

Pioneering better health for all

An Academic Health Sciences Centre for London

King's Health Partners Impact Report 2021–2022

Transforming human health through life sciences, partnership and collaboration

Welcome to King's Health Partners Impact Report for 2021–2022

This year, we have seen an impressive and measurable impact across King's Health Partners (KHP) in each of our programmes and partnerships. Driven by ideas sparked during the pandemic and the population health data it provided, our advancements in life sciences are going further, faster.

Our brilliant <u>Research Excellence</u> <u>Framework</u> results this year show the ingenuity of our clinical academics and the innovation of our research environment, the impacts of which have been felt by patients and healthcare professionals not just across our local healthcare system but at a national and global scale.

It has also been inspiring to see teams capitalising on the collaborative spirit the pandemic fostered across sectors, harnessing the agility and scalability commercial partnerships provide to reach more patients, more quickly. This year's Impact Report once again shares progress across the four themes of our five-year plan, how we are adopting and spreading integrated mental and physical healthcare approaches, and going further, faster across our programmes.

We would like to thank our staff and partners across KHP and the wider system for all their work and support this year. This report is just one of the highlights which are a testament to your ongoing commitment and passion to deliver better healthcare for all through high impact innovation.





Jill Lockett Managing Director King's Health Partners

Contents

- > Key changes and staff a
- Novel technologies, their and diagnostics
- Transforming system-wid improvement and outco
- > Improving urban popula
- > Workforce innovation an
- Mind & Body programm
- Key partnerships
- Thank you

chievements	4
rapeutics	8
de quality omes	12
ation health	16
nd sustainability	22
e updates	26
	28

30

Key changes at KHP

In January and February 2021, we convened an External Advisory Group to **review our governance and propose changes to support the delivery of the five-year plan.**

On 1 July, KHP announced the appointment of <u>the Rt. Hon Prof Lord Ajay Kakkar PC KBE</u> <u>as the Chair of the King's Health Partners</u> <u>Board</u>. Prof Lord Kakkar recently launched the <u>Mind & Body Quality Improvement</u> <u>Network</u> at a KHP event with Rt. Hon Sir Norman Lamb.

The KHP **External Governance Review in March 2021 reflected** on our maturity and strength as an Academic Health Sciences Centre (AHSC), our growing partnership potential, and international reputation for strength in Mind & Body, Clinical Academic Groups (CAGs), now emerging Clinical Academic Partnership (formerly Institutes) themes, and the KHP Education Academy. It also reflected that the governance and delivery model could be simplified for the AHSC to be an innovation agency for partners, focused on joint activities and recognising the importance of joint leadership.

Key changes and staff achievements



We have fully implemented the recommendations of the external review, including these actions:

- KHP Board appointment of new independent chair; review role of non-executive directors.
- Maximise value of senior leadership time by removing CEOs' Action Group and replacing with KHP Executive Group.
- KHP Executive Group expand executive representation across partners, nominated by chief executives, to drive oversight and delivery of the AHSC's programmes and ensure benefits for partners. Includes Executive Dean representation from across the whole university.
- Clinical Academic Partnerships (formerly Institutes) and Clinical Academic Groups – programme structures now reporting to the KHP Executive Group.

In line with the review, we launched our new **System Innovation Forum in May 2022**, bringing together cross-system leaders to connect outside of traditional organisational boundaries to consider the promotion and adoption of innovation.

We have also developed the draft terms of reference for **a new External Advisory Group** to enable AHSC development. Prof Garret FitzGerald (Director of Translational Medicine, Pennsylvania University, KHP NED) will chair the group and report to the Board on its progress and deliberations. This group will launch in Spring 2023.

Staff achievements

This year has seen a substantial raft of awards given to our staff, celebrating their achievements in healthcare, clinical academic work and innovation.

The New Year's and Queen's Birthday Honours included:



Our Chair the Rt. Hon Prof Lord Ajay Kakkar PC was awarded Knights Commander of the Order of the British Empire (KBE), the second highest honour in the UK's annual New Year Honours List.



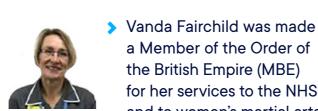
Prof Shakeel Ahmed Qureshi, Professor of Paediatric Cardiology, Guy's and St Thomas' NHS Foundation Trust (GSTT) was awarded a Knighthood (Knight Bachelor) for services to Paediatric Cardiology and Charity.



 Dr Malur Sudhanva, Consultant Virologist, South London Specialist Virology Centre, King's College Hospital NHS Foundation Trust (KCH) was awarded an Order of the British Empire (OBE) for services to Healthcare Science particularly during COVID-19.



Prof Jill Manthorpe, who has worked at King's College London (KCL) for over 20 years and is its first and only Professor of Social Work, was made a Commander of the British Empire for services to social work and social care research.



a Member of the Order of the British Empire (MBE) for her services to the NHS and to women's martial arts. She retired from GSTT earlier this year having been a nurse for 37 years.



Gabrielle Richards, Head of Inclusion and Recovery at South London and Maudsley NHS Foundation Trust (SLaM), was made an Officer of the Order of the British Empire for her extraordinary dedication to mental health, having worked for 29 years. Key changes and staff achievements



Prof Jon Davis, Director of the Strand Group, KCL was made an Officer of the Order of the British Empire for services to Education and History in the Queen's Platinum Jubilee honours list.



Prof Janet Treasure, clinical and academic psychiatrist at the Institute of Psychiatry, Psychology & Neuroscience (IoPPN), was elected as a Fellow of the Academy of Medical Sciences, in recognition of her exceptional contributions to work understanding eating disorders.



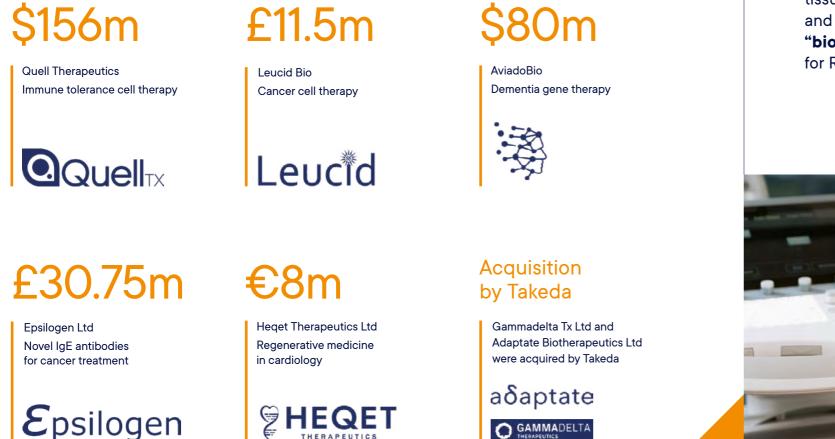
Prof Oscar Marin, a leading neurobiologist from the loPPN was elected to the Fellowship of the Royal Society, in recognition of his outstanding work understanding neurobiology which has led to deeper understanding of neurodevelopmental disorders.



Prof Peter Goadsby, Director of the National Institute for Health and Care Research (NIHR)-Wellcome King's Clinical Research Facility, Professor of Neurology in the IoPPN was elected to the Fellowship of the Royal Society. This recognised his landmark research into migraine and cluster headaches, which also won the Brain Prize in 2021.

Novel technologies, therapeutics and diagnostics

This year, KHP **spinout** creation exploring cell and gene therapy has continued to attract investment, including:



Separately, other funding furthering cell and gene therapy include £11.8m (NIHR) for our Clinical Research Facility, \$7m for the Cancer Centre's "Integrated multi-modal tissue state mapping of TNBC progression", and \$16m from Wellcome Leap for a **"biofoundry in a box" programme** for RNA therapy manufacturing.

8

In commercial partnerships, we

have increased onsite clinical academic activities, with a <u>major GSK cancer</u> <u>partnership</u> focused on 'digital biological twins', and with UCB researching immunology, cancer and neuroscience. Our London **Institute for Healthcare Engineering** is facilitating academicindustry-clinical engagement, with a £16m Research England grant and funding from Siemens, Medtronic, and Nvidia.



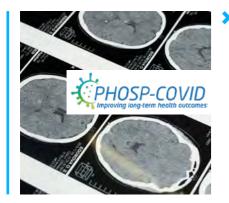


KHP London Medical Imaging & AI Centre for Value Based Healthcare (£26m investment) launched its first programmes this year. These include the Synthetic Brain Project using **deep learning on its Nvidia supercomputer Cambridge-1** to create artificial 3D MRI images of human brains, and the <u>AIDE (AI</u> <u>Deployment Engine)</u> at King's College Hospital (KCH) combining **multiple AI tools** into a single AI interface for accelerating diagnosis and care. Initially, KCH has opted to use AIDE to deploy a stroke AI tool to support NHS clinicians and improve direct patient care.

AIDE is designed by the AI Centre in collaboration with MONAI Deploy, an international working group led by King's College London and AI Centre Industry Partner NVIDIA.

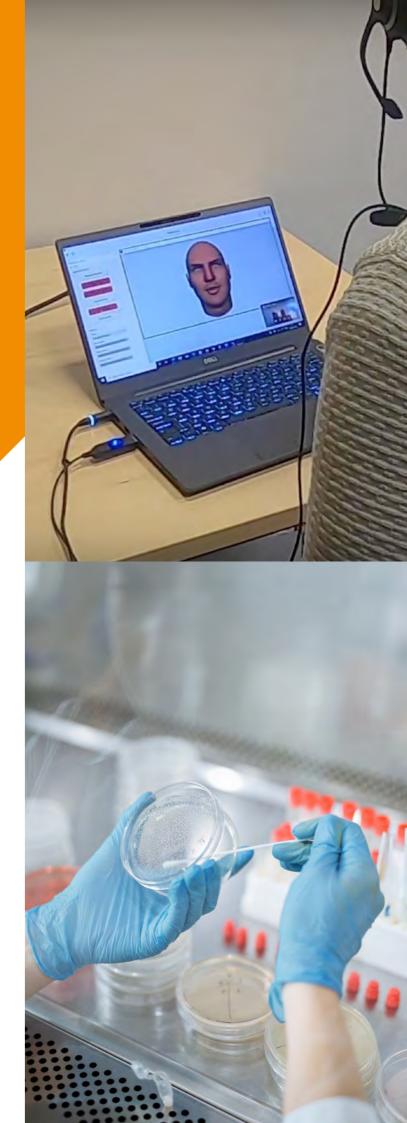


UK start-up <u>Novoic</u> and KHP launched an innovative observational study <u>RHAPSODY</u>, a Remote Assessment of Neurodegenerative and Psychiatric Disorders, (NIHR and NHSX grant funded £150,000) to evaluate the use of speech profiling biomarkers and **applying Al for clinical assessments.**



South London and Maudsley NHS Foundation Trust (SLaM) founded the <u>NIHR Translational Research Collaboration</u> in <u>Mental Health</u>. Our <u>PHOSP-COVID project</u> is the UK's **largest follow up of hospitalised COVID-19 patients**. They established <u>COVID-CNS</u> (co-led with Liverpool), which examines neurological and neuropsychiatric COVID-19 complications. The team support the national mental health informatics collaborations leading to <u>MRC DATAMIND</u> programme (£2m funding). Other pioneering **early detection and novel interventions** being recognised across KHP include:

- A new potential treatment for depression using oral Ketamine (with <u>Neurocentrx</u>, funded £498k from Wellcome Innovator Award).
- The <u>AVATAR2 virtual reality trial</u> which supports talking therapy, which was funded £3.2m by the Wellcome Trust.
- A new Brain Health Clinic by SLaM's Psychological Medicine and Older Adults (PMOA) Directorate offering a virtual alternative to outpatient clinics for people with mild cognitive impairment.
- New research at the Maudsley Biomedical Research Centre (BRC) with COMPASS Pathways PLC into the use of psychedelics as a mental health therapy, with £12m invested.



Transforming system-wide quality improvement and outcomes

£1m seed funding was invested to develop and launch our joint KHP-South East London Integrated Care System (SE London ICS) Population Health and Equity programme. Initial priorities include data science for population health management and Vital 5 (tobacco dependency, alcohol, hypertension, obesity, mental health) screening, tracking, patient education, and clinical management.



With the SE London ICS, £5.8m has been identified for targeted support to address health inequalities across the six boroughs for place-based proposals developed through collaborations including our Local Care Partnerships.

13

The KHP team working in partnership with Lewisham and Greenwich NHS Trust have reviewed their electronic patient records to better understand the prevalence of the <u>Vital 5</u> in their patient cohort.

The KHP <u>Vital 5 programme</u> has made significant progress in Hypertension and Tobacco dependency workstreams. A <u>Hypertension Workshop</u> in June 2021 (96 attendees) resulted in a new system-wide map of hypertension-related initiatives. We also continue to improve variation in physical healthcare of people with mental illness across the system, particularly through the Integrating Mental and Physical Healthcare Systems (IMPHS) project at SLaM. IMPHS was a finalist in the <u>2022 HSJ Partnership Awards</u> and was nominated by Harriet Harman MP for the NHS Parliamentary Awards. KHP has driven more teams across disciplines to use better or patientreported outcomes. Over 2021–22, the Psychological Medicine and Older Adults (PMOA) Directorate at SLaM developed a Power BI platform to extract paired HONOS scores (a clinician rated outcome scale at the start and end of a spell of treatment). Staff have been extensively trained on using this measure, and paired HONOS score data is available for over 3,000 older adult service users over the past three years. The work is now continuing to explore using patient-reported outcomes.





Our award-winning Life Lines project supported over 100,000 secure virtual visits between families during the COVID-19 pandemic – now is pivoting its platform to help with ICU recovery. Its <u>new</u> <u>ICU pathway</u> supports ICU survivors as they move from ICU to the ward and then home, empowering them to set, track and achieve their own bespoke recovery goals.





15

Our endeavours continued to unite system-wide partners to improve health for all communities across the life course, with promising outputs. This includes the south east London Diabetes and Obesity Delivery Board (DODB) with KHP Diabetes, Endocrinology and Obesity (DEO), the <u>HIN</u> and the <u>SE London ICS</u>. It is co-chaired by the KHP Managing Director and the CEO of Bromley Healthcare. The Board oversees delivery of a single set of system-wide priorities for diabetes and obesity services and has launched its first system-wide data diabetes dashboard.

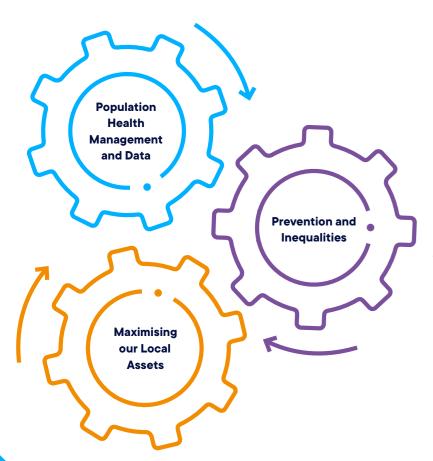
We are proud to host <u>Clinical Effectiveness</u> <u>South East London</u> (CESEL), which provides a systematic evidence-based approach to quality improvement across SE London general practice, to help improve health outcomes and reduce variation and health inequalities for our local population.

Improving urban population health

Improving urban population health

Our population health programme is working in partnership as an integrated <u>Population Health and Equity Programme</u> in collaboration with SE London ICS.

Working in coalition with health and care organisations, local authorities, voluntary and local community organisations, we will tackle three initial workstreams:



In June we held our first **Population Health Conference**, bringing together 180 attendees from across the healthcare system, including clinical and non-clinical staff at all levels, all six boroughs of SE London and voluntary and community sector organisations. Key programmes on population health management, prevention and equalities and maximising our local assets were showcased through a <u>series of video</u> <u>case studies</u>.

Progressing our work **tackling tobacco dependence**, we have convened a system-wide oversight group with joint KHP and SE London public health chairs, to share learning from NHSE Early Implementer site status. This will help scale up implementation of the NHS Long Term Plan for tobacco dependence across acute physical health, mental health and maternity providers in SE London.

KHP leads the ICS-wide clinical network to implement and scale up NHS Long Term priorities to improve lung health and outcomes. We also chair the ICSwide **Long-COVID** clinical operational group which has implemented specialist



assessment clinics (over 1200 Long-COVID patients seen), and which was also successful in winning funding from NHS Charities Together (£570k) to address Long-COVID health inequalities in SE London.

In July, we completed our joint **KHP** - **SE London ICS Health Data Sciences Blueprint**, to harness the power of our partnership and our considerable assets and capability in health data sciences.

5 The Vital 5	Mind and body	Health equity	ອີທີ່ເວັ້ Population health	MedTech & Al
Significantly reduce the burden of disease at an ndividual and population level.	Markedly improve the health outcomes and quality of life of those with chronic physical conditions and serious mental illness.	Tangibly improve the level of health equity across the system.	Build the knowledge and capacity to rapidly and accurately identify patients and populations in need.	Harness technology to guide precision medicine, clinical decision making and empower practitioner, patients and citizens to make the right decision at the right time
Targeted engagement and clinical action to improve level of individual and population health control of Vital 5.	Earlier screening, diagnosis and treatment. Targeted intervention based on need & risk factors.	Targeted interventions to address gaps in access and health outcomes between different population groups.	Decisive action in support of primary and secondary prevention at a population level. Targeted patient health education and advice at place.	Enabling technologies to support patients and citizens to manage their own care pathways, support early intervention, prevention & care closer to home.
>5mmHg av. Reduction in blood pressure tor Hypertensive patients.	SMI related acute admissions reduced by 5%.	SEL achicves highest quartile performance across all equity outcomes	Data driven polygenic risk scores embedded in screening and diagnostic pathways for 5 high burden conditions.	75% cancers diagnosed at stage 1/2 aided by digital pathology imaging & Al.

This will develop better integrated data capability to drive the achievement of population health management approaches, to anticipate and personalise care, drive productivity and efficiency and create a learning health system together. Discussions through a series of local workshops have promoted the identification for 5 key High Impact Changes to achieve; the Vital 5, Mind and Body, Health Equity, Population Health, and MedTech and Al.

These High Impact Changes will serve as the Underpinning framework for our learning health system model, guide investment decision making over the medium term, and enable us to identify priority use cases and monitor progress against our goals

Improving urban population health

The high-performing ESRC Centre for Society and Mental Health has executed some insightful work on disparities in mental health. It has produced **174 publications**, **undertaken 173 engagement activities and has received £3.3m funding (48 awards)**. Notably, the REACH (Resilience, Ethnicity, and Adolescent Mental Health) trial found disproportionate direct distress on young people from the pandemic restrictions and the resulting financial, schooling and familial challenges.



Centre for Society and Mental Health

More broadly on disparities linked to social care and other services, KHP hosts the <u>NIHR (ARC)</u> which has a <u>social care theme</u>. This investigated how day services for both homeless people and older people with long term conditions had adapted during the pandemic and developed a national guide on re-opening after lockdown.

What is anxiety?

SLaM, working as the South London Partners, has conducted the **South London Listens** programme working with citizens, service users, families and community groups to hear their views on how culturally aware and compassionate care can be developed further (more than 1,000 participants joined the first online event).

Internationally, KHP continues to pool its expertise to support the strengthening of health systems and population health in Sub-Saharan Africa through <u>King's Global</u> <u>Health Partnerships</u> (KGHP). In **Somaliland**, we completed a five-year project to transform higher education for clinical staff, improving the quality of teaching and learning for over 1,500 undergraduates.



To support prevention of mental health illness, we launched a new KHP YouTube partnership which has produced a pioneering mental health video series. These are aimed at prevention and offering credible patient information online. The initial <u>8 videos aired during</u> <u>Mental Health Week</u> with 13m opportunities to see, increasing viewership by 61k and subscribers by 164. The series now has 20 videos online, covering conditions including eating disorders, anxiety attacks, body dysmorphic disorder and advice for carers and loved ones.



South London Listens

In Zambia, we are improving <u>emergency</u> <u>care for women facing complications in</u> <u>childbirth.</u> Staff from KCH and GSTT are developing training for health workers at 11 primary health care facilities, giving them the confidence and competence to rapidly diagnose and refer emergencies. In November 2021, our team at Connaught Hospital **Sierra Leone**, were first responders to a fuel tanker explosion which caused 151 deaths and 301 injuries. In the **DR Congo**, we have translated UK COVID-19 learning to support local hospital COVID-19 ICP management plans.

KHP International Collaborations

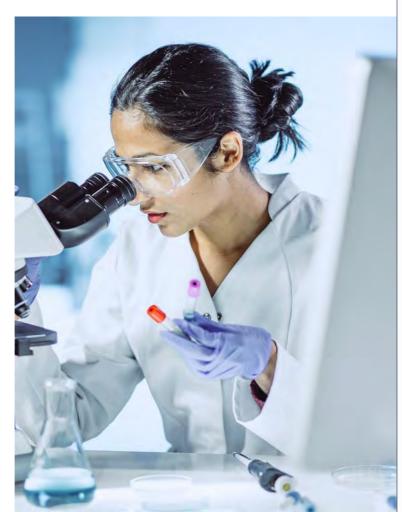
European University Hospital Alliance

KHP continues as an active member in the European University Hospital Alliance (EUHA) to develop research collaboration and translational learning in Al, advanced therapies, and global mental health.

KHP's international partnerships programme builds collaboration and learning with Aarhus University, Aarhus University Hospital and Sydney Health Partners on translating the KHP Clinical Academic Group (CAG) model for accelerating progress and fostering excellence in research, clinical, and education activities.

>

This year KHP was awarded £30k from the Global Engagement Fund to develop an international clinical research capacity building unit within India. Guy's Cancer Academy is working with Karkinos Healthcare - India to provide a digital framework to efficiently coordinate the entire cancer pathway.



Charité -Universitätsmedizin Berlin



Erasmus MC Rotterdam

Erasmus MC ·zafing

Ospedale San Raffaele Milan

I.R.C.C.S. Ospedale San Raffael

Sydney Health Partners



21

Vall d'Hebron Barcelona Hospital Campus



Karolinska University Hospital Stockholm



Universtitätsklinikum AKH Wien -Med Uni Wien, Vienna



Aarhus University







3 Greater Paris University Hospitals



King's Health Partners London

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University Hospitals Leuven



AARHUS UNIVERSITY

Workforce innovation and sustainability

After more than 10 years of service to KHP, our Director of Education and Training Prof Anne Greenough stepped down in March 2022. We celebrated her service and achievements.

In April, we welcomed Dr Claire Mallinson as our new Director of Education, a Consultant Anaesthetist who was Director of Medical Education (Deputy Medical Director) for 12 years at GSTT and immediate past Chair of National Association of Clinical Tutors.

Our Education and Training Annual **Report** showcased significant progress across our CAGs and Clinical Academic Partnerships developing new courses and expanding access to high-quality education and training across our partnership, system, nationally and globally. This year the KHP Education Academy achieved:

947 attendees welcomed to our Primary Care Webinar series

150% increase in the number of new online courses from 2021

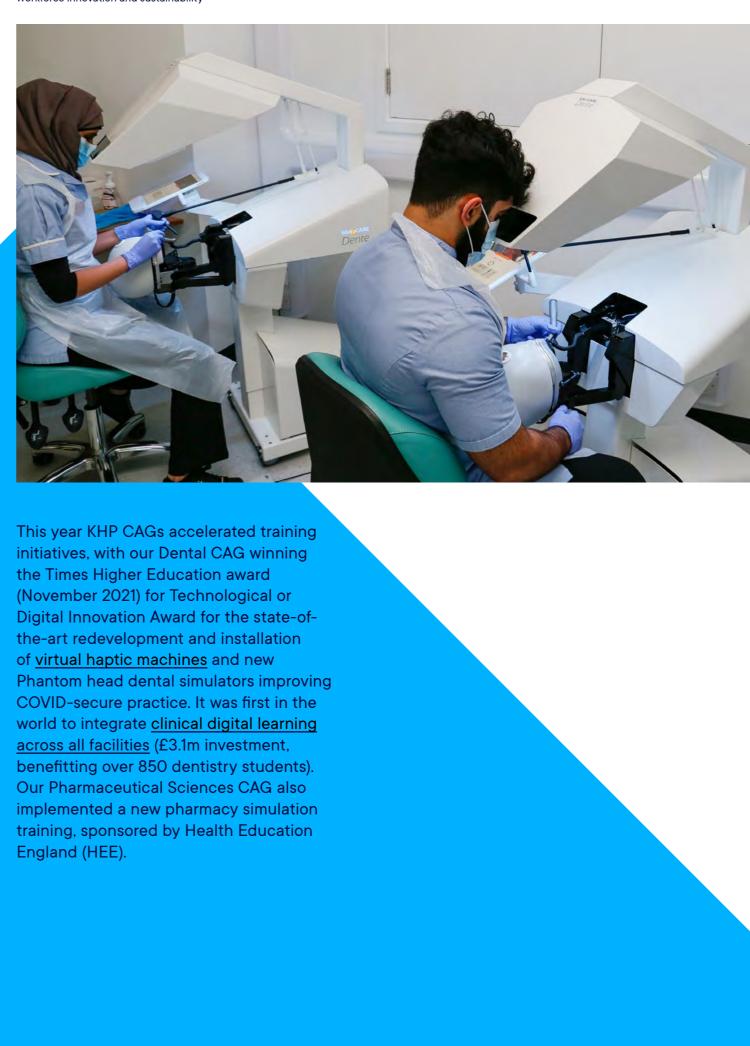
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new integrated academic trainees awarded by the NIHR (application scored 'excellent').

Specialist training

strengthened the RBH-KHP Training Calendar offering trainees access to training across specialties throughout KHP

Workforce innovation and sustainability



Promoting NHS staff in research

370

KHP staff have received Honorary status since August 2017, including;

2

Honorary Senior Lecturers

20

Honorary Lecturers

Honorary

Readers

Honorary Professors

> KHP has continued to promote and enhance the contribution of NHS staff (medical, nursing, allied health) to education and research through formal awards of honorary academic status. 370 KHP staff have received Honorary status since August 2017, with their academic contributions assessed alongside clinical contributions at annual performance development reviews.

Workforce innovation and sustainability



92 adjunct titles were awarded to colleagues whose academic activities included significant competitive external funding and/or the supervision of PhD students. Their career development is evidenced by the promotion of 22 staff to Honorary Professor and 35 staff to Honorary Reader. The contribution of NHS staff to multidisciplinary academic partnerships has had substantial impact across diverse areas, with the COVID-19 response perhaps being the most striking example. To empower staff in the workplace, particularly with challenging behaviours, KCH runs Active Bystander training (over 700 enrolled) and has created a training video for the NHS.

This year we launched <u>KCATO</u>, which will provide **strong oversight of clinical academic training** for all qualified healthcare professionals, and recently appointed its leadership team.

Mind & Body

Programme updates

mind & body



Mind & Body Quality Improvement Network Delivering integrated mind and body care The Mind & Body Programme was established in 2016 with the aim of being an ambitious and collaborative programme, co-designed and co-delivered with our partners, patients and communities, and working to make the advancement of integrated mind and body care a reality. Since then, we have been successful in shifting the conversation and delivering change locally to provide more joined-up care.

We have a national network of over 1000 Mind & Body Champions, award winning programmes integrating mental and physical healthcare systems and data, and launched the Mind & Body Quality Improvement Network. This will provide a comprehensive framework and improvement tool for delivering integrated mind and body care locally and globally.



Our highly reputable Integrating our Mental and Physical Healthcare Systems (IMPHS) project is in its third year of developing and testing new approaches to supporting the physical health of people with severe mental illness.

IMPHS Key Highlights



1,800

over 1,800 calls placed for physical health advice via the Consultant Connect platform – 70% of calls with a recorded outcome avoided an unnecessary referral or admission

referrals into the Physical Health Clinic for complex physical health issues – 15% avoided a referral into acute care



Over the coming year, we will roll out the Quality Improvement Network, and work on a new strategy to accelerate the Mind & Body Programme, aligned to our three work streams – (1) screening, (2) service transformation and (3) empowering and upskilling all staff to support our patients' mind and body needs.





participants in a trial programme to support service users to pursue tailored physical health goals





service users, carers and staff engaged in shaping and delivering the IMPHS project

Key partnerships

Our latest collaborative vision is to partner with investors and build outwards from our three hubs to create a life sciences Innovation District – 'SC1'. This will be a place dedicated to scientific and medical innovation and improving health and wealth locally and globally. Together with the other founding partners Lambeth and Southwark Councils, and the Guy's and St Thomas' Foundation. we launched SC1 in June to hundreds of stakeholders and developers.

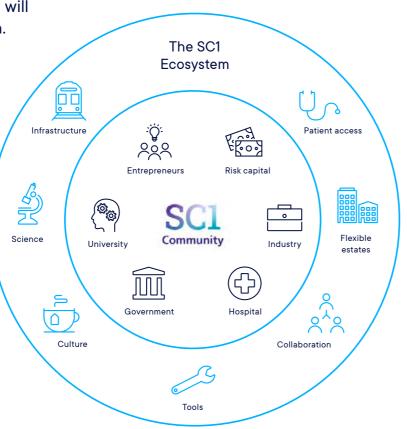
The growth in SC1 will attract larger scale investment and allow us to offer shared scientific facilities and training at lower cost. It will ensure we can develop a pool of technological and commercial expertise that can move across companies and will also contribute to urban regeneration.

Our Clinical Academic Groups and Clinical Academic Partnerships are fully engaged in the development of the new Innovation District. The breadth of clinical and research expertise available to SC1 through our structures is key. Our partnerships are home to some of the most important discoveries, clinical trials and early successes that will be crucial to SC1.



Our Joint Venture between KCH. GSTT and KCL. KHP Ventures, is accelerating at speed offering equity

investments with healthcare expertise for ground-breaking MedTech and digital start-ups.



Our Clinical Academic Partnerships

Our Clinical Academic Partnerships continue to enhance the opportunities of partnership working, including through a relentless focus on system-wide outcomes and working as one team. Key highlights include:

- KHP Women's Children's Health > is mobilising its resilient health system model as an underpinning framework for our new joint KHP and SE London ICS Blueprint for integrating health data sciences, and its Ask the Institute platform is progressing well offering research support to clinical research staff.
- In KHP Cardiovascular and Respiratory Partnership, the KCL Centre for Lung Health had a high-profile launch and will grow our respiratory medicine research even further.
- > In KHP Neurosciences, the developments in the care models for patients with functional neurological disorders has real potential to reduce inequalities of care across the whole system. The partnership's research output has been phenomenal this year with them ranking 4th globally for the number of citations in the top 10% and 2nd in the UK for research power.

- > KHP Diabetes, Endocrinology & Obesity has been working with the SE London ICS and the Health Innovation Network to create a strong focus on both diabetes and obesity service delivery and joint partnership opportunities across sectors. The team continues with their European partnership programme with the H20 health observatory.
- KHP Haematology continues developing its programme and appointing a new joint clinical leadership team. The joint partnership programme with Bristol Myers Squibb continues to develop our understanding of the role of clonal haematopoiesis in disease.

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Pioneering better health for all
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Pioneering better health for all
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Pioneering better health for all
WOMEN AND CHILDREN'S HEALTH

Pioneering better health for a



We would like to thank all those who worked on our achievements this year, from student researchers, to innovative healthcare staff, clinical academics, system stakeholders, industry partners and international collaborators.

31

Together you have all made a significant and very real impact to patients and we hope you are as proud as we are of the inspiring strides made towards better health for all.

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Thank you

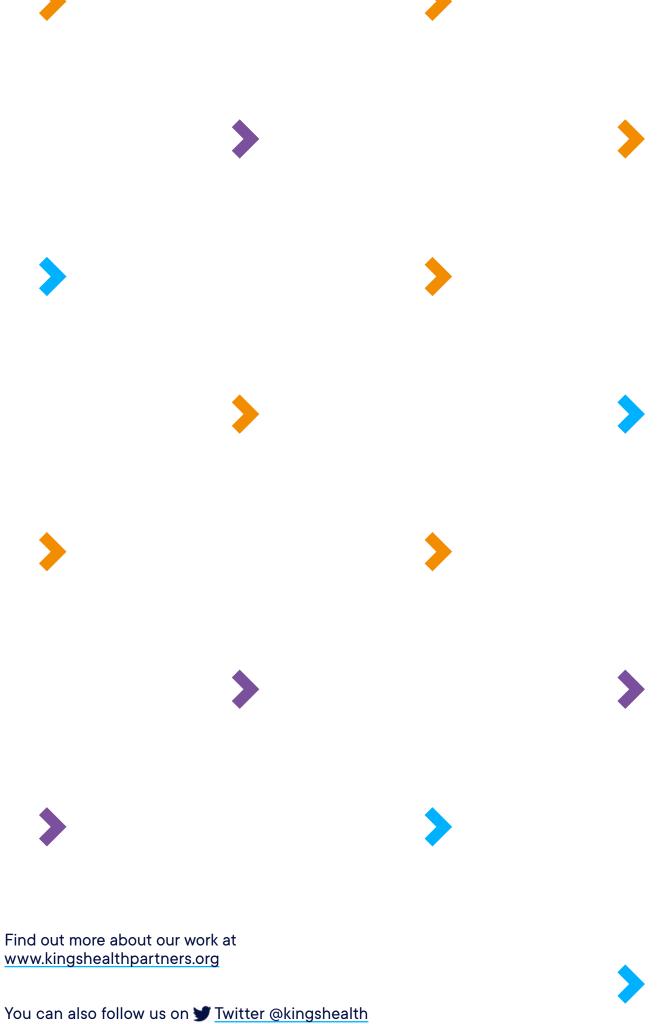
To find out more about any of our work or get in touch, please contact kingshealthpartners@kcl.ac.uk











and visit our in LinkedIn and D YouTube Channel.





