



Summary |

2009. The first 21 CAGs were

established in 2009/10.

Organisation	Clinical academic integration model	Purpose / mission	Resource and leadership model	Output / outcomes / impact	Benefits / challenges / critical success factors
Bristol Health Partners 11 partners, which include: NHS providers (physical health, mental health, community, blood and transplant); Integrated Care Board (ie, regional health system); universities; local authorities (ie, municipalities). 2 affiliate organisations (primary care providers and networks). www.bristolhealthpartners.org.uk Contact: Oliver Watson (email)	19 Health Integration Teams (HITs) organised by specialty or priority. HITs are also grouped by (i) chronic health conditions, (ii) mental health, (iii) equitable, appropriate and sustainable health and care, (iv) public health interventions. Bristol Health Partners formed in 2012. The first seven HITs were established in 2012/13.	Bristol Health Partners is an Academic Health Science Centre and strategic collaboration that exists to help people live longer and healthier lives and improve how services are delivered by integrating, promoting and developing the region's strengths in health and care services, research, innovation and education. A HIT is a group that brings together health professionals, managers, researchers and the public to tackle local health and care priorities.	Leadership: 1-4 Directors per HIT, at least one of which is from a partner organisation. Backgrounds vary from clinicians, public health consultants, academics, public contributors, health and care managers and senior staff within local voluntary, community and social enterprise organisations.	Expected outcomes / impact: (i) external income, (ii) workforce development, (iii) policy influence, (iv) improvements in services / pathways and population health. Routine evaluation: No Year of last review/evaluation: 2016/17 (strategic review).	Benefits: enduring networks; neutral spaces; flexibility'. Challenges: capacity, realistic ambitions, resource. Success factors: Project management, public involvement; alignment with local priorities; engaged leadership.
Contact: Oliver Watson (email)	22 CAGs organised by speciality.	King's Health Partners is an	CAPs receive an annually agreed	Facilitating clinical academic	Benefits: translating and embeddin
King's Health Partners	Some are designated as Clinical Academic Partnerships (CAPs) which receive additional investment in	Academic Health Science Centre where world-class research, education and clinical practice are	budget for leadership and programme management (approx. £450-500k). CAGs receive central	partnership across the KHP organisations to address the root causes of systemic	research in clinical practice; tackling inequalities through a population health management approach;
4 partner organisations, which include three NHS providers (physical health, mental health,	leadership and programme resources.	brought together for the benefit of patients, locally and globally.	support including focused project management (time limited) & light touch support with events,	pressures. Routine evaluation: No	building clinical and academic research capacity and capability.
acute, community, specialist) and one university.	Cross-cutting programmes to support cross-CAG collaboration include: Mind & Body, Education,	CAGs develop their strategies to drive improved patient outcomes through integrated service delivery,	communications etc. All CAGs are offered annual listening exercises.	Year of last review/evaluation: 2021 (review of model).	Challenges: not all CAGs/CAG leadership currently actively engaged. Large number of CAGs
www.kingshealthpartners.org Contact: Joseph Casey (email)	Academic Surgery, Rare Diseases.	education and research. CAPs are areas of identified clinical	Leadership: CAGs and CAPs have co- leaders from academic and clinical		with small amount of project support (outside of clinical academic partnerships).

programmed activity time in their

job plan.

academic strength with the

benefit through collaboration.

potential to accelerate impact and

Summary |

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Greater Copenhagen Health Science Partners 10 partners, anchored across the University of Copenhagen, the Technical University of Denmark, the Capital Region and Region Zealand.	 18 CAGs organised by speciality or priority. 5 new CAGs to be launched 2024 and a further 5 in 2025. Greater Copenhagen Health Sciences Partners formed in 2017. 	Excellent cross-disciplinary translational research and implementation into clinical practice; prevention; education; public-private collaborations.	3.5 mill DKK per CAG for start up (year 1), 3 PhD students and administration. Leadership: Currently 2 CAG chairs working with 10 key members; developing model to 2-4 CAG chairs including mentoring to support the next generation of research leaders.		There is a desire for CAGs to work more collaboratively. A move to matrix working is being planned to help enable more integration.
https://gchsp.dk/en Contact: Ruth Frikke-Schmidt (email)					
Mental health	4 CAGs organised by specialty.	Improved patient outcomes and clinician satisfaction	Resourcing specific to projects.	Routine evaluation: No Year of last review/evaluation: Not	Clinical service delivery standardised.
services	2 CAGs (Bipolar and Psychotherapy) formed in 2019.2 CAGs (Schizophrenia and Dual Diagnosis) launched 2023.	Ensure patients receive standardised/evidence-based treatment; to improve research involvement for staff along with diagnostics and treatment and case supervision support.		yet reviewed.	Effectively enhanced treatment.
Copenhagen					Encetivery emilianced treatment.
3 partners which include 1 mental health hospital, The Region Hovedstadens Psykiatri, and the Faculty of Health and Medical School of the University of Copenhagen.					
KAGs - clinical academic groups (psykiatri-regionh.dk) Contact: Per Sørensen (email) and Lars Vedel Kessing (email)					

Summary |

https://www.fagperson.hospitalsen hedmidt.dk/om-os/kuf/

Contact: David Høyrup Christiansen

(<u>email</u>)

Organisation	Clinical academic integration model	Purpose / mission	Resource and leadership model	Output / outcomes / impact	Benefits / challenges / critical success factors
Human First Partners: VIA University College, the Central Denmark Region, Aarhus University and the 19 municipalities in Central Jutland https://human-first.org/ Contact: Per Jørgensen (email)	theoretical education and practical	Cooperation on groundbreaking research, development, education and clinic (prevention, management, diagnosis, treatment, care and rehabilitation) — for better health and society. This involves delivering and evaluating focused projects. The initial delivery phase for each of the first three focus areas was a two -ear period between 2018 and 2021 after which an evaluation and renewal took place.	organisations	Routine evaluation: No Year of last review/evaluation: Partnership agreement renewed 2021	Challenges: Different legislative frameworks and traditions; different points of view and working conditions; different languages and concepts; absence of general practice
Regional Hospital Central Jutland 1 hospital unit comprising 5 hospitals	4 KUFs organised by priority. (Rehabilitation; Optimising patient-pathways, Cross-sectoral courses of treatment, Multimorbidity).	·	Seed funding of 60k with central secretariat function. Expected to self-fund after 5 years	Increased collaboration across hospitals, specialties and healthcare sectors. Routine evaluation: No Year of last review/evaluation: Planned for 2024	Benefits: Increased collaboration across hospitals, specialties, and healthcare sectors; accelerated implementation of new knowledge in clinical practice. Challenges: Support systems and

funding, time.

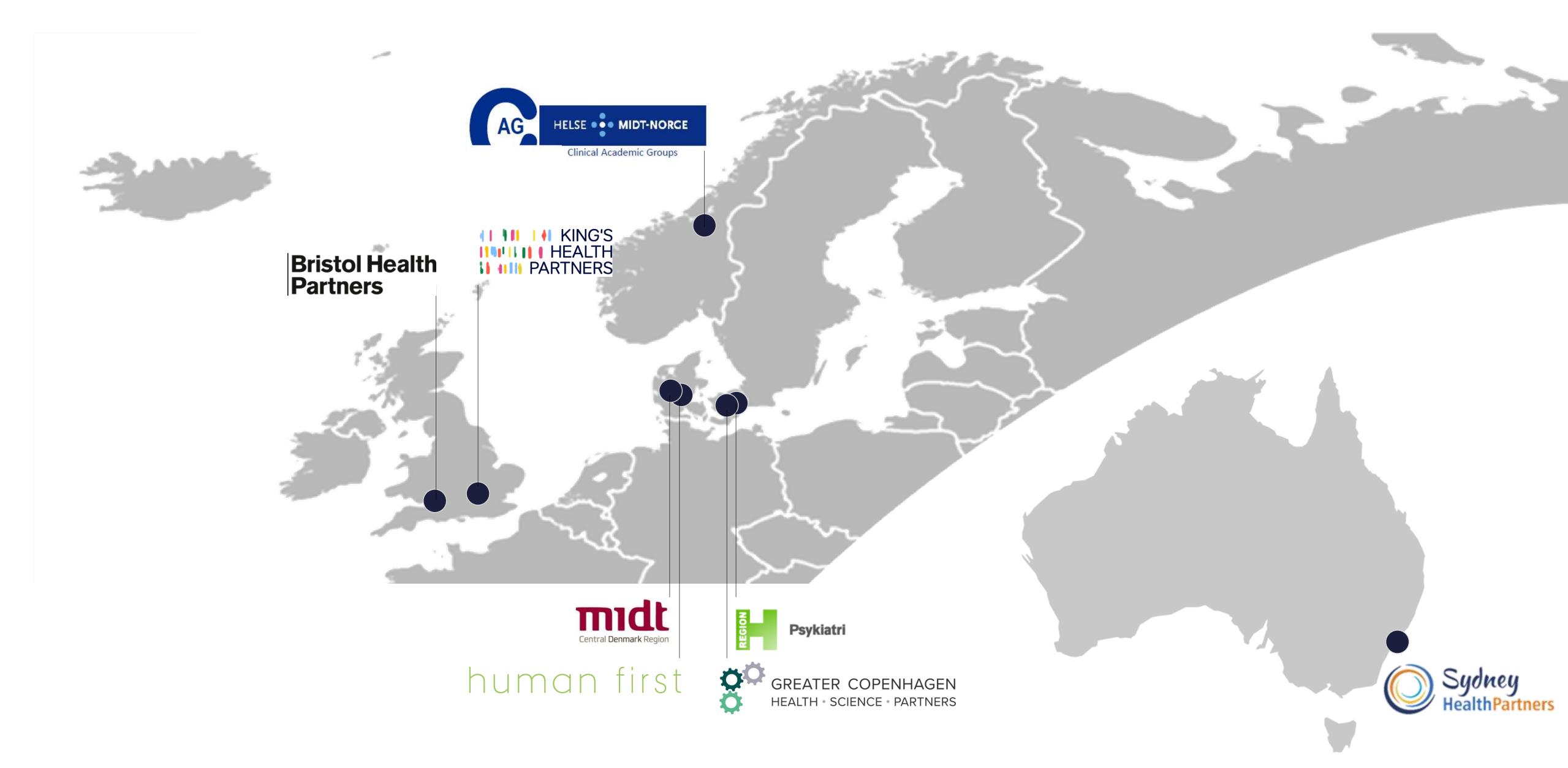
Summary

Organisation	Clinical academic integration model	Purpose / mission	Resource and leadership model	Output / outcomes / impact	Benefits / challenges / critical success factors
Central Norway Regional Health Authority 8 partners including three hospital trusts, pharmacy service, Norwegian University of Science and Technology, Nord University, Molde University College, Volda University College https://www.helse-midt.no/ Contact: Björn Gustafsson (email)	9 Clinical Academic Groups (CAGs) organised by condition, (Inflammatory bowel disease, cardiac diagnostic imaging, multiple myeloma, Alzheimer's disease, prostate cancer, rare genetic diseases, Al cancer prognostic, asthma and COPD, sleep and chronobiology). Formed between 2019 and 2023 through application and review by international panel.	·	first 2 years (one each funded by	dissemination and innovation. Routine evaluation: Yes (every 3 years). Year of last review/evaluation: 2023	in research and innovation; strengthens translational research for patient benefit Challenges: capacity, realistic expectations, external funding, what is the right number of CAGs
Sydney Health Partners 5 health partners (4 local health districts and a children's hospital network), 1 university and 11 affiliated medical research institutes. https://sydneyhealthpartners.org.au Contact: Andria Ratchford (email)	12 CAGs organised by specialty, health priority or innovations in health care. CAGs are self-forming and then accredited through competitive selection process. Formed between 2021 and 2023 (one emerging CAG).	The CAGs are focused on research translation and aim to optimise the impact of research in the health system to improve patient outcomes.	Funding per CAG 2024-2026: \$70k (approx. £35k) for a collaborative project, backfill and capacity building.	Consumer and community involvement; Implementation science academy. Routine evaluation: Yes. mid-year and annual progress reviews, including a brief written report and in-person meeting. Year of last review/evaluation: Planned for 2024.	Benefits: Addresses partner priorities; diversity in disciplines and career stages in leadership teams. Critical success factors: engaged leadership, project management support

Summary | Process for establishing clinical academic integration model

Stage	Considerations	Examples
1. Determine organisational scope for	 Type of health / healthcare system partners involved Number of partners involved Governance and funding arrangements 	 Bristol Health Partners formally include all health providers (NHS trusts) in system; municipalities (local authorities / councils); universities; regional health system (integrated care board)
clinical academic integration model		 King's Health Partners do not formally include all health providers (NHS trusts) or universities in local system, or municipalities (local authorities / councils). However, have separate partnership arrangements and joint programmes including larger number of partners and wider geography.
2. Disciplinary / thematic scope	 Proactive design (i.e., set number of clinical academic collaboration units) or responsive model (i.e., any group can be established subject to set criteria) Structured by specialty / disease group / condition(s), thematically (e.g. 	 Sydney Health Partners have a responsive CAG model involving a competitive process, which has selected 5-6 CAGs in each of two phases
	multimorbidity), capability / purpose (e.g. quality improvement, prevention) or mixed model	 King's Health Partners CAGs are structured by specialty with all specialties across the partners theoretically part of a CAG
3. Funding model	 Internal funding models include seed funding only; annual funding during an establishment period or funding tied to reporting and review Self-funding through research or other awards 	 Central Norway Regional Health CAGs are allocated 1 mill Krona (£90k) annually from Regional Health Authority. Continued funding is linked to 3 yearly evaluation.
4. Organisational / leadership form by clinical academic unit	 Fixed or self-determined number of co-leaders for each grouping Members within each grouping selected or membership granted by virtue of specialty 	Greater Copenhagen Health Science Partners has dual chair arrangement plus 10 members and partners including patient organisations, hospitals and companies
5. Reporting, review and renewal model	 Individual CAGs established for a set period following a competitive process or CAG model to be evaluated collectively a fixed time point 	• Central Denmark Region KUF's will undergo a midterm assessment during years 2/3 of delivery followed by a final evaluation in years 4/5.
		Central Norway reaccredits CAGs every 3 years.

Case studies | International examples of developing clinical academic collaboration models



Bristol Health Partners

11 partners and 2 affiliates

North Somerset





North Bristol

University of BRISTOL

University Hospitals Bristol and Weston

NHS Blood & Transplant



Bristol, North Somerset Integrated Care Board

Avon and Wiltshire Mental Health

BrisDoc onecare:

Bristol Health Partners is a strategic collaboration that exists to help people live longer and healthier lives and improve how services are delivered by integrating, promoting and developing our region's strengths in health and care services, research, innovation and education.

Organised into 19 Health Integration Teams

Chronic health conditions

Mental health

Preventing self-harm and suicide

Psychological therapies in primary care

- Dementia
- Musculoskeletal disorders
- Movement disorders
- Chronic pain
- Kidney disease

Psychosis

Eating disorders

Perinatal mental health

Stroke

Equitable, appropriate and sustainable health and care

- Adversity and trauma
- Supporting healthy neighbourhood
- Bladder and bowel confidence

Public health interventions

- Improving sexual health

- Healthy weight

- Immunisation and vaccines
- Active lives
- Drug and alcohol

Funding External income (max. £15k per year) Health integration Team Workforce **Project** development Management (c. 0.1 FTE) Policy influence Members' in-kind Improvements in time contributions services / pathways and population health

Resourcing and expected impact through HITs

Health Integration Team (HIT): A group that brings together health professionals, managers, researchers and the public to tackle local health and care priorities.

Each HIT typically has 1-4 directors, these can be health professionals, academics, VCSE staff or public contributors. At least one must be from a partner organisation.

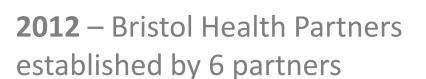
Experience:

- Benefits: Enduring networks; neutral spaces; flexibility
- **Challenges:** Capacity; Realistic ambitions; Resources
- Success factors: Project management; Public involvement; Alignment with local priorities; Engaged leadership

2012/13 – first 7 HITs formed

2016/17 – HITs strategic review

2023 – 2 affiliate members join the AHSC



2015 – 3 partners join

2020 – Bristol Health Partners accredited as one of eight Academic Health Science Centres by NIHR and NHS England. 2 partners join the AHSC



1 university 3 NHS foundation trusts











Guy's and St Thomas' **NHS Foundation Trust**

King's Health Partners is an Academic Health Sciences Centre (AHSC) bringing together world-class research, education and clinical practice for the benefit of patients.

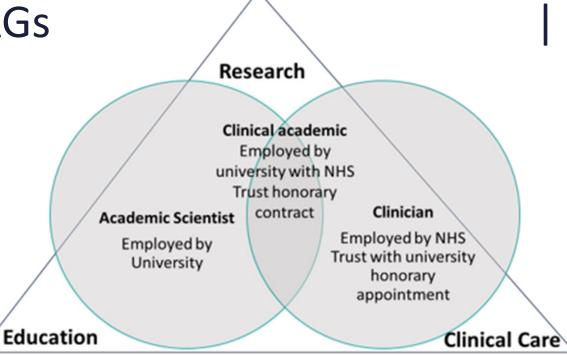
King's Health Partners is building on our five-year strategy (2020-25) to accelerate progress in three connected priorities – Personalised Health, Health Data Sciences, and Population Health, integrating mental and physical health across everything we do.

as one of five AHSCs in launched following internal accreditation

Organised into 22 CAGs

17 CAGs, five of which formed Clinical Academic Partnerships.

Cross-cutting integration through Mind & Body (2014), Academic Surgery (2020) and Rare Diseases (2023) support.



CAGs:

- Addictions
- Behavioural and Developmental **Psychiatry**
- Cancer
- Cardiovascular
- Child and Adolescent Mental Health
- Critical Care
- Dental
- Diabetes, Endocrinology and Obesity
- Genetics, Rheumatology, Infection, Immunology and Dermatology
- Haematology
- Imaging and Biomedical Engineering

- Liver, Renal, Urology, Transplant, Gastro and GI Surgery
- Medicine and Integrated Care
- Mental Health of Older Adults and Dementia
- Neurosciences
- Orthopaedics, Trauma, and **Plastics**
- Palliative Care
- Pharmaceutical Sciences
- Psychological Medicine and **Integrated Care**
- **Psychosis**
- Respiratory and Allergy
- Women's and Children's Health

Leadership, funding and support, outcomes

Leadership: Co-leadership model for CAGs and Clinical Academic Partnerships and Mind & Body from academic, clinical and acrosspartners. Increasing multi-professional leadership.

Funding and support: Five Clinical Academic Partnerships receive leadership and programme funding. CAG leadership funding; project and event support across 17 CAGs. (Further information on supporting integration, see FHJ July 2024)

Outcomes and impact: 17 CAGs have published an outcomes book detailing progress and outcomes across clinical care, research and education (2013-2019).



In 2020, launched annual Impact Report detailing progress and impact against five-year strategy.





2009 – KHP accredited **2009/10** – 21 CAGs England

2014- KHP accredited as one of six AHSCs

2015/16 – CAG listening Exercises launched with KHP Executive.

2015/16 – CAG listening Exercises launched with KHP Executive.



2 universities and 2 health systems







Greater Copenhagen Health Sciences Partners is anchored across the University of Copenhagen, the Technical University of Denmark, the Capital Region and Region Zealand.

Priorities for 2024-27:

- Excellent cross-disciplinary translational research and implementation in clinical practice
- Improved patient treatment and satisfaction
- Prevention at all levels
- Recruitment pre- and postgraduate education
- Public-private collaborations. Life-Science-strategy

Organised into 18 CAGs (expanding to 28) | CAG funding, impact and evolution

- Allergy
- Brain and Technology
- Cancer immunotherapy
- **Endotheliomics**
- Host Infections Laboratory research Drugs
- Imaging-Guided Cancer Surgery
- Inflammation
- Modulating the Infant Microbiome for Disease Prevention
- Novel Strategies to Diagnose and **Treat Bacterial Infections**

- Osteoarthritis
- Personalised Oncological Surgery
- Physical Activity and Sport in Clinical Medicine
- Precision Diagnostics in Cardiology
- Prognostication of Acute Recovery Capacity in an Aging Population
- Regenerative Medicine for **Urogenital Surgery and Fertility**
- Skin Cancer Innovation
- Systemic Low-Grade Inflammation
- Translational Haematology

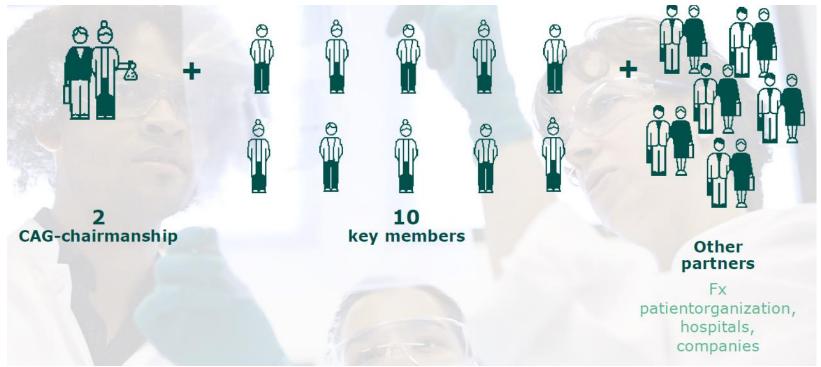
Internal funding c.3.5 mill DKK per CAG for start-up (year 1), 3 PhD students and for administration.

DKK 1.1 billion in external funding

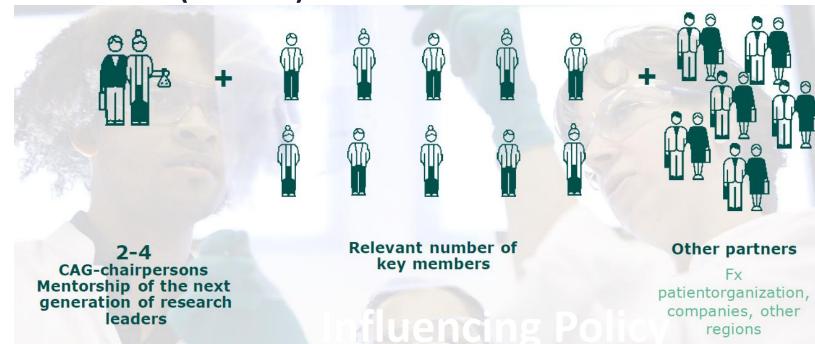
30+ postdocs in BRIDGE-programme

335+ translational PhD students

Current CAG model



CAG model (2024-27)



2019 - DTU and Region Zealand join

2024 (quarter 4) – plan to launch 5 new CAGs

2017 - GCHSP established by UCPH and Capital Region inspired by King's Health Partners CAG model

2022 – Evaluation of impact and benefit undertaken

2024 (quarter 2) – evaluation and interview process for new CAGs

2025 – plan to launch 5 additional CAGs



1 mental health hospitalacross 9 centres1 university partner

The Region Hovedstadens Psykiatri, (RHP, translates as Capital Region Psychiatry) is Denmark's largest psychiatric hospital supporting approx. 50,000 adults and children with mental disorders such as schizophrenia, depression and personality disorders. The treatment takes place across 9 psychiatric centres.

RHP has four <u>clinical academic groups</u> (KAGs in Danish) in partnership with the Faculty of Health and Medical School of the University of Copenhagen. Two started in 2019, two just established in late 2023.

The central focal point for the four KAGs is to ensure a closer integration between clinic, research and competence development and to promote evidence-based treatment of high and consistent quality.

Organised into 4 KAGs

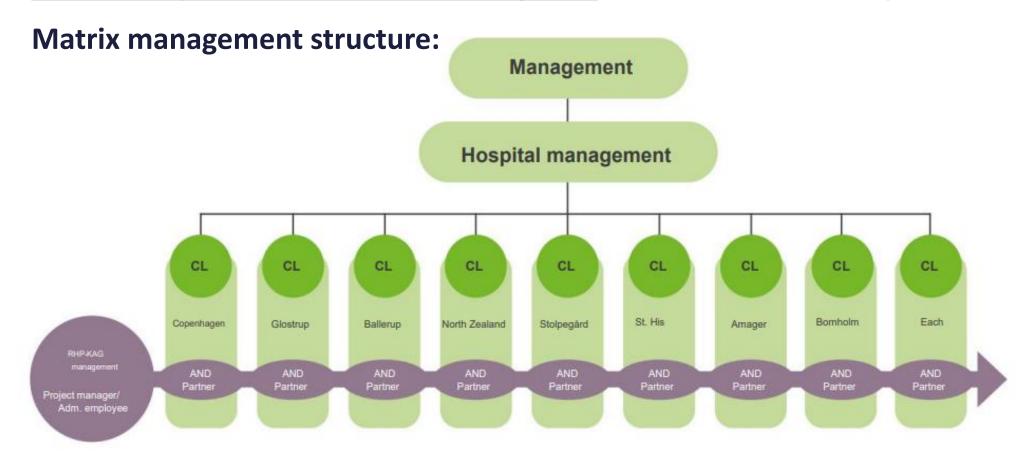
KAG Bipolar – vision:

- To ensure that all patients with bipolar disorder **receive standardized** and evidence-based medical and psychological treatment in accordance with current guidelines aiming to reduce hospitalizations and to improve functioning, quality of life and satisfaction with treatment.
- To provide teaching in diagnostics and treatment, supervision of patient cases, and active involvement in research.

KAG Psychotherapy – vision:

- Ensuring high quality, evidenced based psychotherapy in psychiatry including for those with anxiety and social phobia, depression, PTSD, OCD and Personality Disorder.
- Developing staff competence concurrently with research

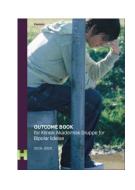
KAG Schizophrenia and KAG dual diagnosis: Visions under development



KAG outcomes

KAG Bipolar:

- Contribution to the evidence base for treating patients in specialist clinics vs standard care
- RCT of >1000 patients to investigate whether specialised out-patient treatment versus generalised communitybased treatment improves patient outcomes and clinician's satisfaction with care in patients with bipolar disorder
- Outcomes published annually from 2019/20:









KAG Psychotherapy:

- Published RCT investigating Mentalization-Based Therapy for Borderline Personality Disorder
- Manualised psychotherapy for most non-psychotic disorders
- Dataset for >34,000 patients, approved for use in research









2023 – CAG Schizophrenia and CAG Dual Diagnosis launched

human first

1 health system

19 municipalities

1 university

1 university college









<u>Vision</u>: Cooperation on groundbreaking research, development, education and clinic (prevention, management, diagnosis, treatment, care and rehabilitation) – for better health and society.

Clinical academic model: Four focus areas function as beachheads for the long-term cooperation and contribute to experience gathering and development of new knowledge within the specific area, as well as intersectoral cooperation in health care in general.

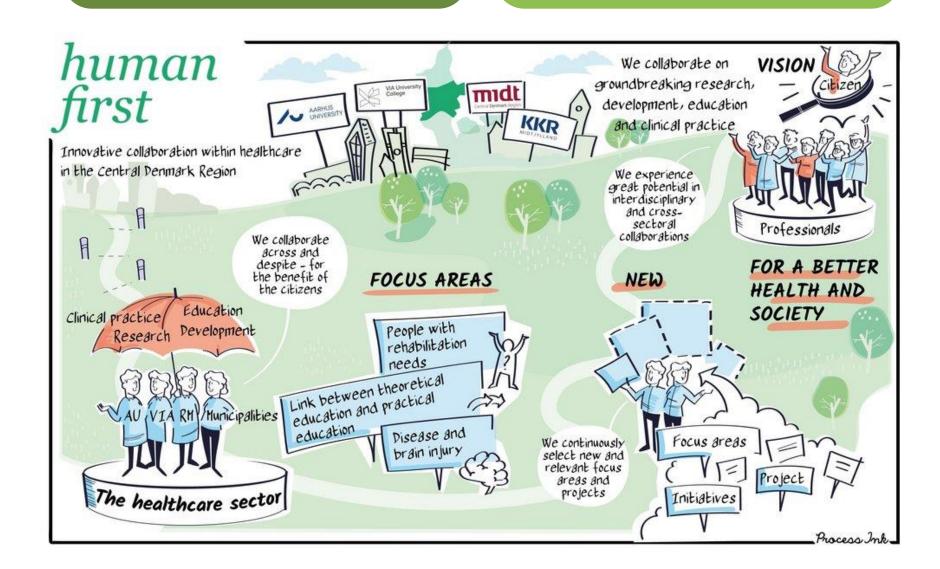
Four focus areas (with one in development)

Brain disease and brain injury

People with rehabilitation needs

Link between theoretical education and practical training

Mental health for children and young people (in development)



Funding model and outcomes

70,000 DKK annually for the use of numerous project groups

Outcome books document progress and next steps:

Brain disease and brain injury

- Fatigue and sleep research programme established and external funding confirmed
- Simulation activities and facilities mapped; course proposals implemented

Rehabilitation – initial focus on cardiac rehabilitation:

 Cardiac rehabilitation research group established. Projects have included a detailed audit of patient data and data flows and improvements needed to enable the delivery of the research agenda to improve patient care

Other projects include:

- a study on patient dropout/non-participation in rehabilitation
- development and delivery of interprofessional training on biopsychosocial approaches
- transition from children's to adult's services

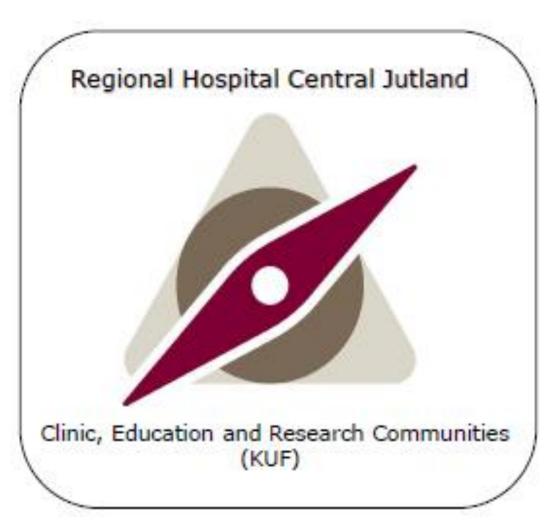
Link between theoretical education and practical training

• Improving the transition from student life to working life

partnership formed



1 hospital unit (5 hospitals) |



In KUF communities, we collaboratively address future healthcare challenges and improve patient pathways.

4 KUFs established (3 projects per KUF)

Rehabilitation

Projects:

- Dysphagia screening
- Identification and monitoring of patients' nutritional status
- Business intelligence (BI) –
 cycles in clinical practice

Multimorbidity

Projects:

- Obesity treatment in children and adolescents
- Improvement in treatment of patients with IBD and arthritis
- Sector transitions for patients with multimorbidity

Optimising patient pathways

Projects:

- Optimisation path from idea to project
- Transitional Pain Service in orthopaedic surgery
- Patient education programme constipation

Cross-sectoral pathways with interdisciplinary solutions

Projects:

- Admission
- The right level and place of treatment
- Socially vulnerable

Leadership, funding, strategy and evaluation

Leadership: leadership teams comprise clinical and research managers. A secretariat function supports the running of each KUF

Funding: DKK 0.9 million seed funding across the KUFs

Strategy: 5-year plans established setting out action areas agreed with three projects for each KUF

Benefits:

- Increased collaboration across hospitals, specialties, and healthcare sectors
- Acceleration of implementation of new knowledge into clinical practice (will require evaluation)

Challenges:

- Support systems and funding
- A new organization in the organization
- Implementation takes time

Evaluation: Progress to be assessed at mid-way point followed by a final evaluation at completion of 5-year term



8 partners in Central Norway



** SYKEHUSAPOTEKENE I MIDT-NORGE ** HØGSKULEN I VOLDA

Central Norway Clinical Academic Groups – bringing experts together for better health.

Through Clinical Academic Groups (CAGs), the regional collaboration body for education, research and innovation in Central Norway <u>aims</u> to stimulate professional collaboration across the sectors, with the aim of better healthcare services.

9 CAGs accredited



2020-22 – first 2 CAGs accredited for three years – *Inflammatory bowel disease and Cardiac diagnostic imaging*

Application, accreditation, evaluation and funding cycle for CAGs

1. CAGs self-organise and apply



Experience:

Application to form CAG requires:

- Named CAG chair and co-chair representing university and health service partner
- Vision for CAG
- CAG organisation chart, leadership structure and members
- Budget and external funding plan
- Financing guarantee for 3-year
 PhD position

 Patients are involved and supportive However

Good intentions constrained by operational pressures

• Well received in academic / healthcare environments

• Strengthens collaboration across hospitals / universities

Challenging to secure external funding

Promotes engagement with other academic

• Smaller and rural hospitals are active partners

communities at the universities

Academic and clinical communities have limited capacity to establish CAGs

2022-24 – two new CAGs accredited –Prostate cancer and Rare genetic diseases– and first two CAGs reaccredited

2024-26 – two new CAGs accredited – Asthma and COPD, Sleep and Chronobiology



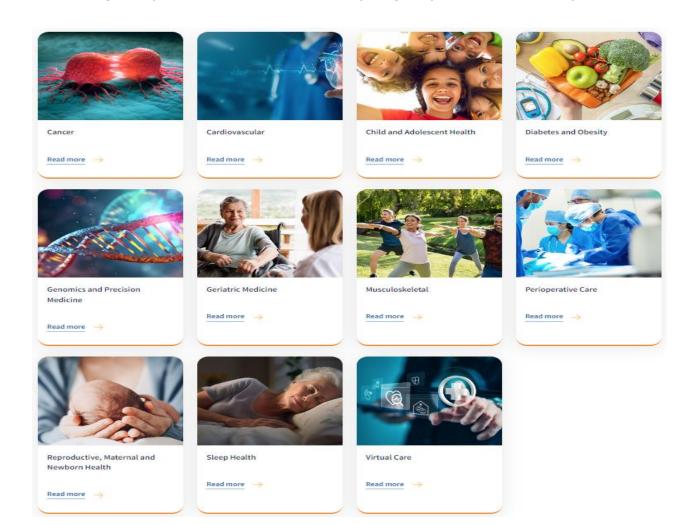
5 major health services, 1 university and 11 affiliated medical research institutes



Sydney Health Partners' vision is to transform the way research improves patient care and public health in our health system by strengthening research translation to better enable the transfer of research discoveries into everyday clinical practice. The purpose of the CAGs is to optimise the impact of research in the health system.

Organised into 11 CAGs

Working through clinical academic groups as the primary vehicle for practical delivery of operational priorities



Major health priorities: cancer; cardiovascular health; musculoskeletal health; diabetes and obesity; sleep health; child and adolescent health.

Health services priorities: geriatric care of the frail elderly, perioperative care of surgical patients; reproductive, maternal and newborn health; (child neurodevelopment and mental health).

Innovations in health care: virtual care; genomics and precision medicine.

Leadership, strategy, funding and evaluation

Leadership: Led by chair / co-chairs; Leadership team of ten members.

SHP Strategic and CAG perational priorities:

- **Supporting people** capacity and capability building, especially in earlier career clinician researchers.
- Aligning innovation linking promising ideas to clinical priorities identified by our health partners and fostering collaboration.
- **Enabling research** ensuring effective consumer and community involvement in research
- **Increasing Impact** advancing the science of research translation and improving the competitiveness of funding applications.

Funding:

- 2022 2023: \$50k AUD (including \$30k for a collaborative research project, \$15k capacity building); 2024 – 2026: \$70k AUD per year
- Secured places for SHP training:
 - Implementation science
 - Consumer and community involvement

Lessons learned:

- Engaged Chair(s) and leadership teams.
- Operational support to organise the group, coordinate meetings and events.
- The importance of leveraging resources with other networks (e.g. coorganizing and co-badging activity).
- CAGs interested in cross-CAG meetings and sharing knowledge
- 2024 2026 Objectives established
- Yearly CAG progress reviews. Program review planned for 2024-2025.

