

IMPERIAL

Jameel
Institute

Combating disease
threats worldwide



IMPERIAL

Overview of the work of the school
Professor Neil Ferguson
Director, School of Public Health

Imperial College London



Jameel Institute

Annual report

Specially prepared for
Community Jameel

December 2024

Executive summary and foreword

2024 has been year of renewing our core mission to combat disease threats worldwide, whilst also working to broaden our reach, deepen our research impacts and collaborations, and ensure our continued growth and tangible impact, well into the future.

March was a significant milestone for the Jameel Institute and School of Public Health, as it saw us step into our new home, generously supported by Community Jameel. Professor Sir Chris Whitty, the Chief Medical Officer for England, officially opened the School of Public Health and many distinguished guests such as Dame Marit Mohn, Community Jameel Director George Richards, policymakers and local community leaders, all attending the opening.



Community Jameel and Jameel Institute staff at the official opening of the new School of Public Health Building

As the Jameel Institute, and more broadly, the School of Public Health, have settled into the new White City Campus, there has been a buzzing atmosphere as academics, students and partners have come together to collaborate, develop, showcase and generate transformative research, programmes and ideas in public health. We look forward to the possibilities and potential the new year will bring.

In October this year, we were exceptionally proud to announce the launch of the [Jameel Institute Realtime Intelligent Support for Emergencies \(JI-RISE\) programme](#). Headed by Jameel Institute's Dr Oliver Watson and London School of Hygiene and Tropical Medicine's, Dr Bhargavi Rao, and funded by Community Jameel, this programme will provide real-time data and modelling across traumatic injuries; malnutrition; and mortality and vaccination planning to help humanitarian agencies respond to crises in conflict zones.

The Jameel Institute – Kenneth C Griffin Initiative for the Economics of Pandemic Preparedness Initiative (EPPI), under the leadership of Jameel Institute Deputy Director, Katharina Hauck, continues to progress and expand with new partnerships and team members joining. The team unveiled their multi-country dashboard, 'DAEDALUS Explore' at the inaugural Infectious Disease Modelling Conference in Bangkok, in September this year. The dashboard tool will allow users to simulate the health, education and economic impacts of pandemic scenarios for seven hypothetical future pandemics of varying severity across 67 countries. The team will continue to work on the dashboard for broader use and implementation from 2025 onwards. Additionally, the EPPI team collaborated with CEPI, and other partners, in projecting the impact of advance investments into vaccines.

Dr Anne Cori's work on COVID-19 and pandemic preparedness continues. Ongoing work includes a major review on priority pathogens, via the [Pathogen Epidemiology Review Group](#) (PERG), that may cause outbreaks in the future, research on optimal stockpile sizes of the Ebola vaccine, and continued development of software tools for outbreak

analytics. Dr Cori has also written guest editorials and opinion pieces, participated in plenary conference talks, and organised and delivered workshops.

The NCD Risk Factor Collaboration (NCD-RisC), led by Professor Majid Ezzati, conducted the [largest study to date that examined general and abdominal adiposity in either world regions and their associations with hypertension](#). The report, co-lead authored by Jameel Institute Research Associate, Dr Bin Zhou, showed that BMI and waist-to-height ratio both distinguish people with or without hypertension, but people in South Asia, Latin America and the Caribbean, and the regions of Central Asia, Middle East and North Africa, had higher waist-to-height ratio at the same BMI levels than in other regions.

Professor Timothy Hallett continues his work as chair of the modelling guidance group for the investment case of the Global Fund and leading the 'Thanzi La Onse' project, integrating epidemiological and health economics research to inform resource allocation decisions in low- and middle-income countries. An [overview of the 'Thanzi La Onse' \(TLO\) model](#) was published in The Lancet Global Health in November of this year.

As the Jameel Institute grows and evolves to address emerging threats and priorities, we continue to invest our resources in a broad range of human health issues and strengthened capacity building activities, both locally and globally. Fostering our close collaborations with partners around the world, we work to gain insights into current issues in global health policymaking, and understand, first-hand, which interventions are effective. Through routine and consistent engagement with our partners, we actively look to evolve and pivot the Institute's research and adapt to new challenges by seeking strategies that effectively address some of the most important challenges to human health in the post-pandemic world.

Our 'JameelCast' podcast series, produced by Research Associate Dr Thomas Rawson, takes listeners behind the scenes of public health, spotlighting the latest research developments and the work being done right here, at the Jameel Institute. Most recently, [Dr Rawson spoke with Dr Lilith Whittles on the emerging mpox outbreak](#).

My sincere thanks to the commitment, drive and enthusiasm consistently shown by my Jameel Institute colleagues. This innovative and engaged group generate real and impactful change through their work. I would also like to take this opportunity to thank Community Jameel, and Kenneth C. Griffin, for their continued support in bolstering our research, relationships and continued growth. Without them, this work would not be possible.



I hope you enjoy reading about the work of the Jameel Institute and please do stay in touch with us via our [website](#), [Twitter/X](#), [LinkedIn](#), [YouTube](#) and [Bluesky](#) – where we share research updates, collaborations, opportunities, media, events and so much more.

Wishing you a safe and restful holiday season. I look forward to sharing our progress in 2025.

With thanks,

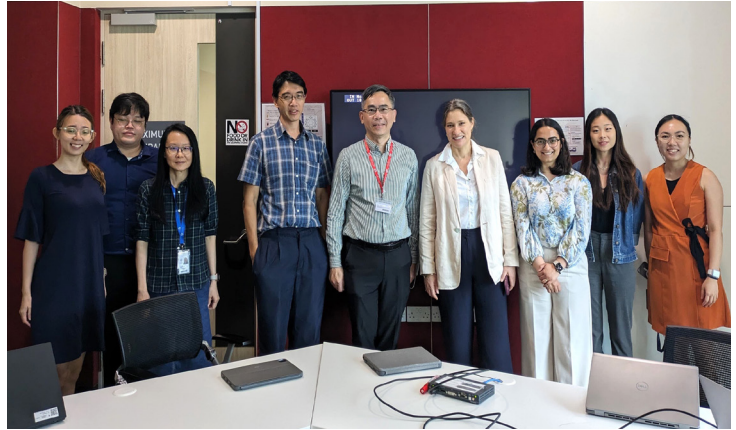
Professor Neil Ferguson
Director, Jameel Institute

Research overview

Emerging threats

Economics of Pandemic Preparedness (EPPI)

- The Jameel Institute-Kenneth C. Griffin Initiative for the Economics of Pandemic Preparedness Initiative (EPPI) was founded in October 2022. It is using pioneering integrated economic-epidemiological modelling to provide critical data and analysis to inform public health decisions related to pandemic preparedness and disease outbreaks around the world. The initiative is a collaboration between the School of Public Health, Imperial College Business School, WHO, Singapore's Programme for Research in Epidemic Preparedness And Response (PREPARE), Singapore's National Centre for Infectious Diseases (NCID) and Umeå University in Sweden.



Professor Hauck and PhD student, Kanchan Parchan, with EPPI's Singaporean project partners

- In June the EPPI team held the first 2-day workshop on the economics of pandemic preparedness (Stockholm, Sweden). The workshop provided a forum for early to established academics to share and discuss research developments, ideas and future projects centred around the themes of: policy-focused modelling, economic impacts of interventions, and social and behavioural aspects of preparedness.
- In November we soft-launched [DAEDALUS Explore](#), a pandemic preparedness dashboard powered by the EPPI team's integrated economic-epidemiological model. The dashboard provides policymakers with an online tool to project the costs of pandemics, and the impact of better pandemic preparedness under variable parameters. The launch took the form of an in-person workshop event, held in the lead up to the inaugural Infectious Disease Modelling conference in Bangkok. Over 20 technical specialists and policymakers tested DAEDALUS Explore and shared their feedback on how to optimise its practicality and usability. The EPPI team are now taking on board key feedback and making refinements to the dashboard and underlying code ready for next year's official launch.



DAEDALUS Explore dashboard

- In addition to further development of the integrated model, creation of the dashboard, and capacity building activities, the EPPI team have also progressed well with applying the integrated model to critical questions posed by our partners in multinational organizations and governments. In particular, this year the EPPI team

have continued their research collaboration with CEPI and Linksbridge to estimate the costs and benefits associated with CEPI's 100-day mission: to make a strain-specific vaccine available for use within 100-days of a novel SARS like virus being sequenced. The team are looking forward to completing the research in the early new year and to publishing their work to inform global pandemic preparedness.

- Across all activities, EPPI partners with organisations and institutions from around the globe, drawing on regional expertise and strengthening collaborations in the integrated modelling field:
 - » G20 Health and Finance Taskforce
 - » WHO Department of Health Financing and Economics
 - » Coalition for Epidemic Preparedness Innovations (CEPI)
 - » National Centre for Infectious Diseases, Singapore
 - » Ateneo de Manila University, Philippines
 - » National Institute of Public Health of Mexico
 - » Imperial Institute of Infection
 - » Imperial College Business School: Centre for Health Economics and Business Innovation

Pathogen Epidemiology Review Group

- The most recent review; recently published in [The Lancet Global Health](#) and led by Jameel Institute Research Associate, Dr Patrick Doohan, focused on Lassa fever disease, and highlighted the need for improved and more comprehensive surveillance of this highly severe pathogen, both in humans and rodents. Addressing these gaps is essential for developing accurate mathematical models and informing evidence-based interventions to mitigate the impact of Lassa fever on public health in endemic regions.
- Dr Anne Cori has been working on a multi-pathogen review project initially put on hold due to the pandemic. The [Pathogen Epidemiology Review Group \(PERG\)](#) is building a catalogue of mathematical modelling parameters facilitating rapid response to potential outbreaks of nine WHO priority pathogens. This research from the PERG group is due to be published on a [newly established website](#).
- As part of this collaboration, Jameel Institute researchers Dr Anne Cori, Dr Patrick Doohan, Dr Thomas Rawson and PhD student Tristan Naidoo published several systematic review papers. The first two focused on [Marburg virus disease](#) and Ebola virus disease, published in The Lancet Infectious Diseases. They contain systematic reviews of articles reporting any outbreaks, transmission models or epidemiological parameters for Marburg and Ebola. This work identified large knowledge gaps in Marburg epidemiology and estimated that Marburg virus has a case fatality ratio of 61.9%, highlighting the urgent need for better understanding this virus, for which there is no treatment or vaccine. This work also highlighted that although Ebola virus epidemiology has been extensively studied, most species, except the Zaire species which caused a large epidemic in West Africa in 2013-16, are poorly characterised. This is particularly problematic given recent outbreaks of the Sudan species, and the lack of vaccine or treatment against non-Zaire strains.



WHO Hub Berlin Priority Pathogen Review Group - Dr Patrick Doohan, Dr Ruth McCabe, Dr Anne Cori, Kelly McCain and Christian Morgenstern.

- In collaboration with WHO and the London School of Hygiene & Tropical Medicine (LSHTM), research workshops have been hosted at LSHTM, WHO Hub in Berlin, and Imperial. Further funding has been sourced and provided for this project.

H5N1

- Professor Neil Ferguson and Dr Anne Cori supported national (UKHSA) and international (WHO) public health agencies in evaluating the threat to human health of recent outbreaks of H5N1 among wild birds, including advising on surveillance system design.
- Under the leadership of Professor Katharina Hauck the EPPI team is analysing the economic impact of the H5N1 pandemic on the US dairy industry. Dr Thomas Rawson has been providing epidemiological support to the economic analysis and is leading a modelling study of H5N1 avian influenza in US dairy cattle. By synthesising veterinary records on cattle movements with reported outbreaks, Dr Rawson has been connecting and identifying the links of infection across the US and identifying areas which are likely to be under-reporting the true scale of outbreaks. Ultimately, this work will help inform priority areas of epidemiological surveillance, estimate feasible boundaries of disease burden, and identify the “connectedness” of state-level cattle operations.

Mpox

- A team of our researchers produced age- and vaccination-stratified estimates of the case fatality ratio of Clade I mpox in historically endemic settings, finding the highest risk of death in the youngest children. Our researchers have also been working to produce a mathematical model of mpox disease transmission, progression and vaccination in order to unravel the epidemiological characteristics of the different clades and the impact of different vaccination scenarios in sub-Saharan Africa.

Learning from the COVID-19 pandemic

- Dr Anne Cori guest edited a special issue of *Epidemics* on [Data needs for better surveillance and response to infectious disease threats](#), which illustrates a wide scope of innovation in data collection, processing and analysis of data, spotlighting accomplishments in three themes: surveillance, contextual understanding, and data analytics.
- Dr Cori has also contributed to the opinion piece [Lessons from COVID-19 for rescalable data collection](#) published in *The Lancet Infectious Diseases*. In this piece Dr Cori highlights the need to make sure epidemic surveillance remains ready to be rapidly scaled up and adapted when needed.

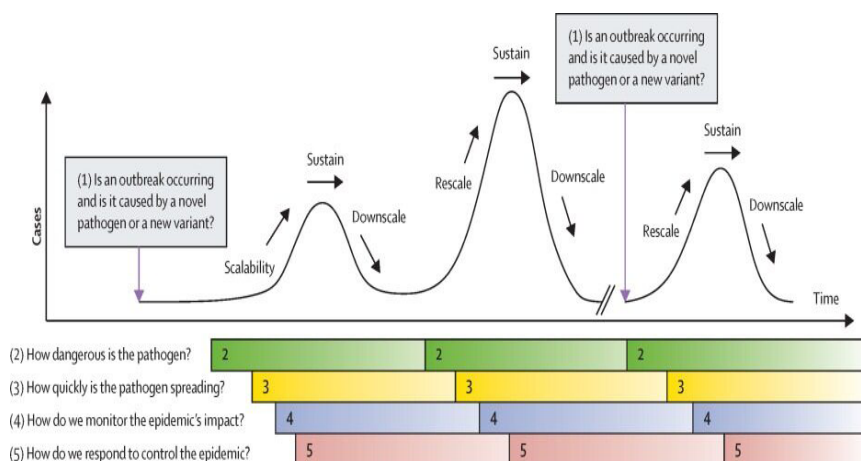


Fig 1. Policy questions and data needs across the different phases of an epidemic.

- Dr Cori’s paper investigating the spread of infectious diseases and the effective targeting of control measures, [Gaps in mobility data and implications for modelling epidemic spread: A scoping review and simulation study](#), highlights the importance of human mobility data and its substantial impact on the predicted [epidemic dynamics](#), with complex and non-intuitive biases.
- Dr Cori’s paper entitled [Temporal variations in international air travel: implications for modelling the spread of infectious diseases](#), has been published in the *Journal of Travel Medicine*. The study concluded that use of

historical flight data as a proxy in epidemic models is an acceptable practice, except in rare, large epidemics that lead to substantial disruptions to international travel.

- Dr Thomas Rawson worked on a research project that analysed [The impact of health inequity on spatial variation of COVID-19 transmission in England](#). The study found that the amount of Adult Social Care infection control funding given per capita impacted the transmission of COVID-19 (the areas that got more, saw a reduced transmission). See Figure 2 below.
- Tristan Naidoo, a Jameel Institute PhD student, is investigating the relationship between Twitter/X and COVID-19 outcomes. With a view on pandemic preparedness, the purpose of this investigation is to use social media to quantify adherence to protective behaviours during a pandemic. In his first year, Tristan explored Twitter/X usage and its relationship to the outcomes of interest. The second year of Tristan's PhD has been spent creating a dataset of tweets relating to the COVID-19 pandemic. Using a subset of this dataset, Tristan extracted sentiment and investigated how it relates to COVID-19 outcomes of interest (cases, hospitalisations, and deaths). In his third year, Tristan is extending his analysis to multiple countries and languages.

Variation in socio-demographic factors by LTLA and the respective stratification of per capita COVID-19 incidence

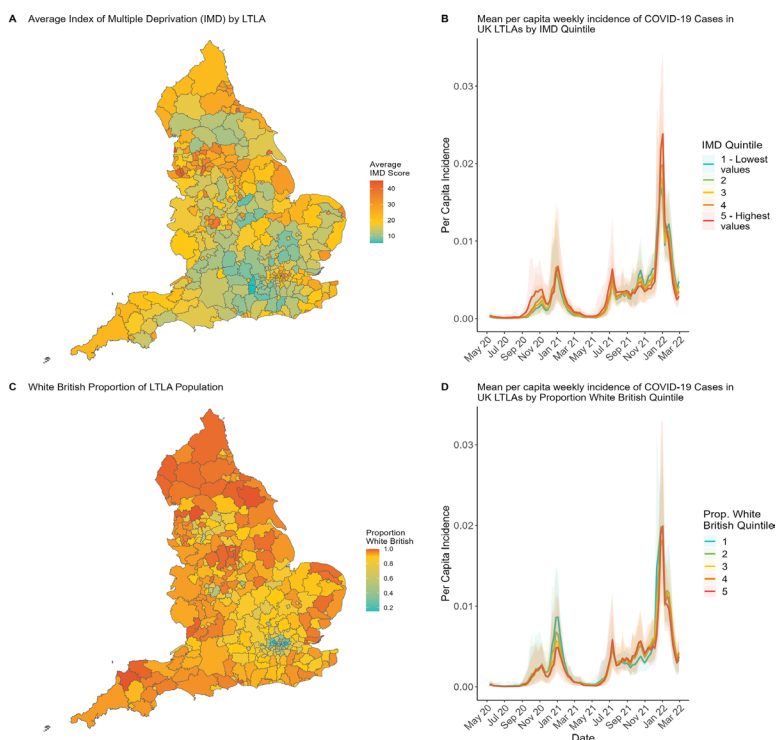


Fig 2. Variation in socio-demographic factors by LTLA, and the respective differences in average per capita incidence of COVID-19 cases when stratified by these socio-demographic factors.

Climate and health

- Professor Neil Ferguson has continued with his work leading a Wellcome Trust funded research programme which aims at improving our understanding of how environmental conditions affect the transmission of five key diseases (malaria, dengue, yellow fever, cholera and meningitis A). The programme also examines the implications of climate change for the health burden caused by those diseases and what the impacts are on control policies. Recruitment to the programme is complete, and subcontracts with several partners in low- and middle-income countries in Africa and Latin America have been finalised. Initial research has focused on developing high performance parallelised simulation and inference algorithms, with pilot applications to dengue and malaria.

How much vaccine to stockpile for Ebola outbreaks

- In a 2023 collaboration that has continued into 2024, Dr Anne Cori, Professor Katharina Hauck and Professor Neil Ferguson have been instructed by a global consortium of donors including WHO, GAVI and the Centres for Disease Control (USA) to inform on the optimal vaccination strategies and stockpile size of the Ervebo vaccine held by the international agencies. The team has finalised work comparing ring- and geographic vaccination strategies and is currently evaluating the benefits and costs of preventive vaccination of healthcare workers. In a recent development, further funding for this project was secured through GAVI.

Other

- Dr Cori has continued her work developing and using software for real-time outbreak analytics. Her team recently [extended their popular R package for epidemic monitoring, EpiEstim](#), to make it applicable to contexts where epidemic data is not collected daily.

Strengthening health systems

- In October 2024, we launched the [Jameel Institute Realtime Intelligent Support for Emergencies \(JI-RISE\)](#) programme. This new programme will be led by Jameel Institute's Dr Oliver Watson and London School of Hygiene and Tropical Medicine's, Dr Bhargavi Rao. The initiative will provide real-time data and modelling across traumatic injuries; malnutrition; and mortality and vaccination planning to help humanitarian agencies respond to crises in conflict zones.



Launch of Jameel Institute Realtime Intelligent Support for Emergencies (JI-RISE).

- Professor Timothy Hallett continues to lead the Thanzi La Onse (TLO) project, a major collaboration funded by the UK's Global Challenges Research Fund (GCRF), which aims to develop the use of epidemiology and health economics to create a step-change in the way that health priorities are addressed through policy interventions in low-income countries, particularly in Africa. This is done through the development of high-quality research to inform resource allocation decisions in the region and support policy environments for the productive use of that research. The team aims to achieve this by developing a model of all health loss in a population, which can be used to examine the effect of resource allocation, management and clinical practice, to contribute to informing decision-making (www.tlomodel.org).
- As part of Thanzi La Onse, Professor Hallett, accompanied by ten members of the TLO team, were invited to run a session in the 2024 Malawi Government Think Tank to present the latest TLO model findings.
- Professor Hallett also coordinated a workshop in Malawi dedicated to mathematical modelling and attended by academics, NGOs and civil servants.
- An overview of the TLO model was published in [The Lancet Global Health](#).
- Within the pillar of epidemiology, the Thanzi la Mawa project has developed a novel health system model (a holistic representation of the Malawi health system's processes and mechanisms), to better understand how to most effectively allocate resources to tackle public health challenges and improve population health. In the future, it is hoped that this model can be used by policy makers in Malawi and in other African countries to help inform how health priorities are addressed through policy interventions.



Professor Hallett leading the mathematical modelling workshops in Malawi this year.

NCD Risk Factor Collaboration (NCD-RisC)

- Professor Majid Ezzati continues leading the Wellcome Trust funded, NCD Risk Factor Collaboration (NCD-RisC). The NCD Risk Factor Collaboration (NCD-RisC) is a network of health scientists around the world with the core group of researchers based at Imperial. One of the latest outputs of the NCD-RisC is a paper published in collaboration with the World Health Organisation (WHO) [Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population representative studies with 222 million children, adolescents, and adults](#) which has attracted much media attention. With over 1500 researchers contributing to the study, researchers set out to analyse trends in obesity and underweight – both forms of malnutrition which are detrimental to health in many ways. Researchers analysed the weight and height measurements from over 22 million people, aged 5+ (63 million people aged 5-19, and 158 million aged 20 years or older) representing more than 190 countries. Published in The Lancet, the study finds that the total number of children, adolescents and adults worldwide living with obesity has surpassed one billion. The report highlights that these trends, together with the declining prevalence of people who are underweight since 1990, make obesity the most common form of malnutrition in most countries.
- The NCD Risk Factor Collaboration (NCD-RisC), conducted [the largest study to date that examined general and abdominal adiposity in either world regions and their associations with hypertension](#). The report, with Jameel Institute's Dr Bin Zhou as co-lead author, showed that BMI and waist-to-height ratio both distinguish people with or without hypertension, but people in south Asia, Latin America and the Caribbean, and the region of central Asia, Middle East and north Africa, had higher waist-to-height ratio at the same BMI levels than in other regions.

Building partnerships and capacity

Partnerships and policy engagements

The team has continued to strengthen existing relationships and build new ones by collaborating with a wide range of international partners from national and international organisations, government and academia, and by engaging with high-level policy-makers in a variety of advisory roles.

Some examples of our successful and much-valued collaborations:

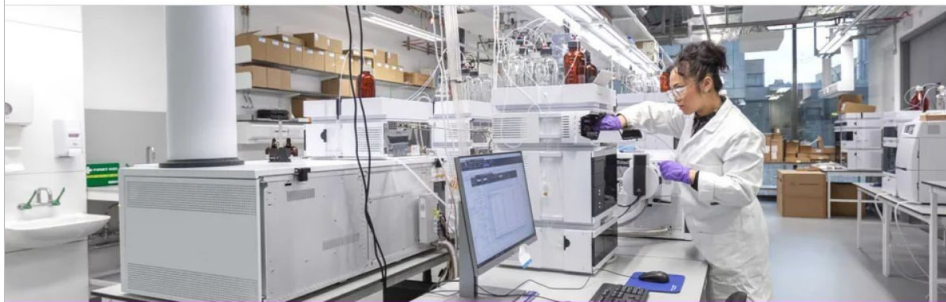
- The Jameel Institute was invited, along with leading actors in the UK science community including the Chief Scientific Advisor, FCDO, Professor Charlotte Watts; the Foreign Secretary's Representative for Humanitarian Affairs in the OPTS, Mark Bryson-Richardson; Community Jameel Director, George Richards, (as well as representatives from UK Med, Save the Children, International Rescue Committee, London School of Hygiene and Tropical Medicine and more), to gather at the Foreign, Commonwealth and Development Office in London. The objective of this meeting was to provide a stronger understanding of the health needs across Gaza, strengthened coordination between UK science, humanitarian actors and funders working on the Gaza crisis and strengthened understanding of where UK scientific expertise and partnerships can be channelled for maximum impact. Those invited were asked to harness their collective expertise to direct assistance as effectively as possible to the people of Gaza.



Jameel Institute attending a meeting in collaboration with the FCDO, UK Med, Save the Children, International Rescue Committee, LSHTM and Community Jameel at the Foreign, Commonwealth and Development Office to strengthen coordination of UK science, humanitarian actors and funders working on Gaza crisis.

- The EPPI team is working with CEPI to determine the Return on Investment (ROI) in terms of health, economic gain, and educational gains of the 100-day mission. CEPI's commitment to instigate advance investments in vaccine capacity that will allow the world to develop a vaccine within 100 days of a new pandemic emerging.
- A partnership between the EPPI team and colleagues from Mexico's Instituto Nacional de Salud Pública (INSP) saw the development of a dynamic epidemic model based on national data to estimate the number of deaths that could have been averted during the COVID-19 pandemic, had the government-initiated measures to curb obesity at an earlier date. The model's results were presented to WHO and at the International Health Economics Association (iHEA) Congress in South Africa, last year. The Jameel Institute funded the attendance of Dr Martha Carnalla to present findings at the iHEA conference alongside JI colleagues. [Promoting healthy populations as a pandemic preparedness strategy: a simulation study from Mexico](#) has been published in The Lancet Regional Health – Americas.
- Research on how to preserve lives and livelihoods during lockdowns, undertaken jointly the Ateneo University in the Philippines. The outcome of this partnership is a manuscript which is being prepared for submission to a journal.
- In collaboration with WHO, we have worked on a project for the G20 Joint and Finance Health Task Force (JFHTF) on economic vulnerabilities due to pandemics.
- For the Ervebo stockpiling project, led by Dr Anne Cori, the team were invited to apply for and secured additional funding from GAVI.
- Professor Katharina Hauck co-chaired the health economics group for the Infected Blood Inquiry in the UK. The final report quantifies the long-term economic and health costs of infected blood and blood products in the 1970s and 1980s.
- The EPPI team work closely and consistently with our Singapore partners, investing time, training, weekly calls and modelling support. Most recently, Professor Katharina Hauck and Kanchan Parchani, a research assistant from the EPPI team, met with the PREPARE team in Singapore to continue discussions on using integrated economic-epidemiological modelling to analyse the health and economic impacts of COVID-19 in Singapore.
- The Jameel Institute and MRC GIDA were successful in a bid to host three early career Fellows from Thailand under the International Science Partnerships Funds (ISPF) Early Career Fellowships Programme. Jameel Institute and MRC GIDA were selected by the British Council and we showcased some strong existing collaborations in our application.

ISPF Early Career Fellowships in Epidemiology and Control of Infectious Diseases (Thailand)



Opportunity for early career academics from Thailand to spend to a year at Imperial

- As part of Thanzi La Onse, Professor Hallett, accompanied by ten members of the TLO team were invited to run a session in the 2024 Malawi Government Think Tank to present the latest TLO model findings.
- JI-RISE will be working with a number of external partners including LSHTM, MSF, UNOCHA, Geneva Water Hub and WHO.

External engagement

- The Jameel Institute participated in the WHO Berlin Hub ‘Workshop on epidemiological parameters to refine the GREP database’. This was jointly organised by the MRC Centre for Global Infectious Disease Analysis, World Health Organisation, WHO Pandemic HUB and the London School of Hygiene and Tropical Medicine (LSHTM). The Priority Pathogen Review Group, including Jameel Institute members, Dr Patrick Doohan, Dr Anne Cori and Christian Morgenstern presented their research.
- In November 2023, Dr Cori [presented at the Epidemics conference in Bologna](#), Italy, speaking to the ‘Privilege in epidemic modelling careers’ and highlighting the vast under-representation of various minorities. Since then, Dr Cori has featured in a [Science in Context episode](#) exploring this work and an [Imperial news article](#), written an article published on [ScienceDirect](#) and recorded her full plenary talk (now [published on YouTube](#)).
- Dr Cori was invited to speak at the WHO Hub Speaker Series in Berlin in March 2024. The speaker series was co-hosted with Charité Centre for Global Health to discuss how we can leverage diversity in pandemic and epidemic intelligence for better public health decision making.
- Additionally, Dr Cori was invited to present at the [JUNIPER \(Joint Universities Pandemic and Epidemiological Research\) Annual Meeting](#) in March 2024. Here, Dr Cori relayed the importance of inclusion and advocacy within the epidemiological community as she spoke to the current privilege in modelling careers.
- Jameel Institute’s, Dr Bin Zhou, presented on the burden and complexity of multimorbidity at the World Heart Federation’s World Heart Summit in Geneva in May 2024.
- Professor Hallett and colleagues at the Kumuzu University of Health Science had the pleasure of presenting their collaborative work at the 9th African Population Conference (20-24 May 2024) to His Excellency Dr. Lazarus McCarthy Chakwera, President of the Republic of Malawi.



Professor Hallett presenting at the 9th African Population Conference.

- Professor Majid Ezzati was invited to attend The Bellagio Centre Convening Program, hosted by The Rockefeller Foundation, focused on the integration of climate services for health.
- Jameel Institute members, Dr Thomas Rawson, Dr Rob Johnson and Dr Patrick Doohan participated in the [launch of the Mohn Centre for Children’s Health and Wellbeing](#) with 59 Year 2 pupils in attendance. The team played interactive games to help explain the research carried out at the Jameel Institute and encourage interest in STEM.
- A special session on the GREP (Global Repository of Epidemiological Parameters) was co-organised by Dr Cori’s PERG group in conjunction with the WHO and LSHTM at the Infectious Disease Modelling Conference in Bangkok, November 2024.
- Dr Bin Zhou presented at a seminar at the National Center for Chronic and Non-Communicable Disease Control and Prevention, Chinese Center for Disease Control and Prevention, on the methodological challenges of analysing heterogeneous global health data in July 2024. He also discussed collaborative projects with the disease surveillance team.

- Dr Bin Zhou was invited to sit on a panel at this year's World Heart Congress ESC Congress in London, August 2024.



Dr Bin Zhou, on a panel at the World Heart Federation's ESC Congress in London. Here, he was discussing the role of epidemiology and health systems data in shaping public policy.

- Dr Bin Zhou presented the recent findings on global and regional cardiometabolic risk factor trends from the NCD Risk Factor Collaboration (NCD-RisC), jointly with collaborators from Africa, Latin America and South Asia, at the World Congress of Epidemiology in Cape Town in September 2024.
- Professor Neil Ferguson was invited to sit on a panel at this year's Future Resilience Forum, October 2023. Accompanied by fellow panellists including the Foreign Secretary's Representative for Humanitarian Affairs in the OPTs, Mark Bryson-Richardson, and Chaired by Community Jameel Director, George Richards, the panel focused on harnessing the power of science and technology for global emergencies.



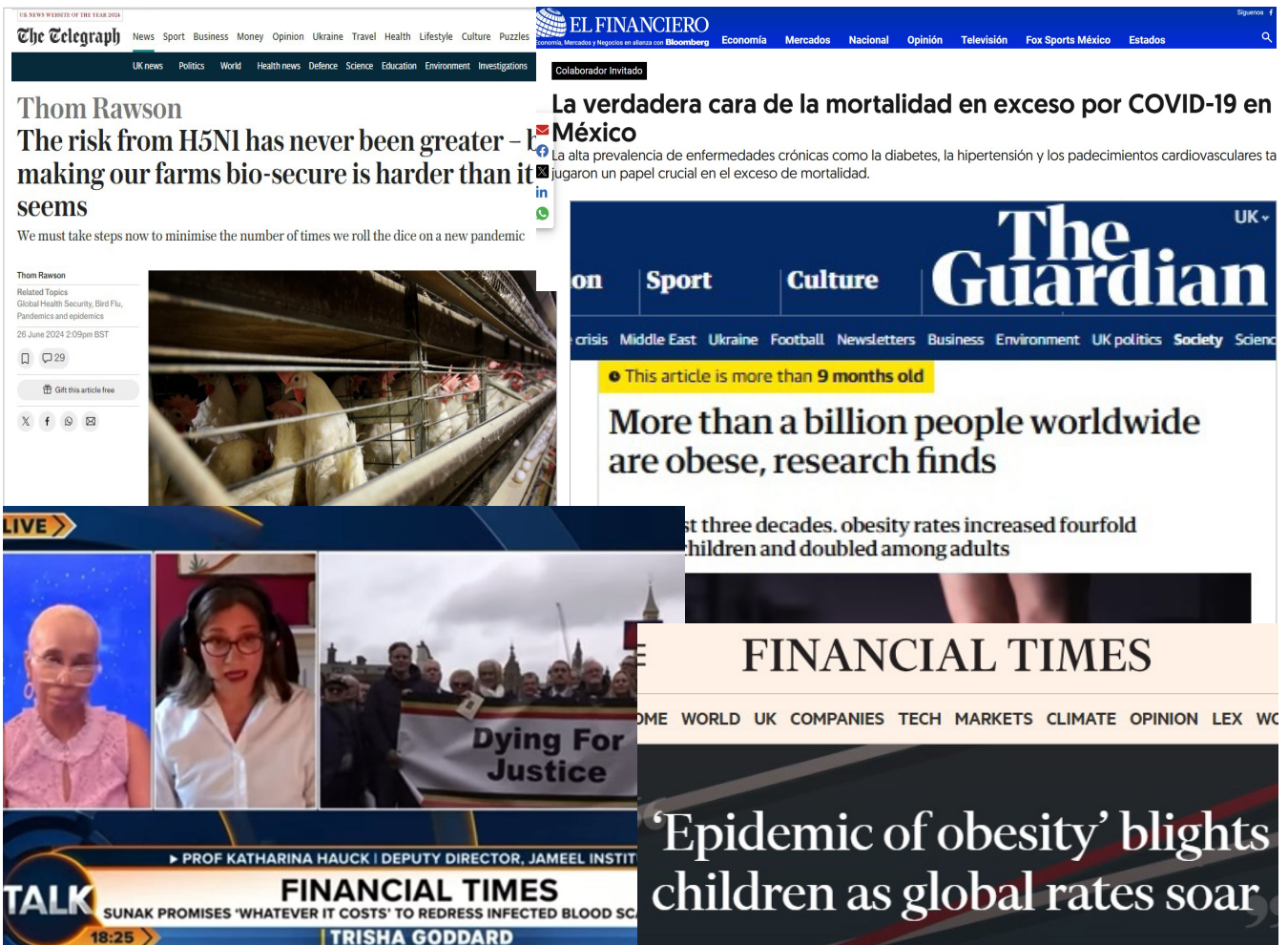
Professor Neil Ferguson and fellow panellists at the Future Resilience Forum.

Communications

Media coverage

A compilation of media coverage highlights featuring Jameel Institute staff and research:

- **21 November 2024** – Tortoise ‘Trendy’ podcast, [The doctor will see you now](#) Professor Neil Ferguson
- **26 June 2024** – The Telegraph – Op-ed: [The risk from H5N1 has never been greater – but making our farms bio-secure is harder than it seems](#) Dr Thomas Rawson
- **25 May 2024** – TalkTV, The Trisha Goddard Show: [Infected Blood Inquiry | TalkTV | Interview with Professor Katharina Hauck \(youtube.com\)](#)
- **21 May 2024** – El Financiero: [The true face of excess mortality from COVID-19 in Mexico](#). Article on research undertaken by Dr Rob Johnson and colleagues from The National Institute of Public Health of Mexico (INSP)
- **17 May 2024** – La Jornada (Politica): [Prevalence of obesity, determinant of deaths from COVID-19](#). Article on research undertaken by Dr Rob Johnson and colleagues from The National Institute of Public Health of Mexico (INSP)
- **5 May 2024** – Reporte Indigo: [Findings of the Independent Commission on COVID-19: Scientific Report or Political Attack?](#) Article on research undertaken by Dr Rob Johnson and colleagues from The National Institute of Public Health of Mexico (INSP)
- **29 February 2024** – The Financial Times: [“Epidemic of obesity” blights children as global rates soar](#). Article on research undertaken by Professor Majid Ezzati, Dr Bin Zhou and colleagues
- **29 February 2024** – The Guardian: [More than a billion people worldwide are obese](#). Article on research undertaken by Professor Majid Ezzati, Dr Bin Zhou and colleagues



Events

We use our events to educate and develop collaborations, build capacity and leverage partnerships:

- The **Economics of Pandemic Preparedness event** was successfully held at the Royal Society London in April 2024. Hosted in collaboration with the Institute of Infection and Centre for Health Economics and Policy Innovation, the objective of this workshop was to debate the policy and research priorities for pandemic prevention and preparedness, recognising that budgets are limited, and tough choices must be made in the trade-offs between population health and the economy.
- The first ever **Workshop on the Economics of Pandemic Preparedness** took place in Stockholm in June. Hosted in collaboration with Umeå School of Business, Economics and Statistics at Umeå University, this two-day workshop fostered dialogue and collaboration between policy makers, economists and epidemiologists. The Jameel Institute funded the full cost for two students from LMICs (India and The Philippines) to attend and present their work at the workshop.



Presentations at this year's Economics of Pandemic Preparedness event, held at the Royal Society London.

- In September, the **Infectious Disease Modelling Conference, Pre-Conference Workshop** (Bangkok), hosted in conjunction with our partners at the National Centre for Infectious Diseases (NCID) Singapore, trained participants on the DAEDALUS Explore dashboard. Powered by an integrated economic-epidemiological model, the dashboard projects the health, economic and educational impacts of hypothetical future pandemics, and estimates the value of pandemic preparedness in 60+ countries. The workshop was attended by more than 20 delegates representing four continents and over nine countries including Switzerland, the UK, Thailand, the Philippines, India, Singapore, Vanuatu, South Africa and Malawi. Throughout the workshop the attendees – who worked in academia, government and international organizations such as the WHO – drew on their modelling and policymaking expertise to share feedback with the EPPI team on how the dashboard and underlying code package could be further enhanced to improve functionality. This feedback is now being taken on board and will be used to improve the relevance and functionality of DAEDALUS Explore before it's official launch next autumn.



Jameel Institute staff presenting at the Infectious Disease Modelling Conference, Pre-Conference Workshop.

- Our annual **Jameel Institute Symposium 2024 ‘Strengthening health systems for emergencies’**, showcases the Jameel Institute’s collaborative and interdisciplinary research approach. Several colleagues across Imperial and external experts from humanitarian agencies, multilateral organisations, and the commercial sector participated in a series of talks, panel discussions and moderated breakout sessions on specific topic areas. In this year’s Jameel Institute Symposium, we focused on how to strengthen, evolve and adapt existing healthcare systems to be better prepared in the face of emergencies. With research presented by academics from the School of Public Health, Imperial Business School, The George Institute and London School of Hygiene, as well as panellists from the World Health Organisation, Save the Children, Alliance for International Medical Action (ALIMA), United Kingdom Humanitarian Innovation HUB (UKHIH) and the Ukrainian Medical Charity. The research and discussion amply demonstrated the importance of understanding lived experience and the vital role research can play in feeding into resilience, response and preparedness for health systems in emergency situations. While there were many sobering insights into the complex and novel challenges health systems currently face, the same conversations also showed that hope can be found in the commitment, collaboration and energy of those dedicated to ensuring resilient and equitable healthcare systems.



Speakers and panellists at this year’s Jameel Institute Symposium looking at how to strengthen, evolve and adapt existing healthcare systems to be better prepared in the face of emergencies.

Publications

- **Estimating the health effects of COVID-19-related immunisation disruptions in 112 countries during 2020-30: a modelling study**
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- **Climate change, malaria and neglected tropical diseases: a scoping review**
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- **The interaction of disease transmission, mortality, and economic output over the first 2 years of the COVID-19 pandemic**
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- **Improving modelling for epidemic responses: reflections from members of the UK infectious disease modelling community on their experiences during the COVID-19 pandemic**
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- **Modeling resource allocation strategies for insecticide-treated bed nets to achieve malaria eradication**
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- **SIR... or MADAM? The impact of privilege on careers in epidemic modelling**
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