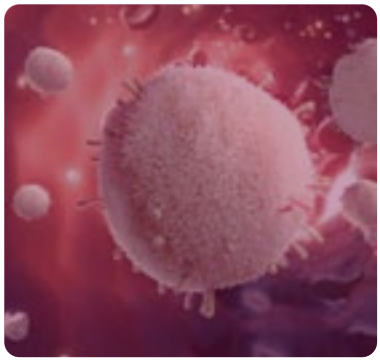
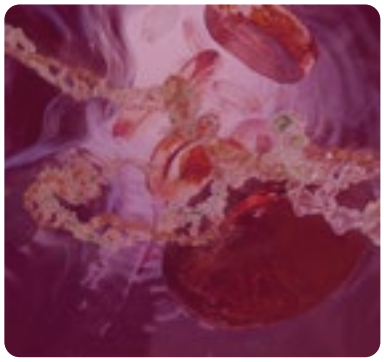
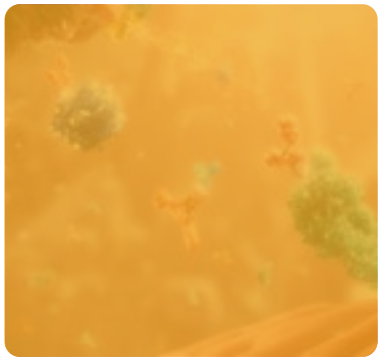
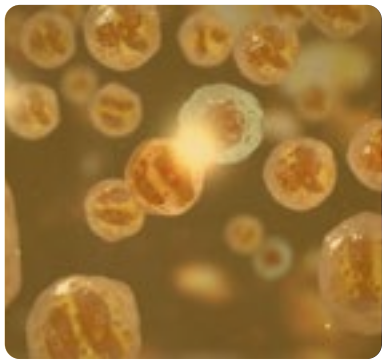
ACCELERATING SCOTLAND'S PLACE AS A GLOBALLY COMPETITIVE HUB FOR COMMERCIAL CLINICAL TRIALS

2025

This is an AstraZeneca non-promotional report for policymakers. Insights have been derived from a Chatham House Rules round table hosted in August 2025

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EXECUTIVE SUMMARY

PEOPLE AND CULTURE ARE ABSOLUTELY KEY; WE NEED TO BETTER DEFINE WHAT RESEARCH IS AND THINK DIFFERENTLY ON HOW WE DO THIS, FRAMING CLINICAL TRIALS AS A CORE PATHWAY OF CARE.

Commercial clinical trials deliver early patient access to innovative treatments, strengthen health-systems, offset care costs and generate evidence that can accelerate health gains and economic development for society. Scotland stands at a pivotal moment in its ambition to lead the delivery of commercial clinical research at scale with the potential to convert recent UK-leading progress into a durable, international advantage.

Clinical trials are the largest and most mobile form of research and development (R&D), contributing £7.4 billion of gross value add (GVA) to the UK economy, supporting 65,000 jobs in 2022. That generated £1.2 billion of revenue, supported 13,000 jobs in the NHS alone and is estimated to have prevented 3 million sick days.[I]

However, between 2017 and 2021, the UK fell from 4th to 10th in phase III global clinical trial recruitment and its share of European initiations dropped in this time period, while Spain, Germany, France, Poland and Italy surpassed the UK.[II]

In response, the 2023 Commercial Clinical Trials in the UK: The Lord O'Shaughnessy Review[III] developed wide-ranging recommendations that have since been accepted in full by consecutive, Conservative and Labour administrations in Westminster.[IV] Here, the Scottish Government focused on collaboration, implementation, infrastructure and working in partnership on UK-wide efforts to restore and grow commercial clinical trials.[V]

The 2024 Voluntary Pricing, Access and Growth (VPAG) saw innovative pharmaceutical companies and government agree a £300 million fund channelled toward the UK's capacity and capability to conduct clinical trials.[VI] *The Collaborative Accelerator for Commercial Clinical Trial Delivery in Scotland* (CATALYST) programme since went on to secure four of the UK's twenty Commercial Research Delivery Centres (CRDC'S).[VII, VIII]

In August 2025, AstraZeneca convened a policy roundtable chaired by Lord O'Shaughnessy with experts and system leaders from government, the NHS, academia and industry to identify core challenges and define priority interventions that can accelerate Scotland's place as a globally competitive hub for commercial clinical trials. Our overarching theme was that research is core to Scotland's health future and that we possess the right foundations to excel in delivery of clinical trials at scale and pace.

Attendees expressed an overwhelming desire for policymakers to set a bold ambition on commercial trial activity and establish involvement in clinical trials as a central pillar of care provided by the health system. Sustainable funding models are required and participation for healthcare professionals and patients alike should be simplified. There are evident opportunities for operational centralisation and de-centralised delivery models to best serve Scottish populations. It was clear that Scotland's excellent health data can be a cornerstone of success.

In 2017, the UK ranked 3rd, 2nd, and 4th in the world for phase I, II, and III industry trials - if we can return activity to 2017 levels it would result in £3bn additional GVA generated, £485m additional NHS revenue and support 25,000 jobs across the UK.[IX] The time is now, the next 12–24 months are an unprecedented opportunity to accelerate progress, improve patient outcomes, demonstrate efficient delivery and attract global investment into the NHS.

In our roundtable report, we outline recommendations that can be taken forward by the Scottish Government, NHS Scotland, the healthcare professions, third sector and industry.

POLICY RECOMMENDATIONS AT A GLANCE:

1. Scottish policymakers should set an ambitious course to attract and deliver more commercial clinical trial activity in Scotland
2. Commercial clinical trials involvement should be established as a core pillar of NHS care, empowered by sustainable funding mechanisms that guarantee long-term impact
3. Adopt a 'Once for Scotland' approach to establish Scotland as a global leader on commercial trials
4. Harnessing Scotland's data, digital and technological edge to innovate on primary care and decentralised trial delivery.
5. Embed clinical trials in education and early careers training programmes with dedicated, thoughtful clinical trials content
6. Prioritise trials that align to Scotland's health challenges

We provide in-detail policy recommendations in our main report.

ACKNOWLEDGEMENTS

The authors of this report would like to thank the following participants for their time and consideration in formulating the findings herein:

The Lord James O'Shaughnessy, former Parliamentary Under Secretary of State, Department of Health and Social Care and author of the O'Shaughnessy Review: Commercial clinical trials in the UK.

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Mr Miles Briggs MSP, Member of the Scottish Parliament cross-party group on life sciences, co-chair of the cross-party group on cancer and former Scottish Conservatives Spokesperson on Health

Dr Tom Barlow, Senior Research Manager, Chief Scientist Office, Scottish Government

Professor Rory McCrimmon, Dean of Medicine, University of Dundee; Lead Clinician, Scottish Diabetes Research Network and Professor in Experimental Diabetes and Metabolism

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Professor Neeraj Dhaun, Director, Edinburgh Clinical Research Facility and Senior Fellow, INSERM & Université Paris-Descartes Cardiovascular Centre

Professor Naveed Sattar, Professor of Metabolic Medicine, University of Glasgow and Fellow, Academy of Medical Sciences

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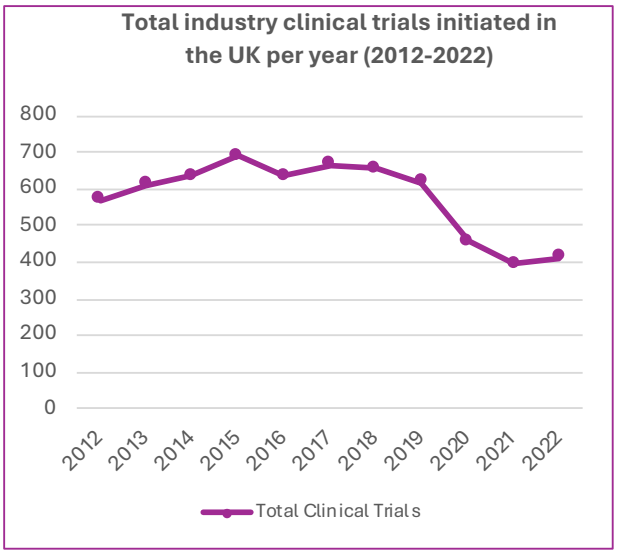
Gary White, Head of Clinical FSP Go to Market, IQVIA and former Chair of Life Science ILG

BACKGROUND

Clinical trials can deliver innovative treatments, strengthen healthcare infrastructure and relieve pressures on NHS staff all whilst offsetting care costs and generating value for the economy. In 2022 clinical trials generated approximately £7.4 billion of GVA to the UK economy and supported 65,000 jobs in the UK.[I]

Between 2017 and 2021, the UK had precipitously fallen from fourth to tenth place in the global rankings for the number of phase III trials it hosts.[II] This is despite substantial evidence proving that CTIMPs produce wide ranging benefits for patients, our health system and economy.



Source: Association of the British Pharmaceutical Industry, https://www.abpi.org.uk/publications/getting-back-on-track-restoring-the-uk-s-global-position-in-industry-clinical-trials/

The O'Shaughnessy Review, published in May 2023, was commissioned by the UK Government to assess and recommend reforms for the commercial clinical trials ecosystem - especially for Clinical Trials of an Investigational Medicinal Product (CTIMPs).[III]

O'Shaughnessy documented several challenges: regulatory delays, operational bottlenecks, and insufficient use of health data and digital tools as major factors in the UK's clinical trials performance. The previous UK Government accepted the Review's 27 recommendations in full, setting out five headline commitments on:

- Approval timelines
- National contracting
- 'Real-time' data
- Increasing outreach to patients
- Establishing clinical trial networks.[IV]

Following the O'Shaughnessy Review, the pharmaceutical industry committed to funding a £400 million programme via UK VPAG scheme, to enhance capacity to delivery industry clinical trials across the UK's four nations.[VI]

Furthermore, in 2025 the UK Government committed to reducing study set-up times to 150 days as part of its 10 Year Health Plan and included a swath of commitments as part of its Life Sciences Sector Plan to accelerate clinical trial set-up, expand capacity, and modernise research infrastructure.[XV]

Standardised contracts, enhanced data integration, investments in genomics, support for novel health cohorts, improved oversight and performance tracking aiming to drive health outcomes and stimulate economic growth.

In Scotland Ministers have consistently supported a more patient-centred, pro-innovation and digitally enabled clinical research environment.[X] The Scottish Government's response to the O'Shaughnessy Review focused on collaboration, implementation of the review recommendations, enhancing research infrastructure, and consciously contributing to UK-wide efforts to restore and grow commercial clinical trials post-pandemic.[V]

Exciting progress has already been made on building Scotland's clinical trials capacity and critical infrastructure through the £36.9 million NHS Research Scotland Collaborative Accelerator for Commercial Clinical Trial Delivery in Scotland (CATALYST) initiative supported by the Scottish Government's Chief Scientist Office (CSO). This has created four of the UK's twenty-one new commercial research delivery centers (CRDCs). First phase infrastructure and resource is now in place before shifting to operate as a three-tiered Hub and Spoke delivery model.[VI-VIII]

In an internationally competitive market, Scotland can build upon this solid foundation to not only keep up with global trends but punch far above them.[XI]

To forge a globally leading position our roundtable attendees put forward bold thinking for policymakers to establish an enduring vision for Scotland's research ecosystem, an ethos that ensures clinical trials remain at the heart of NHS delivery for a healthier, more prosperous Scotland.

The following priorities should inform Scotland's approach to strengthening commercial clinical trials:

1. Scottish policymakers should set an ambitious course to attract and deliver more commercial clinical trial activity in Scotland
2. Commercial clinical trials involvement should be established as a core element of NHS care, empowered by sustainable funding mechanisms that guarantee long-term impact
3. Adopting a single site, 'Once for Scotland' approach to establish Scotland's global leadership.
4. Harnessing Scotland's data, digital and technological edge to innovate on primary care and decentralised trial delivery.
5. Embedding clinical trials in education and early careers training programmes.
6. Prioritise trials that align to Scotland's health challenges

As we look ahead to the next Holyrood elections, it is imperative to reinvigorate political attention and public awareness towards research as a core pillar of NHS care. The below findings and recommendations offer a unique springboard for policymakers, clinicians, industry and academia to work from in this endeavour.

1. SCOTTISH POLICYMAKERS SHOULD SET AN AMBITIOUS COURSE TO ATTRACT AND DELIVER MORE COMMERCIAL CLINICAL TRIAL ACTIVITY IN SCOTLAND

WE HAVE THE PATIENTS; WE HAVE THE STUDIES AND THERE IS A GAP TO CLOSE IN BETWEEN

Scotland's potential in clinical trials and the benefits to its NHS staff, healthcare professions, industry and patients from continued support for R&D was recognised as significant during our roundtable, expressing that "there is no way forward" without them and the revenue they can sustainably generate.

The COVID-19 pandemic played a considerable role in changing people's attitudes to commercial clinical trials, widening awareness of them and evidencing their crucial role in delivering breakthroughs for patients.

THE COVID-19 PANDEMIC HAS CHANGED ATTITUDES – WE NEED TO EXPLORE HOW SCOTLAND CAN BUILD ON THAT.

Considering the above context, Scotland now can set an ambitious course for the entire clinical trials ecosystem.

Policymakers will be critical to this endeavour and can set a bold path at the legislative level and within the health system. They will be foundational to setting a system primed to embed clinical trials as part of the norm, using their leadership to build their significance into health and economic policy frameworks. More broadly, they can play a crucial role in elevating the importance of clinical trials through direct communication to the health system, engaging health leaders, clinicians, the third sector, industry, and, most importantly, patients.

> **THE GENERAL MEDICAL COUNCIL (GMC) HAS MADE CLEAR THAT EVERY CLINICIAN MUST BE A PART OF RESEARCH MOVING FORWARD, EITHER BY RAISING AWARENESS OF CLINICAL TRIALS, RECRUITING FOR THEM OR DESIGNING AND CARRYING OUT THEIR OWN RESEARCH PROJECTS.**[XII]

> **WHILE THE TAXPAYER SUPPORTS [CLINICAL TRIALS] THROUGH FUNDING BODIES AND THERE IS A GREAT AMOUNT SUPPORTED THROUGH THE THIRD SECTOR, WE NEED TO MAKE COMMERCIAL CLINICAL TRIALS A VIRTUE THROUGHOUT THE WHOLE HEALTH SYSTEM.**

PEOPLE AND CULTURE ARE ABSOLUTELY KEY; WE NEED TO BETTER DEFINE WHAT RESEARCH IS AND THINK DIFFERENTLY ON HOW WE DO THIS, FRAMING CLINICAL TRIALS AS A CORE PATHWAY OF CARE.

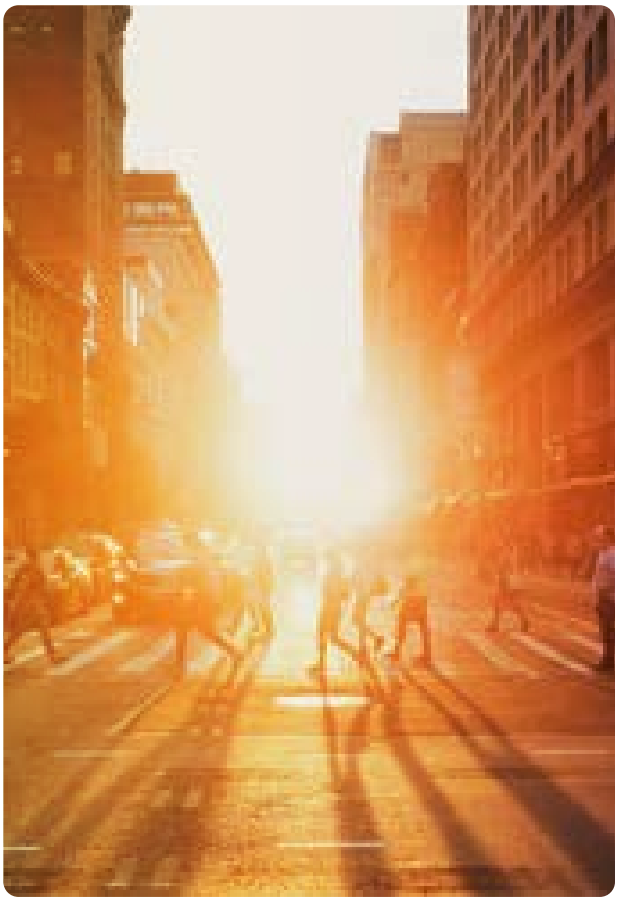
Indeed, analysis by the UK MHRA in April 2025 states that "the global clinical trials market is expected to nearly double to over £80 billion by 2032" and 85% of clinical trials in the UK are sponsored by industry and the remaining 15% supported by universities, hospitals and charities.[XIII] In Scotland alone, pharmaceutical companies invested £164 million in R&D in 2018, estimated to generate £1.5 billion in economic benefits for the Scottish economy over the next three decades.[XIV]

The CSO has laid the groundwork for this research, already nearing the UK Prime Minister's recent pledge to reach a 150-day set up time for trials in the UK.[XV] As the CSO embarks upon initiating Phase 2 of the CATALYST programme, policymakers can support the CSO to not only reach this target but move far beyond it. Scotland can create a world-leading reputation, defined not only by its cost, quality and speed of commercial clinical trials but having them engrained across every aspect of NHS healthcare as espoused by the GMC.

This ambitious course should have an 'all society' approach at its heart, particularly targeting diverse and underserved populations less able to access care due to their remote location or socio-economic background and those suffering from Scotland's core health challenges, such as obesity and chronic disease.

PATIENTS FROM MIDDLE CLASS BACKGROUNDS ARE VERY GOOD AT ACCESSING AND MEETING THEIR HEALTH NEEDS, INCLUDING THROUGH RESEARCH. THIS IS NOT THE CASE FOR THOSE FROM LOWER SOCIO-ECONOMIC BACKGROUNDS.

Officials should explore opportunities in the delivery of the anticipated Scottish Life Science Strategy to bolster clinical trials through Scotland's cutting-edge digital, data and technology capabilities and companies, drive upward demand and work more collaboratively with all stakeholders involved in this space.



THE UPCOMING SCOTTISH LIFE SCIENCES STRATEGY COULD GIVE US THE OPPORTUNITY TO MAKE THE PATIENT MORE VISIBLE AND ENABLE MORE UPWARD DEMAND FOR COMMERCIAL TRIALS.

To help with this endeavour, our roundtable addressed several themes, from organisation and culture to education and training. Each of these can provide all interested stakeholders with a solid grounding in the issues and challenges that must be addressed to meet our ambition, but the starting point for this must be policy leadership.

THE TIMING IS EXCELLENT, BECAUSE THE TIME TO MAKE THINGS BETTER, BIGGER, IS NOW.

Detailed policy recommendations for each area are found at the end of this report.

2. COMMERCIAL CLINICAL TRIALS INVOLVEMENT SHOULD BE ESTABLISHED AS A CORE PILLAR OF NHS CARE, EMPOWERED BY SUSTAINABLE FUNDING MECHANISMS THAT GUARANTEE LONG-TERM IMPACT

> **FOR NHS CONSULTANTS, HAVING TIME TO DO TRIALS IS NOT ENOUGH. IT HAS TO BE FUN. YOU HAVE TO INCENTIVIZE IT THAT IT'S FUN, IT'S REWARDING, IT'S LESS BURDENSOME ADMINISTRATIVELY OF PEOPLE BECAUSE THE AMOUNT OF PAPERWORK AND TRAINING THAT PEOPLE HAVE TO DO IS SUBSTANTIAL. THAT IS ALSO ABOUT CREATING A CULTURE THAT ACTUALLY LOOKS AFTER PATIENTS AND SHOWS THEM LOVE SO THAT THEY COME BACK, AND WE HAVEN'T GOT THAT AT THE MOMENT.**

Participants told us that patients and staff highly value the care they respectively receive and can deliver through clinical trials. In that context, meeting the needs of NHS staff, namely consultants and their respective management teams but also other allied health professionals, such as nurses – where we heard England are ahead in terms of resourcing – pharmacists and pharmacy technicians who lead on pharmacy services, and data teams who are essential to driving the ambitious path we want to set for clinical trials in Scotland.

SCOTTISH PATIENTS RESPOND WELL TO BEING ASKED TO PARTICIPATE IN TRIALS AND ARE FAR MORE ALTRUISTIC THAN PATIENTS IN OTHER PARTS OF THE WORLD. THIS IS SOMETHING THAT SHOULD BE SAID LOUD AND CLEAR.

It is essential that clinical departments themselves, where medical professionals on the ground treat patients each day, are both involved and enthused about conducting research. To address this, attendees at our roundtable emphasised the importance of organisational alignment and the need for cultural shifts in managerial structures to decrease costs, administrative efficiency, and embed a clinical trials ethos across the system.

UNUSUALLY FOR POLICYMAKERS – SUCCESSFULLY UPSCALING COMMERCIAL CLINICAL TRIALS IN SCOTLAND IS NOT A FISCAL CONSTRAINT, IT'S AN OPERATIONAL CONSTRAINT. IDENTIFYING OPPORTUNITIES FOR EFFICIENCY, HELPING HEALTH BOARDS BECOME MORE AGILE AND INSTILLING A LEARNING CULTURE ACROSS THE SYSTEM IS KEY TO UNLOCKING VALUE HERE.

As evidenced throughout this report, clinical trials can serve as a catalyst for cost-savings rather than an avenue for cost-cutting. As one participant made clear, "the NHS could not survive without innovation." There was consensus that administrative burden and bureaucracy was having an impact on the ability of staff to dedicate time for research.

WHEN WE DO CLINICAL TRIALS, IT CAN TAKE UP TO FOUR YEARS FOR A RESEARCH STUDY TO BE PUBLISHED, MEANING FUNDING FLOWS CAN ALSO TAKE FOREVER, MAKING THE ENTIRE PROCESS HIGHLY CUMBERSOME.

Identifying and building efficiencies could be transformative for NHS staff, allowing managers to be more research-driven and creating an understanding that, in the long-term, clinical trials can generate efficiencies for the whole system and patients.[XVI, XVII]

As clinical trials become more enjoyable, an essential element of our ambition, participation will naturally increase, ensuring that the real benefits of them – academic, financial and professional – are realised and delivered far sooner to the NHS's hardworking medical, pharmacy, nursing and allied health professionals. Getting the balance right is key across roles. Roundtable attendees highlighted the importance of dedicated data entry staffing structures to free up patient facing teams. NHS Lothian stands out as an exemplar in this respect, where robust scrutiny of budgets and corresponding re-investment into data entry teams has garnered efficiencies for the board.

There was strong agreement that establishing more robust leadership responsibilities on research, clearer accountabilities, proper delineation of spans of control and formal business practices within dedicated research departments could create significant, whole system opportunities, particularly a drive towards revenue generation for the NHS and self-sustained funding.

The roundtable highlighted the opportunity to explore these funding mechanisms and encourage prioritisation within leadership roles across the system. This would have a multitude of benefits, increasing both accountability and transparency, ensuring performance standards are met and reducing burdens on health board chief executives. However, there was debate on how that might best manifest for Scotland. In either case, it was made abundantly clear that both accountability and clear spans of control were essential.

THE GOOD THING THAT MONEY UNLOCKS IS THAT EVERYONE HAS TO BE RESPONSIBLE...WE NEED TRANSPARENCY, ACCOUNTABILITY AND NO HIDING SPACES FOR UNDERPERFORMANCE.

In that context, clinical trial units (CTUs) and/or R&D departments should act like a "small business function" within hospitals to "fund future success." This function can give structural accountability to the system, visibly report on the revenues from clinical trials and could open opportunities for government, charitable or new commercial funding that is both realistic and sustainable.

Attendees discussed whether legislative requirements on health boards to report on non-target setting data for clinical trials could be used to measure clinical trial performance, taking precedent from the Health & Care Act 2022. Measuring volume, speed, quality, innovation and/or impact was considered key to establishing a clinical trial ethos in the NHS.

PUBLISHING NON-TARGET SETTING DATA AT THE NATIONAL OR CRDC LEVEL, SUCH AS INCOME GENERATED THROUGH COMMERCIAL CLINICAL TRIALS, COULD GREATLY INCREASE AWARENESS AND POPULARISE THE SUSTAINABLE FINANCIAL OPPORTUNITIES OF COMMERCIAL CLINICAL TRIALS, MOVING THE ECOSYSTEM BEYOND A HAND-TO-MOUTH EXISTENCE AND BRINGING REAL ACCOUNTABILITY.

Lessons could be learned from the international market to drive more sustainable revenue generation, such as the case of Germany. One participant highlighted that, owing to Germany's decline in the number of clinical trials conducted in the country since the COVID-19 pandemic[XVIII], the German Government had taken robust action to incentivise their trial resurgence, strengthen the evidence base for HTA decisions and accelerate patient access to innovative therapies; specifically a new provision where the proportion of domestic clinical trial enrolment for global trial participants informs the corresponding health technology assessments for that medicine.[XIX]

In an increasingly globally competitive market, attendees questioned whether Scotland could formally explore the German model or other similar approaches, that potentially link health technology assessments (HTAs) by the Scottish Medicines Consortium (SMC) to domestic clinical trial activity to build Scotland's early experience with new therapies in Scottish cohorts and stimulate clinical trial activity.

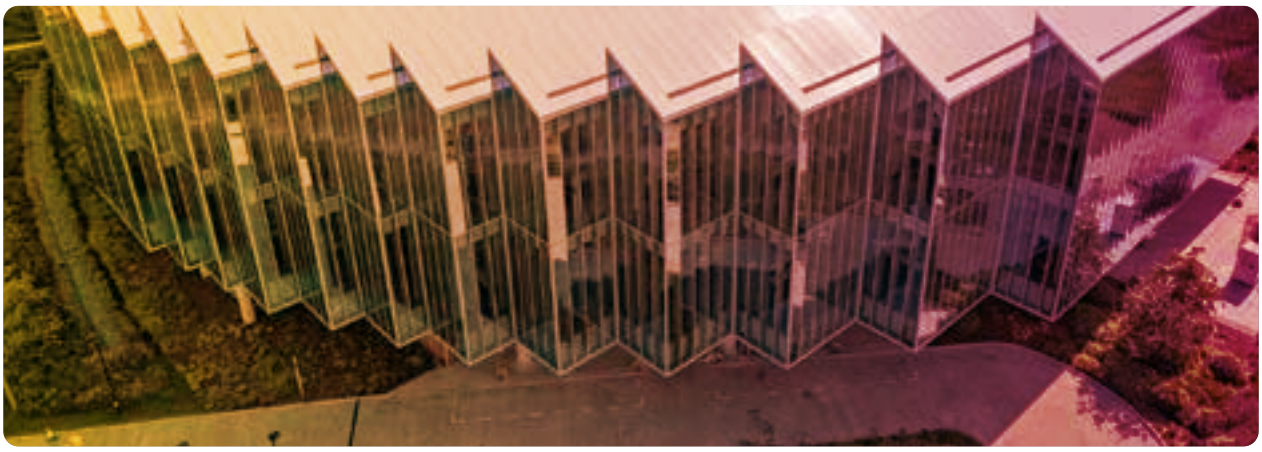
> **IF WE ARE GOING TO BE REALLY INTERNATIONALLY ASSERTIVE IN CLINICAL TRIALS, IT IS THINGS LIKE [GERMAN MEDICAL RESEARCH ACT 2025 LINKING DOMESTIC TRIAL ACTIVITY TO HEALTH TECHNOLOGY APPRAISAL] THAT CAN REALLY TAKE US A STEP BEYOND.**

Scotland could ultimately deliver a sustainable financial cycle within its own clinical trials ecosystem, where revenue is generated and recirculated. We can therefore not only grow Scotland's reputation as a global trials hotspot but do so in a manner that bolsters commercial attractiveness whilst ensuring that system efficiency, cost-savings, staff satisfaction and development, and patient outcomes remains the bedrock of the country's health future.

Detailed policy recommendations for each area are found at the end of this report.

3. ADOPT A ‘ONCE FOR SCOTLAND’ APPROACH TO ESTABLISH SCOTLAND AS A GLOBAL LEADER ON COMMERCIAL TRIALS

THE ATTRACTIVENESS OF A SINGLE RESEARCH ENTITY APPROACH AND POPULATION-LEVEL ACCESS TO NHS SCOTLAND WOULD BE PHENOMENAL FOR RESEARCH ORGANISATIONS.



The December 2024 announcement of four CRDCs in Scotland represents significant progress in Scotland’s critical infrastructure, offering an unprecedented opportunity to ensure equitable geographic distribution of clinical trials across the country.

Contributors were clear that a significant key to this could be establishing a single ‘Once for Scotland’ commercial trial approach, specifically – operational centralisation – that could be administered through a bespoke entity. A single entity could provide suitable governance structures, single information governance assessments, sole service level agreements, proportionate risk models and broader data permissions. A single study site designation by companies would be highly prized.

> **WE WANT TO DO MORE TRIALS WITH THE SAME AMOUNT OF MONEY…IT WOULD BE GREAT TO DO MORE COOL STUFF AND HAVE THE INFRASTRUCTURE TO DRIVE THAT THROUGH.**

COMMUNICATION OF CLINICAL TRIAL OPPORTUNITIES IS REALLY IMPORTANT FOR CLINICIANS AND HAVING A SINGLE RESEARCH ENTITY DRIVING COORDINATION COULD YIELD A LOT.

A single research entity approach would also substantially increase the ability to investigate and recruit more people from across Scotland for clinical trials, follow up using routinely related data in their communities and, in time, ensure people are receiving international standard of care treatments.

Scotland's current regulatory environment is already set-up to support this recommendation, with frameworks surrounding unified trial approval and centralised contracting already streamlined, putting us ahead of England in this regard. Regulatory timelines in the likes of Australia and the US are even simpler, meaning further lessons can be learned to bolster a 'Once for Scotland' approach and drive our competitiveness internationally.

PROPORTIONATE RISK SHOULD BE USED, WE ARE INCREASINGLY TOO RISK AVERSE AND SHOULD BE ABLE TO ASSESS RISK CENTRALLY, WITH ONE ENTITY FOR SCOTLAND ALONGSIDE ALL HEALTH BOARDS.

The Once for Scotland model could also have benefits for commercial relationships with industry, where simplicity and financial sustainability in the research environment is considered critical to their business operations.

...THIS WOULD BE A BIG CHALLENGE, BUT IT IS THE WAY IN WHICH THE FOUR-COUNTRY SOLUTION BECOMES LED BY SCOTLAND AND BRINGS TRIALS TO THE UK. IT WILL NOT BE SIMPLE, BUT IT SPEAKS TO OUR ASPIRATIONAL MINDSET.

There will inevitably be challenges to this approach, namely whole-system engagement. The commercial environment must enable research whilst being empowered with staff, resources and equipment, all delivered through sustainable income sources.

If delivered in the correct way, coalescing CRDCs under one banner and driving engagement with industry has the potential to elevate Scotland as the clinical trials leader among the four nations of the UK and instil an inherent appeal to the global research market.

Detailed policy recommendations for each area are found at the end of this report.

4. HARNESSING SCOTLAND'S DATA, DIGITAL AND TECHNOLOGICAL EDGE TO INNOVATE PRIMARY CARE AND DECENTRALISED TRIAL DELIVERY.

THE DECENTRALISATION OF CLINICAL TRIAL [DELIVERY] OFFERS SCOTLAND A MASSIVE OPPORTUNITY BECAUSE OF THE NATURE OF ITS DISPERSED POPULATION AND HIGHLY RURAL COMMUNITIES

The proposed shift of clinical trials into community settings under the CRDC model will be particularly beneficial to Scotland's dispersed population, with 17% of the country residing in rural areas as of 2019.[XX] Research from the United States has shown that rural populations have been historically excluded from research. Barriers to engagement range from proximity to research facilities, poor infrastructure, including lack of research staff and data collection, and lack of awareness of the potential benefits of clinical trials.[XXI] Attendees noted that such barriers also exist in Scotland.

The importance of primary care settings in breaking down these barriers was considered essential by participants. With a significant rural and remote population, decentralising clinical trials – decentralised delivery - could present a significant opportunity to expand patient recruitment. In addition, given the consensus by our participants and the GMC that every healthcare professional must be involved in research moving forward, decentralisation can also apportion involvement from – and support to – local GPs across the country.

WE SHOULD OFFER GP'S THE SAME SUPPORT ON RESEARCH AS WE DO FOR DOCTORS IN OUR HOSPITALS

The COVID-19 pandemic undoubtedly had an impact on both the quality[XXII] and quantity[XXIII] of clinical trials conducted in the UK, however, this has merely re-emphasised the importance of expanding research funding to low-resource areas. Perhaps the most interesting element from the pandemic is that, despite the opportunity to raise awareness of clinical trials amongst the public, the UK has experienced a year-on-year decrease in interventional clinical trial participation since 2020/21 and sits at its lowest point in the last seven-year period.[XXIV] It was noted by one attendee that we have not learned well enough from the opportunities that the pandemic offered to us.

THERE REMAINS A DEGREE OF SEPARATION FROM CLINICIANS CONDUCTING CLINICAL TRIALS AND THOSE WILLING TO TAKE PART IN THEM, BUT THERE IS FERTILE GROUND TO REDUCE THIS GAP.

In that context, options posed by the roundtable group included expanding access to clinical trials in primary care settings and remote communities, legislative reform to create a primary care research delivery mechanism, and cloud-based or artificial intelligence (AI) driven systems for patient recruitment. It was suggested that, even more broadly, policymakers could explore wider legislative reform to streamline study set-up, data join-up and patient consent to be contacted about clinical trials opportunities, taking inspiration from the UK Government's Be Part of Research service on the NHS App.[XXV] Every opportunity should be taken to also connect Scotland within UK wide initiatives such as the developing Health Data Research Service (HDRS).

It was argued that such methods would have a multipronged impact, streamlining trial set-up by making research opportunities more visible to patients, allowing clinicians to recruit from the top-down but also allowing patients to signal their own interest in clinical trials from the ground-up. With the digital front door opportunity in Scotland this could put Scotland ahead of established systems in England.

HARNESSING EXISTING CAPABILITIES AND EXPLORING DUAL-USE SYNERGIES COULD HAVE THE POTENTIAL TO DRIVE MUCH GREATER THROUGHPUT, REDUCE COSTS AND ALLOW FOR THE CONDUCTING OF MORE CLINICAL TRIALS IN A FINANCIALLY SUSTAINABLE WAY.

SCOTLAND HAS A FANTASTIC DATA SET...IN TERMS OF RECRUITMENT, IF YOU HAD ACCESS TO THE ENTIRE PRIMARY CARE COMMUNITY AND RAN AN OPT-OUT SYSTEM YOU COULD OPEN CLINICAL TRIAL OPPORTUNITIES TO THE ENTIRE POPULATION. THIS WOULD BE RADICAL, BUT IT CAN BE DONE IN A SAFE AND SECURE WAY.

A potentially radical position would be to have an opt-out position on clinical trials for Scot's. The roundtable also explored opportunities for simplifying current information systems, consent processes and linkage through existing patient registries, including the potential to build a national, searchable resource across diseases. For example, we could feed more aspects of Scotland's research records directly into patient care pathways.

Attendees highlighted that Scotland already possesses leading digital health databases from which to build upon, such as the Community Health Index (CHI), Scottish Health Research Register (SHARE) and Scottish Diabetes Research Network (SDRN) Research Register (SCI Diabetes).

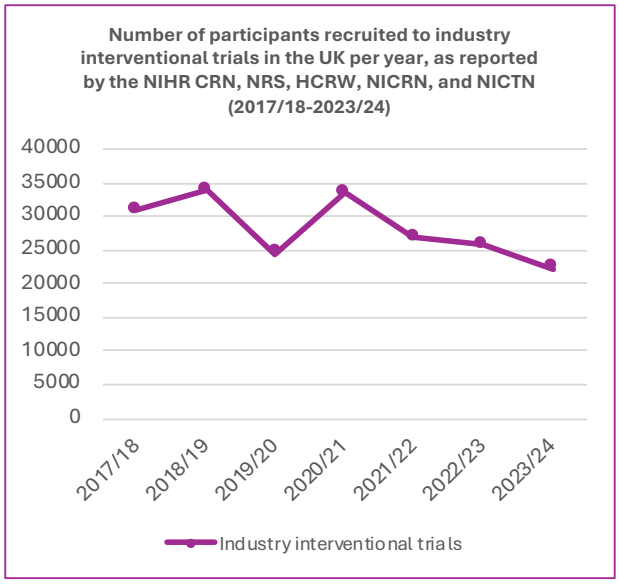
WE NEED TO LOOK AT USING SCOTTISH IT EXPERTISE TO BUILD ON THE GREAT START WE HAVE MADE AND EXPAND INFRASTRUCTURE TO DRIVE MORE TRIALS THROUGH THE SYSTEM.

One participant highlighted the importance of public-private partnerships, citing the Scotland Renal AstraZeneca initiative between NHS Scotland, the Universities of Dundee and Glasgow as an example of the advances that can be provided by working collaboratively.

THE SCOTLAND RENAL INITIATIVE SHOULD BE USED AS A POSTER CHILD FOR INVOLVING JUNIOR CLINICIANS FROM TRIAL INCEPTION BUT ALSO FOR MAKING TRIALS A GREATER SUCCESS IN SCOTLAND THROUGH ADVANCES IN TECHNOLOGY, SUCH AS AI, WIDENING PATIENT PARTICIPATION AND DOING MORE WITH PRE-EXISTING FUNDING.

It was suggested that efforts should also be made at the UK-wide level to influence ongoing accessing health data reforms. Research should be positioned as an essential part of care in this context, given current distinctions within General Data Protection Regulation (GDPR) laws which have proved to be a challenge for clinical trial activity.

The roundtable debated several avenues for employing these approaches, including their financial aspects, but came to an agreement that, irrespective of final design or approach taken, data, digital and technologically advanced systems and enablers must be embedded into the way we conduct clinical trials moving forward.



Source: Association of the British Pharmaceutical Industry, https://www.abpi.org.uk/media/eyzpflm5/abpi-the-road-to-recovery-for-uk-industry-clinical-trials-december-2024.pdf

Detailed policy recommendations for each area are found at the end of this report.

5. EMBEDDING CLINICAL TRIALS IN EDUCATION AND EARLY CAREERS TRAINING PROGRAMMES

I THINK PEOPLE AND CULTURE ARE ABSOLUTELY KEY TO THIS...

Our roundtable identified a common thread across participants that clinical trials could be anchored more resolutely within medical education and continuous professional development.

WE ALSO NEED TO BE THINKING AT THE BEGINNING OF CAREERS AS WELL AS THE BEGINNING OF PATIENT JOURNEYS. SO ARE WE DOING ENOUGH WITH CLINICIANS ABOUT CLINICAL TRIAL TEACHING TO STUDENTS AND NOT JUST THE PEOPLE WHO ARE RUNNING THE TRIALS. AND ARE WE DOING THAT ACROSS ALL DISCIPLINES, SO ALL OF THE OTHER ALLIED HEALTH PROFESSIONALS WHO CAN, ARE PLAYING A REALLY KEY PART IN CLINICAL TRIALS.

Recent data indicates that Scotland invested less than a sixth of that spent in England per capita and under half of that spent by Wales or Northern Ireland in clinical academic training awards for healthcare professions (excluding medicine and dentistry).[XXVI] Though this excludes medicine, a whole-system approach to clinical trials in Scotland, to include nursing, pharmacy and allied health professionals could greatly improve the embedding of clinical trials as foundational to a healthcare career. Fostering a greater awareness within government of the symbiotic relationship that exists between it, academia and the commercial clinical trials sector could further socialise these principles.

WE ARE SEEING ACROSS THE COUNTRY A DROP IN NUMBER OF MEDICAL STUDENTS AND TRAINEES GETTING INVOLVED IN CLINICAL TRIALS

Our roundtable attendees highlighted, however, that positive steps to address these issues are already being taken, with academic institutions such as the University of Edinburgh and University of Glasgow each offering postgraduate master's degrees in clinical trials. Indeed, the University of Glasgow's Clinical Trials MSc stands as a particular example of a successful NHS, industry and academia trilateral partnership, with experts from IQVIA delivering important elements of the course to students.

Nevertheless, there remains additional opportunities to instill clinical trials into education and provide further support for research as part of professional development across all health professions. In addition to more dedicated courses and modules for healthcare professionals, attendees suggested that this could also include the establishment of a bespoke clinical trials academy within the Scottish university system or increased funding for clinical fellowships via the CSO. Such efforts could be supplemented with a concerted national education campaign across the university system to communicate the value and potential impact that clinical trial involvement can provide healthcare professionals, policymakers and patients.

THERE NEEDS TO BE AN EXPLORATION OF THE THINGS WE CAN DO TO INCREASE THE EXPECTATION THAT, AS A HEALTH PROFESSIONAL, WHATEVER LEVEL YOU ARE AT, YOU MIGHT AND SHOULD HAVE A PART TO PLAY IN CLINICAL TRIAL SUPPORT FOR YOUR PATIENTS.

Placing clinical trials at the core of medical education and professional development for hospitals and general practice medics can aid in shifting ways of working within the NHS for the better. By making clinical trials the norm and one of the most common aspects of care, the supply of data and evidence for future decisions and therapies will naturally be expanded.

Detailed policy recommendations for each area are found at the end of this report.

6. PRIORITISE TRIALS THAT ALIGN TO SCOTLAND'S HEALTH CHALLENGES

WE NEED TO PRIORITISE GIVING BACK HEALTH, NOT JUST PROLONGING LIFE. IF WE WANT TO IMPROVE THE ECONOMY, MAKE COST-EFFICIENCIES IN THE HEALTH SYSTEM AND REDUCE THE BURDEN OF MULTIMORBIDITY, WE NEED TO GET UPSTREAM AND INTERVENE IN EARLY-STAGE DISEASE...SUCH AS OBESITY.

Research has suggested that, on average, primary prevention in care can be four times more cost-effective than treatment.[XXVII] Scotland can preferentially look to prioritise clinical trial activity that prevents, slows and avoids the complications of disease to have a significant impact on the NHS in Scotland and society. The Renal partnership between AstraZeneca and Scotland, aiming to slow the progression of chronic kidney disease – a condition affecting ~1:10 Scot's, illuminates how research trials can improve patient outcomes.[XXVIII]

Attendees discussed the possibility of a public campaign, led by the Scottish Government, including NHS Scotland and Public Health Scotland, in collaboration with the third sector, raising visibility of the value of clinical research and encouraging action by patients to seek out opportunities to participate. While this would offer multiple benefits for recommendations outlined in this report - particularly awareness related to mandated opt-out positions. Emphasizing an upstream focus and engaging the public on the vital role of research could have a profound influence on the early intervention agenda for Scotland.

...WHAT WE WANT TO DO IS PREVENTION AND PROTECTION [TO AVOID] THAT DECLINE THAT PEOPLE THEN REACH, THAT TAKES THEM TO DIALYSIS AND TRANSPLANTATION.

Clinical trials with interventions and medicines that enable that path – to earlier primary and secondary prevention intervention – can be a cornerstone for Scotland to tackle many of its population health priorities.

Detailed policy recommendations for each area are found at the end of this report.

IN-DETAIL POLICY RECOMMENDATIONS

1 SCOTTISH POLICYMAKERS SHOULD SET AN AMBITIOUS COURSE TO ATTRACT AND DELIVER MORE COMMERCIAL CLINICAL TRIAL ACTIVITY IN SCOTLAND

Our roundtable's overarching theme was that there is no way forward without clinical trials. Scotland has the right foundations to excel in clinical trials, but to go further, policymakers must:

- Set an ambitious course for the clinical trials ecosystem, setting a bold path at the legislative level and within Scotland's health system.
- Display leadership, priming the NHS to make clinical trials the norm.
- Embedding clinical trials within Scotland's health and economic policy frameworks.
- Elevate clinical trials through direct communication to NHS leaders, clinicians, pharmacists, nurses, allied health professionals, the third sector, industry and, most importantly, patients.
- Support the Chief Scientist Office to accelerate trials set-up times ahead of the UK's 150-day target and to create a world-leading reputation for Scotland, unrivalled in cost, quality and speed.
- Mandate a health equity 'all society' approach, targeting diverse and underserved populations potentially less able to access care.
- Prioritise the clinical trials in the delivery of the Scottish Life Sciences Strategy, by harnessing Scotland's cutting-edge digital, data and technology capabilities.

2 COMMERCIAL CLINICAL TRIALS INVOLVEMENT SHOULD BE ESTABLISHED AS A CORE PILLAR OF NHS CARE, EMPOWERED BY SUSTAINABLE FUNDING MECHANISMS THAT GUARANTEE LONG-TERM IMPACT

Clinical trials must be fun, show love to patients and be less cumbersome for staff. Simplicity, sustainable funding and a business mindset in research can each contribute to a clinical trials ethos within Scotland's health system, generating wide-ranging efficiencies and cost savings.

Policymakers have their own part to play in this and must:

- Reduce the administrative burden associated with clinical trials on staff by creating dedicated data entry teams within Scotland's health boards, using the example of NHS Lothian, where robust scrutiny of budget and re-investment in staff has reaped rewards.
- Establish robust leadership responsibilities for research, clearer accountabilities, proper delineation of spans of control.
- Adopt sustainable funding models that increase accountability and transparency.
- Popularise the revenue generation associated with clinical trials by exploring legislative requirements for health boards to report on clinical trials performance
- Formally explore linking domestically conducted clinical trial activity to a medicines health technology assessments (HTA) by the Scottish Medicines Consortium (SMC)

3 ADOPT A 'ONCE FOR SCOTLAND' APPROACH TO ESTABLISH SCOTLAND AS A GLOBAL LEADER ON COMMERCIAL TRIALS

Commercial Research Delivery Centres (CRDC) present Scotland with an unprecedented opportunity to expand our clinical trials infrastructure and ensure equitable distribution across the country.

To full leverage our existing strengths and expertise, policymakers must:

- Consider an operationally centralised, single 'Once for Scotland' commercial trial entity for Scotland that allows CRDCs to work collaboratively.
- Enact measures to enable governance for single information governance assessments, single service level agreements, proportionate risk models, and broader data permissions within this system.
- Learn from international best practice to streamline existing clinical trials regulations, approvals and contracting.

4 HARNESSING SCOTLAND'S DATA, DIGITAL AND TECHNOLOGICAL EDGE TO SUPPORT PRIMARY CARE AND DECENTRALISE CLINICAL TRIALS

The shift to community settings under CRDCs presents huge opportunities for Scotland's rural and remote population in primary care settings and for expanding clinical trials across the country.

To ensure that patients and clinicians in these areas truly feel the benefits of our ambitions and clinical trials visibility is maximised, policymakers must:

- Explore legislative reform to streamline study set-up, data join-up and patient consent to be contacted about clinical trials opportunities, taking inspiration from the UK Government's Be Part of Research service on the NHS App.
- Explore legislative reform to create a Scotland-centric primary care research delivery mechanism – decentralised delivery.
- Investigate cloud-based or artificial intelligence (AI) driven systems for patient recruitment.
- In collaboration with the CSO, simplify existing information systems, consent processes and patient registries, including – based on the example of the Scottish Health Research Register (SHARE) – the building of a national, searchable resource across diseases, feeding more aspects of Scotland's trial master files (TMF) directly into patient care pathways and seeking out opportunities to build trials into developing technologies.
- Seek to influence the UK Government's intention to review data collection laws, including approaches to accessing health data, positioning research more robustly as a critical element of care to promote commonality and health data collection.

5 EMBEDDING CLINICAL TRIALS IN EDUCATION AND EARLY CAREERS TRAINING PROGRAMMES

Clinical trial must be at the front end of the staff team's education and training. Medical students and trainees should be instilled with the idea that clinical trials are the foundation of their future careers.

To anchor clinical trials more resolutely within medical education and professional development policymakers must:

- Employ carefully planned NHS curricular developments, that encourage research to 'become the norm'
- Expand dedicated clinical trials courses and modules for healthcare professionals in the university system.
- Explore the establishment of a bespoke clinical trials academy or increased funding for clinical fellowships via the CSO.

6 PRIORITISING EARLY INTERVENTION TRIALS THAT ALIGN TO SCOTLAND'S HEALTH CHALLENGES

Evidence has proven that early intervention is more cost-effective than treatment and can drive efficiencies across the entire health system.

To ensure we continue to lead the way in addressing Scotland's core health challenges, policymakers must:

- Seek to conduct more clinical trials for patients that prevent, slow and avoid the complications of Scotland's major diseases.
- Consider a national campaign, led by the Scottish Government, including NHS Scotland and Public Health Scotland, in collaboration with the third sector, raising visibility of the value of clinical research - focused on high Scottish disease burden areas.

REFERENCES

[I] https://www.abpi.org.uk/publications/the-value-of-industry-clinical-trials-to-the-uk/

[II] https://www.abpi.org.uk/media/fjhnjz34/rescuing-patient-access-to-industry-clinical-trials-in-the-uk.pdf

[III] https://www.gov.uk/government/publications/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review-final-report

[IV] https://www.gov.uk/government/publications/commercial-clinical-trials-in-the-uk-the-lord-oshaughnessy-review/government-response-to-the-lord-oshaughnessy-review-into-commercial-clinical-trials-in-the-uk

[V] https://www.cso.scot.nhs.uk/full-response-on-independent-review-of-commercial-clinical-trials-offers-opportunity-to-renew-strategic-priorities/

[VI] https://www.abpi.org.uk/value-and-access/uk-medicine-pricing/voluntary-scheme-on-branded-medicines/supporting-uk-economic-growth/

[VII] https://www.nhsresearchscotland.org.uk/news/scotland-will-be-home-to-four-new-commercial-research-delivery-centres-crdcs-as-part-of-100-million-public-private-health-research-boost

[VIII] https://www.nhsresearchscotland.org.uk/news/the-chief-scientist-office-festive-message-2024#:~:text=A%20%C2%A336.9%20million%20investment%20in%20Scotland%2C%20includes%20four,and%20strengthen%20clinical%20trials%20activity%20across%20the%20country[IX] https://www.abpi.org.uk/publications/creating-the-conditions-for-investment-and-growth/

[X] https://www.gov.uk/government/publications/the-future-of-uk-clinical-research-delivery

[XI] https://www.iqvia.com/insights/the-iqvia-institute/reports-and-publications/reports/global-trends-in-r-and-d-2025

[XII] https://www.gmc-uk.org/-/media/documents/good-practice-in-research-105393967.pdf

[XIII] https://www.gov.uk/government/news/first-ever-mhra-analysis-of-uk-clinical-trial-applications-finds-new-opportunities-to-drive-medical-breakthroughs-for-patients

[XIV] https://www.abpi.org.uk/media/news/2023/february/pharmaceutical-industry-a-key-player-in-scotland-s-life-sciences-sector/

[XV] https://www.gov.uk/government/news/prime-minister-turbocharges-medical-research

[XVI] Beckman RA, Natanegara F, Singh P, Cooner F, Antonijevic Z, Liu Y, Mayer C, Price K, Tang R, Xia A, Apostolaros M, Granville C, Michaels D. Advancing innovative clinical trials to efficiently deliver medicines to patients. Nat Rev Drug Discov. 2022 Aug;21(8):543-544. doi: 10.1038/d41573-022-00109-y.

[XVII] https://www.nihr.ac.uk/story/stampede-turning-point-trial-design

[XVIII] https://www.taylorwessing.com/zh-hant/insights-and-events/insights/2023/09/aktuelle-entwicklungen-im-bereich-klinischer-arzneimittelstudien#:~:text=An%20evaluation%20carried%20out%20by,data%20even%20for%20research%20purposes.

[XIX] https://velocityclinical.com/the-start-of-germanys-national-pharma-strategy-implications-for-cros-and-clinical-trials/#:~:text=Pharmaceutical%20companies%20that%20conduct%20a,Germany%20as%20a%20trial%20location.

[XX] https://www.gov.scot/publications/rural-scotland-key-facts-2021/pages/2/

[XXI] Noonan D, Lam WKK, Goodrich J, Sullivan S, Bentley-Edwards K, Koeberl D, Palipana A, McClernon FJ. A case study of inclusion of rural populations in research: Implications for science and health equity. Clin Transl Sci. 2024 Aug;17(8):e13885. doi: 10.1111/cts.13885.

[XXII] Park, Jay J H et al. How COVID-19 has fundamentally changed clinical research in global health. The Lancet Global Health, 2021 May, 9(5), e711 - e720.

[XXIII] McDonald K, Seltzer E, Lu M, Gaisenband SD, Fletcher C, McLeroth P, Saini KS. Quantifying the impact of the COVID-19 pandemic on clinical trial screening rates over time in 37 countries. Trials. 2023 Apr 4;24(1):254. doi: 10.1186/s13063-023-07277-1

[XXIV] https://www.abpi.org.uk/media/eyzpflm5/abpi-the-road-to-recovery-for-uk-industry-clinical-trials-december-2024.pdf

[XXV] https://www.gov.uk/government/news/unprecedented-boost-for-clinical-trials-under-10-year-health-plan

[XXVI] Peters A, Cameron H, Cunningham S, Dawkes S, Donaldson J, Hughes L, Savinc J, MacArthur J. Inequalities of provision of nationally funded clinical academic training awards for healthcare professionals: quantitative comparisons across the four nations of the UK. J Res Nurs. 2025 Mar 15:17449871241291947. doi: 10.1177/17449871241291947.

[XXVII] https://media.nesta.org.uk/documents/How_to_save_the_NHS__primary_prevention.pdf

[XXVIII] https://www.dundee.ac.uk/stories/new-partnership-pioneering-kidney-health-research