawian child to have access to their fundamental rights. A lecturer chairs the Royal College of Paediatrics and Child Health (RCPCH) [International workstream on climate change](#). Success in this area will be defined by an aspiration for at least 33% of all research to have global impact.

d. **Entrepreneurial.** We have a track record of entrepreneurship with devices with medical and societal impact; Orbital Diagnostics was spun out in 2018, the planned medical device centre will push the frugal methodology, enshrined in Arclight, as an alternative to traditional narratives on healthcare instruments. Success in this area will be measured in worldwide penetration of Arclight suite. Our PGT Programmes in health service leadership and education are primarily designed to aid critical thinking in the challenging sphere of healthcare delivery, impact will be measured in the number of Health Service staff enrolled as students.

e. **Digital.** The 7-strong Learning Technology Team spearhead the SoM's digital endeavour and will, by 2023, have produced world leading software to aid on-line, synchronous and asynchronous taught programmes. They are nationally recognised and contribute to the University's digital ambition.

f. **Sustainability.** The on-line education platforms already in operation and in development will aid the reduction of travel-related carbon emissions. The school will embrace hybrid working

KPIs

14. Key metrics:

- a. **Grant income and overhead recovery targets.** The 2021 REF environment statement (baseline) shows grant income at RG median levels and we exceed the publication quality level in that 60.3% of annual publications are in the top 10% of cited journals and 33.7% are in the top 10% of cited papers. The '*award values / academic staff*' places Medicine above the Russell Group lab science mean. The target for 2026 will be grant income / FTE above relevant Russell Group comparators.
- b. **League tables.** In 2021 the 3 main league tables place this Medical School at 8th, 9th and 13th (average 10th). The target for 2026 is to continue to rise in the league tables, we aspire to maintain a position in the top third.
- c. **Target student FTE.** The 2021 values are 610 Government capped UG students, 45 PGR and 10 PGT. The school aspires to growth of PGR by 20%, significant growth of PGT up to ~60 FTEs and a fair share of the new SG funded UG places on award of new programmes
- d. **Recruitment of staff FTE.** Continue trajectory of growth of staff FTE through fully funded new endeavours at a rate of 10% per annum.
- e. **National student satisfaction.** St Andrews expectation is to remain in the top 3 for national student satisfaction.
- f. **Diversity awards.** Attain benchmark awards; Athena Swan Silver and any relevant future developments.

*Professor David Crossman
Head of School and Dean of Medicine*

30 August 2021