



Kellogg College
University of Oxford



The Pandemic
EVIDENCE Collaboration

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ANNUAL REPORT PREPARED FOR MCCALL MACBAIN FOUNDATION

The Pandemic EVIDENCE Collaboration

September 2023 – August 2024

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Background

The COVID-19 pandemic has highlighted the strengths and limitations of scientific research and knowledge exchange during a public health emergency. While pharmacological interventions were rapidly developed, tested, and distributed with remarkable efficiency, decisions regarding many non-pharmacological interventions (NPIs) were often made with limited evidence. As a result, there is still a lack of understanding regarding the potential short- and long-term benefits, harms, and unintended consequences of various public health measures, as well as the optimal ways to organise patient care.


In response to these challenges, a collaborative initiative was launched in September 2023 by independent academics and scholars from institutions around the world, including Bond University in Australia, the University of Calgary and McMaster University in Canada, Oslo Metropolitan University in Norway and the University of Oxford in the UK. These experts came together with a shared goal: to identify, develop, and implement strategies for generating high-quality evidence on NPIs during public health emergencies to better inform policy and care decisions.

To advance this mission, the Pandemic Evidence Collaboration was established with the support of a generous £275,000 grant over three years from the McCall MacBain Foundation. This initiative unites diverse expertise and resources to propel the project forward, ensuring that future public health decisions are based on rigorous, evidence-based research.

The Pandemic Evidence Collaboration (PEC) aims to address several key questions:

- How can high-quality evidence for NPIs, including but not limited to randomised controlled trials, be generated during a global public health emergency?
- How can effective and efficient knowledge exchange be promoted to ensure that scientists and public health officials focus on the most relevant policy and care questions, and that policymakers and health system leaders integrate this evidence into decision-making?
- How can the short- and long-term impacts of NPI policies be studied, particularly in terms of health (e.g., life expectancy and quality), economic factors (e.g., income, housing, and food security), psychosocial effects (e.g., community cohesion), and environmental considerations (e.g., biosafety and waste management)?

The collaboration endeavours to address these questions through projects based on three pillars and four cross-cutting themes, presented diagrammatically in a matrix below:



Non-Pharmacological Interventions: Working Pillars and Cross-Cutting Themes

Cross-cutting themes	Pillar 1 Diagnostics and Transmission	Pillar 2 Interventions and Evidence	Pillar 3 Practice and Policy
Theme 1: Definitions and Nomenclature Glossary of terms Taxonomy Classifications	Diagnostic criteria Testing methods - PCR, lateral flow, rapid tests, serology, WGS Testing strategies	Types of NPIs: Individual vs community vs population-based settings Identifying and applying NPIs to various settings Developing, testing and applying Novel NPIs in a pandemic	Assessing the cost-effectiveness of interventions in pandemics Assessing waste during pandemics and impact on policy
Theme 2: Data Challenges Inputs to transmission models Outcomes – mortality, morbidity, infection, hospitalisations, other Data veracity Data sharing	Modes of Transmission <ul style="list-style-type: none"> • Animal-animal studies • Human-animal studies • Human challenge studies Study Quality and Standards A framework for evidence assessment, synthesis, and adjudicating study quality	Assessing the benefits and harms of NPIs Developing a framework for evidence synthesis Developing evidence during and outside of pandemics Study design for high quality: RCTs, CRTs, cohort studies and others Outcomes – mortality, infections, hospitalisations, morbidity	Developing a framework for grading policy Developing effective policy Policy for intervening in individuals and populations Adjudicating study quality for policy Reporting criteria Role of Journals
Theme 3: Methodological Issues	Access to data with bias assessments Setting minimum methodological standards Reporting methods	Role of the environment and infrastructure Waste in the scientific literature Role of laboratory studies Use of models and predictive modelling	Role of media and dissemination in effecting policy Behavioural tactics in setting policy
Theme 4: Funding	Short term / long term sustainable / internal and external grants, conference revenue, leveraging		



Establishing the PEC

The Pandemic Evidence Collaboration (PEC) was officially launched at a meeting held at Kellogg College on April 11-12, 2024. Attendees included scholars and academics coming from the five Founding Partner and Steering Committee universities—Bond University (Australia), the University of Calgary (Canada), McMaster University (Canada), Oslo Metropolitan University (Norway) and the University of Oxford (UK)—as well as members of the Founding Scientific Planning Committee, who were selected during the Collaboration’s development phase in 2023.

Role of the Founding Steering Committee

The members of the Founding Steering Committee are taking the lead on the following activities for the Collaboration:

- **Develop and Sustain a Global Consortium:** Establish strategies to formalise and maintain a global network, ensuring that each member site demonstrates a strong commitment to high-quality research.
- **Generate Robust, Generalisable Knowledge:** Begin from a position of equipoise to produce research findings that are widely applicable and minimise risk of bias.
- **Facilitate Knowledge Exchange:** Foster academic-societal partnerships to promote bidirectional knowledge exchange, effectively informing both research and policy/care decision-making.
- **Oversee Scientific Programmes:** Provide strategic oversight for the development and implementation of PEC’s scientific programmes and initiatives.

The Founding Partner and Steering Committee is made of the following individuals:

- Professor John Conly, Associate Professor Kirsten Fiest, Professor Tom Stelfox, University of Calgary, Alberta, Canada¹
- Dr Victoria Haldane, University of Toronto, Ontario, Canada
- Professor Carl Heneghan, Dr Annette Plüddemann, Dr Georgia Richards, University of Oxford, UK
- Professor Paul Glasziou, Bond University, Queensland, Australia
- Dr Mark Loeb, McMaster University, Hamilton, Ontario, Canada
- Dr Atle Fretheim, Oslo Metropolitan University, Norway

Role of the Founding Scientific Planning Committee

The Founding Scientific Planning Committee is playing a critical role in the Collaboration by:

- Participating in regular meetings to guide the strategic direction of the PEC.
- Designing and developing the scientific programme for international meetings.
- Attending and actively participating in international symposiums and conferences.
- Establishing ‘oven-ready’ research protocols to ensure rapid project implementation during public health emergencies.
- Disseminating research findings and promoting effective knowledge exchange.
- Leading high-priority international collaborative projects.
- Fostering ongoing collaboration to generate robust evidence.
- Mentoring and supervising Evidence-Informed Fellows to build capacity and expertise.

The Founding Scientific Planning Committee is made of the following individuals:

- Professor John Conly (Chair), University of Calgary, Alberta, Canada
- Dr Annette Plüddemann, University of Oxford, UK
- Professor Carl Heneghan, University of Oxford, UK
- Dr Georgia Richards, University of Oxford, UK
- Dr Sara Gandini, European Institute of Oncology, Italy
- Dr Igbo Onakpoya, University of Oxford, UK
- Dr Elena Cecilia Rosca, Victor Babes University of Medicine and Pharmacy Timisoara, Romania
- Dr Susanna Maltoni, IRCCS AOUBO, Bologna, Italy
- Associate Professor Kirsten Fiest, University of Calgary, Alberta, Canada
- Dr Mark Loeb, McMaster University, Hamilton, Ontario, Canada

¹ Professor Tom Stelfox has since relocated to the University of Alberta.

- Dr Victoria Haldane, University of Toronto, Ontario, Canada
- Dr Oyuka Byambasuren, Bond University, Queensland, Australia
- Associate Professor Mark Jones, Bond University, Queensland, Australia
- Dr Atle Fretheim, Oslo Metropolitan University, Norway
- Dr Tom Jefferson, University of Oxford, UK
- Assistant Professor Jenine Leal, University of Calgary, Alberta, Canada
- Jessica Bartoszko, PhD candidate, McMaster University, Hamilton, Ontario, Canada

Recruitment of Founding Evidence-Informed Fellows

To support the initiative of building a robust evidence base for NPIs and expanding the Collaboration, \ Founding Partner / Steering Committee representatives from their respective Universities (as previously listed) were invited to nominate a Founding Evidence-Informed Fellow (EIF) to facilitate engagement and project participation (refer to the attached letter template in **Appendix 1: Terms of Reference for Evidence-Informed Fellows (EIF)**).

The EIF role has been established to provide postgraduate trainees (PhD and Master's students), Post-Doctoral Fellows, and early to mid-career researchers who have a strong interest in and capacity for enhancing evidence generation and application for NPIs with an opportunity to develop expertise in NPIs for public health emergencies. Fellows will be encouraged to attend and present at relevant events, fostering an environment that promotes learning, collaboration, and innovation. We sought individuals who could make bold, thought-provoking, and constructive contributions, recognising the importance of capacity building and possessing the expertise to identify exceptional candidates to join the collaboration.

Founding EIF nominees were required to submit a letter of recommendation from their direct supervisor at their respective Universities, along with a three-page CV. Each nomination was reviewed and approved by a member from one of the different Founding Partner members within their respective Universities. Founding Partner & Steering Committee members were notified in advance of the nominations to ensure a timely review process.



Figure 1: Founding Evidence Informed Fellows. From left to right: Georgia Richards, Oyuka Byambasuren, Jessica Bartoszko, Jenine Leal.

Following a rigorous selection process, four Founding EIFs were chosen, forming a cohesive and collaborative group that meets regularly and is playing a crucial role in shaping the collaboration's strategy. These Founding EIFs are:

- **Georgia Richards** is a researcher and lecturer at the Centre for Evidence-Based Medicine, University of Oxford. During her DPhil, she utilised open data sources—including coroner's reports, global narcotics data, sales of over-the-counter medicines, and private prescription records—to develop tools such as the Oxford Catalogue of Opioids and the Preventable Deaths Tracker. The Preventable Deaths Tracker has attracted significant attention from the UK's Chief Coroner's Office, the Ministry of Justice, the media, bereaved families, and the public, with over 9,000 monthly visitors. Her expertise in data collation, open science, and work on preventable deaths will be invaluable to the collaboration.
- **Oyungerel Byambasuren** is an academic general practitioner and postdoctoral researcher at the Institute for Evidence-Based Healthcare, Bond University. She completed her PhD on the effectiveness and usability of mHealth apps in primary care and is currently working on projects aimed at increasing the uptake of non-drug interventions, reducing overdiagnosis, and closing evidence-practice gaps in general practice. Her recent work includes high-priority COVID-19 research on the prevalence of asymptomatic cases, seroprevalence, the role of eye protection in prevention, and the impact of COVID-19 vaccinations on long COVID.
- **Jessica Bartoszko** is an infectious disease epidemiologist with the Canadian Nosocomial Infection Surveillance Program. Jessica has 30+ peer-reviewed publications and 5+ years of experience in evidence synthesis and evaluation. She led the design, coordination, execution and publication of studies that have informed practice guidelines and policy on influenza vaccination, personal protective equipment, and drugs for COVID-19. A highlight is a systematic review and meta-analysis she led comparing medical masks to N95 respirators for preventing COVID-19 in healthcare workers, which has been cited 608 times and is in the top 5% of all research outputs scored by Altmetric.
- **Jenine Leal** is an Assistant Professor at the University of Calgary, specialising in the development, implementation, and evaluation of novel approaches to infection prevention and control to improve patient safety and reduce healthcare costs. Her research includes population-based epidemiological and economic studies, as well as validation studies using extensive surveillance and administrative datasets on infectious diseases, including antimicrobial resistance. Jenine contributed to the AHS COVID-19 Scientific Advisory Group, authoring six reports that informed practice and policy. She also developed the Alberta COVID-19 Analytics Research Database, a population-based resource utilising secondary data to understand the local epidemiology and resource implications of COVID-19.

We take pride in including the Founding Evidence-Informed Fellows, who are early-career researchers, as integral members of the Founding Scientific Planning Committee. Their perspectives are valued in all levels of decision-making and management within the PEC. We are committed to building their capacity and empowering them to take on leadership roles, ensuring their voices shape the future direction of the Collaboration.



Figure 2: Founding Evidence Informed Fellows at Kellogg College. From left to right: Georgia Richards, Oyuka Byambasuren, Jessica Bartoszko, Jenine Leal.

Recruitment of Evidence-Informed Fellows

In addition to the four Founding EIFs, eleven additional Evidence-Informed Fellows were appointed through an open competitive selection process conducted by PEC's Founding Scientific Planning Committee, leveraging their home institutions and research networks.

The eligibility criteria for our Evidence-Informed Fellow positions included the following:

- Candidates must be early to mid-career researchers currently in post, or 'trainees' enrolled in a graduate or postgraduate programme in any field at a university, postdoctoral researchers (post-doctoral fellows), or physicians in a training programme.
- Applicants were required to provide documentation confirming their enrolment from their respective university, hospital, or institution, along with a detailed CV.
- Founding Partners from each of their respective University nominated an Evidence-Informed Fellow to collaborate in developing this initiative. Applicants were required to submit a letter of recommendation from their line manager and a three-page CV, which were reviewed and approved by a representative from one of the other Founding Partner and Steering Committee member organisations.

All applications were evaluated using a 1-4 scale (**see Appendix 2: Evidence Informed Fellows Grading Criteria**). To qualify, candidates needed to achieve a minimum average score of 3.17.

We received provocative, bold and constructive contributions from applicants seeking to promote global collaboration and generate innovative evidence for NPIs in public health emergencies across all healthcare settings. The Scientific Planning Committee of the PEC is committed to capacity building of EIFs and fostering ongoing collaboration through the following initiatives:

- **Supporting Early Career Researchers:** Encouraging early career investigators to pursue research that develops evidence for NPIs in public health emergencies.
- **Establishing an Exchange Programme:** Promoting global collaboration and interaction among scholars, with a focus on generating novel evidence for NPIs in low- and middle-income countries (LMICs).
- **Developing Sustainable Research Protocols:** Creating 'oven-ready' research protocols to enable the swift initiation of research projects during the early stages of public health emergencies.
- **Building Researcher and Decision-Maker Partnerships:** Facilitating effective knowledge exchange between researchers and decision-makers during public health emergencies to ensure evidence-based decision-making.

The exchange programme will be formalised at the November 2024 meeting, where plans and an indicative budget will be presented for approval.

To support the development of sustainable 'oven-ready' research protocols that enable the rapid initiation of projects during the early stages of public health emergencies, the Collaboration has

already identified 35 projects with designated titles and leads. We anticipate this number will continue to grow, and both the November 2024 meeting in Oxford and the Banff meeting in May 2025 will provide valuable opportunities to prioritise projects with the greatest potential impact on public health. We have already identified and prioritised projects that can be supported with expertise, exchange visits, and resource contributions from existing collaborators.

Successful candidates, supported by a minimum of two local mentors, are expected to:

- Contribute to the development of research protocols.
- Build expertise in non-pharmacological interventions (NPIs) for public health emergencies.
- Generate innovative evidence on NPIs for public health emergencies.
- Attend and actively participate in at least two international conferences.
- Engage in regular online meetings and contribute actively.
- Promote the consortium's work and objectives at both local and global levels.
- Support the establishment of sustainable global research partnerships.

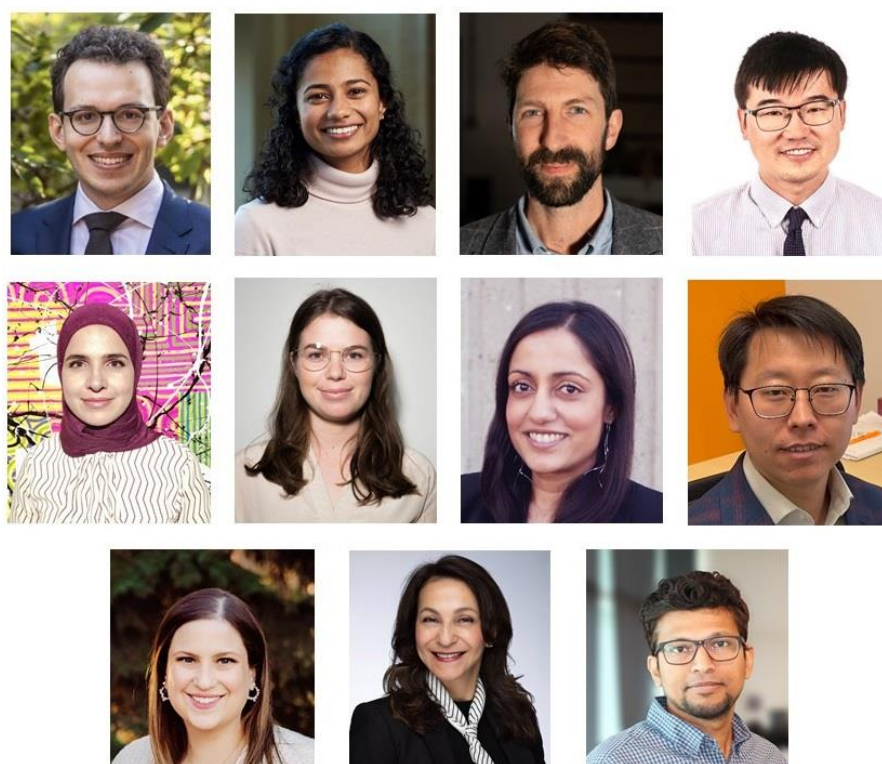


Figure 3: Evidence-Informed Fellows. Top row: Adam Komorowski, Elizabeth Thomas, Kevin Bardosh, Yuan Zhang; Middle Row from left to right: Eman Abukmail, Ingeborg Hess Elgersma, Ranjani Somayaji, Guosong Wu; Bottom row, from left to right: Elissa Rennert-May, Fariba Aghajafari, Nashit Chowdury.

Following the recruitment process, the following academics were selected as Evidence-Informed Fellows (EIFs) for the Collaboration:

Name	Gender	Institution(s)	Region	Specialisation
Elizabeth Thomas, MD PhD	F	Bond University / University of Oxford	Australia	Diagnostics & Transmission / Interventions & Evidence
Kevin Bardosh, PhD	M	University of Oxford	UK / Canada	Practice & Policy
Yuan Zhang, PhD	M	McMaster University	Canada / China	Intervention & Evidence/ Practice & Policy
Adam Komorowski, MD	M	McMaster University	Canada / Italy	Diagnostics & Transmission / Interventions & Evidence
Eman Abukmail, MD MSc	F	Bond University	Australia / Palestine	Interventions & Evidence/Practice & Policy
Ingeborg Hess Elgersma MA	F	Norwegian Institute of Public Health	Norway	Interventions & Evidence/Practice & Policy
Ranjani Somayaji, MD MPH	F	University of Calgary	Canada	Practice & Policy/Interventions & Evidence
Guosong Wu, PhD	M	University of Calgary	Canada	Interventions & Evidence/Practice & Policy
Elissa Rennert-May, MD MSc	F	University of Calgary	Canada	Interventions & Evidence/Practice & Policy
Fariba Aghajafari, MD PhD	F	University of Calgary	Canada / Iran	Interventions & Evidence/Practice & Policy
Nashit Chowdhury, MSc	M	University of Calgary	Canada / Bangladesh	Interventions & Evidence/Practice & Policy

Full profiles of Evidence-Informed Fellows (EIFs) are included in Appendix 3: Profiles of Evidence-Informed Fellows.

Rationale, Principles, and Structure of the PEC

During the Collaboration's inaugural meeting held at Kellogg College on April 11-12, 2024, members collectively established the rationale, core principles, and objectives of the PEC, and agreed upon its working arrangements and collaborative structure:

Rationale

The COVID-19 pandemic has highlighted both the strengths and limitations of scientific research and knowledge exchange during public health emergencies. While pharmacological interventions, such as vaccines and antiviral therapies, were developed, tested, and distributed globally with remarkable speed and effectiveness, many non-pharmacological interventions (NPIs)—including public health measures like masking, physical distancing, school closures, and airport screenings, as well as medical care strategies such as acute and long-term care organisation, triage protocols, vaccine distribution, and personal protective equipment management—were implemented with limited supporting evidence.

As a result, four years after the World Health Organization declared COVID-19 a pandemic, there is still insufficient understanding of the potential short- and long-term benefits (e.g., reduced disease transmission and mortality) and harms (e.g., mental health declines, increased drug overdoses, social isolation, delays in cancer care, prolonged surgical wait times, and impacts on the educational performance of children and youth) of many NPIs, as well as the most effective ways to organise patient care.

Current research and knowledge-sharing practices for NPIs are unlikely to produce the robust evidence needed to guide decision-making in future public health emergencies. To address this critical gap, the Pandemic Evidence Collaboration (PEC) will unite leading independent academic centres in evidence-based medicine from around the world to develop and disseminate high-quality evidence for NPIs.

Principles

- Prioritise NPIs to enhance population health and improve health service delivery.
- Establish a global collaboration to build capacity at the human, system, and organisational levels for future public health emergencies, nurturing current and future scientists.
- Commit to equity, diversity, inclusion, and accessibility in all aspects of the collaboration's work.
- Uphold excellence in high-quality research and knowledge exchange through strong academic and societal partnerships to guide research and policy decisions.
- Maintain equipoise and produce generalisable knowledge with minimal risk of bias.
- Define evidence-based collaboration, drawing from the founding principles of the Cochrane Collaboration.
- Foster cooperation, teamwork, integrity, openness, transparency, scientific rigour, and independence.
- Provide ongoing support and training for all members, with a focus on young investigators and developing the next generation of evidence-based experts.
- Avoid duplication of efforts to ensure efficient use of resources.
- Minimise bias in every endeavour.
- Ensure that all workstreams are relevant to current and future public health challenges.
- Offer open access to all outputs to promote transparency and broad dissemination.
- Strive for excellence in the quality of all outputs and continuously review and refine strategies to maintain high standards.

Structure

Work progressed across all three Pillars through which the PEC aims to address the key questions outlined in the Background section. Initial concepts were shared through the following presentations. **Further details of these are included in** [Error! Reference source not found..](#)

- Pillar 1: Diagnostics and Transmission
- Pillar 2: Interventions and Evidence
- Pillar 3: Practice and Policy

The March 2024 meeting facilitated the formation of three working groups aligned with these Pillars. A comprehensive list of projects, including titles and methodological approaches, was developed for each Pillar. Each group then presented their projects to the entire collaboration for review. Lead Principal Investigators and collaborators were subsequently assigned to each project to ensure effective leadership and coordination.

For the individual projects, protocols were written or are works in progress. Each project was categorised into the following categories:

- Can be done with existing resources of PEC and individuals currently part of collaboration
- Requires further funding, draft proposals, and full protocols written for grant awarding bodies
- Needs additional people and resources external to PEC (for instance, recruitment of medical students to help with data extraction may be necessary)

Examples of projects currently underway include:

- Serial Cycle Threshold as a Surrogate for Viral Cultures: Evaluating the use of cycle threshold values to determine the infectious potential of SARS-CoV-2.
- Review of the Common Cold Unit Studies: Analysing historical studies to gain insights into respiratory pathogen research.
- Assessing Biases in Transmission Studies of Respiratory Pathogens: Developing a risk of bias tool to evaluate the quality of transmission studies.
- Catalogue of Harms: Systematically mapping the harms associated with different NPIs.
- Living Review of Coroners' Prevention of Future Deaths Reports: Continuously reviewing and analysing coroner reports published in England and Wales to identify preventable causes of death.
- Multi-country Retrospective Data Linkage Study: Conducting a cross-country analysis of coroner data to assess the impact of NPIs during the COVID-19 pandemic, with a focus on identifying harms, necessary modifications, and potential solutions.

At the upcoming second PEC workshop in November 2024, all EIFs will present their research protocols to the entire team, allowing for collective input and feedback to refine and enhance their projects. This collaborative review will help strengthen the strategy for successfully bringing each project to completion. Additionally, visiting placements across the five Founding Partner and Steering Committee member organisations will be approved by the Founding Steering Committee, providing EIFs with opportunities to collaborate more closely and gain valuable experience across diverse research environments.

The Collaboration has established 35 project protocols to date with titles and leads we want to take forward. We fully expect this number to increase, and both the November 2024 meeting in Oxford and the Banff meeting in May 2025 will provide opportunities to prioritise these projects that will most impact public health. We have already prioritised projects we can support with expertise, exchange visits and resource input from existing collaborators.

International Conferences

Planning for the first of two international conferences is well underway. A dedicated planning committee has been formed, and the programme is currently being developed. The Call for Abstracts and Registration are now open.

Looking at the Pandemic in the Rear-view Mirror: Successes, Failures and Unintended Consequences

Banff Centre for Arts and Creativity, Banff, Canada

14-16 May 2025

The conference features daily themes aligned with the three Pillars outlined in the Background section and has attracted several high-profile international speakers including Prof Gordon Guyatt, Prof Didier Pittet and Dr Verna Yiu, Provost and Vice-President, University of Alberta, Canada.

EBMLive 2026 - Creating High-Quality Evidence for Evidence-Informed Policy

Rhodes House, Oxford, UK

24-26 June 2026

Sustainability of the Collaboration

The PEC is committed to sustaining its efforts through a comprehensive business plan and matched funding strategy. Surplus income generated from both international conferences will contribute to the matched funding initiative. In addition:

- The Norwegian Institute of Public Health has generously provided up to £30,000 to support attendance and travel bursaries for early to mid-career researchers and residents of low- to middle-income countries to participate in the Banff event in May 2025.
- An additional £6,950 was secured through the efforts of Founding Steering Committee members Professor Carl Heneghan and Dr Annette Plüddemann, who taught an evidence-based medicine course as part of the Oxford Global programme at the Said Business School's Thatcher Business Education Centre. The course enrolled 38 students from China, covering topics such as the fundamentals of evidence-based practice, the role of the NHS, and the application of evidence during the pandemic, along with the challenges faced in developing effective strategies.
- The O'Brien Institute for Public Health at the University of Calgary, in partnership with its Corporate and Foundations Development Team, is actively seeking additional funding opportunities on behalf of the Collaboration.
- Dr Georgia Richards, a Founding Evidence-Informed Fellow, has been awarded a prestigious King's Prize Fellowship along with a £20,000 research grant. She will use this funding to enhance the Preventable Deaths Tracker with insights specific to future pandemics and to draft a protocol for assessing coroner reports from the pandemic across all Pandemic Collaboration founding sites. Additionally, Georgia is developing several grant applications to create a comprehensive death investigation platform that integrates various data sources beyond coroner reports.
- PEC members Dr Jenine Leal (Principal Investigator), Associate Professor Mark Jones, Dr Mark Loeb, Dr Atle Fretheim, Professor John Conly, Dr Elissa Rennert-May, Ingeborg Hess Elgersma, and Dr Jessica Bartoszko have been awarded CDN \$15,000 in funding from the University of Calgary's O'Brien Institute for Public Health to support the project titled "Evaluating the Effectiveness of the Enhanced Masking Directive in Alberta, Canada During the 2023-2024 and 2024-2025 Respiratory Seasons."

Long-Term Ambition of the Collaboration

As described previously, the long-term outcomes of the Collaboration can be evaluated based on the agreed-upon principles, which focus on the effective application of NPIs to enhance population health and health service delivery during public health emergencies. This includes building human, system-level, and organisational capacity to respond to future crises, producing high-quality research, and fostering academic-societal partnerships to guide research and policy decision-making. The ultimate aim is to generate generalisable knowledge with minimal bias. Specific goals include:

- **Expanding Collaboration and Partnerships:** Increasing the number of collaborators and partner organisations during the May 2025 Banff Meeting through academic exchanges. Several small group sessions have been organised to facilitate meaningful interactions and networking.
- **Increasing Evidence Informed Fellowship Funding:** Securing additional funding for EIFs opportunities through matching programmes within host institutions.
- **Developing Expertise within the Collaboration:** Enhancing the expertise available to support EIFs through the academic exchange programme, which will provide enriching experiences for them.
- **Project Prioritisation:** Prioritising projects for future funding by engaging with the Founding Scientific Planning Committee and participating in interactive discussions to identify those with the greatest impact potential.
- **Ensuring Sustainability:** Strengthening the sustainability of the Collaboration by publishing both peer-reviewed papers and grey literature, thereby attracting the attention of funding agencies.
- **Developing DPhil Funding Proposals:** Creating funding proposals for DPhil opportunities with the support of senior mentors. Currently, PEC members Professor Carl Heneghan and Dr Annette Plüddemann are collaborating with St Andrews, School of Medicine, the Mackenzie Institute for Early Diagnosis at the School of Medicine at the University of St Andrews on a proposal for early diagnosis research, including the role of early diagnosis in pandemics

Appendices

Appendix 1: Terms of Reference for Evidence-Informed Fellows (EIF)

Background

The COVID-19 pandemic has identified important strengths and limitations of science and knowledge exchange during public health emergencies. While pharmacological interventions were developed, tested, and disseminated with impressive timeliness and effectiveness, the decisions for many non-pharmacological interventions (NPIs) were made with limited evidence. Consequently, there remains little understanding of the potential short- and long-term benefits and harms of many of the interventions undertaken and how to best organize patient care across the spectrum of health care delivery. The Pandemic EVIDENCE Collaboration was established to help address this knowledge gap.

The Evidence-Informed Fellowship was designed to provide graduate trainees, post-doctoral fellows, and early to mid-career researchers with an active interest in improving the generation and use of evidence for NPIs, with an opportunity to further develop their skills, knowledge, and expertise in research regarding NPIs.

Goals

The Evidence-Informed Fellowship aims to:

- Identify, develop and implement strategies to generate high-quality evidence for NPIs during public health emergencies.
- Foster effective and efficient knowledge exchange during pandemics so scientists and public health officials address the most relevant policy and care questions.
- Collaborate with policymakers and health system leaders to incorporate the resulting evidence into decision-making.
- Evaluate the short- and long-term consequences of NPI policies on health (e.g., length and quality of life), economic (e.g., income, housing, and food security), psychosocial (e.g., community cohesion), and environmental (i.e., natural and built environment— e.g., biosafety and waste management) well-being.
- Support the professional development of trainees and early career researchers within the evidence-based medicine and public health community.

Deliverables

Evidence-Informed Fellows (EIFs) are expected to regularly participate in Pandemic EVIDENCE Collaboration activities. This participation may include, but is not limited to, the following activities:

- Attend collaboration meetings and provide updates on their ongoing research projects and activities.
- Contribute meaningfully to Pandemic EVIDENCE Collaboration research projects. Contributions should meet co-authorship criteria defined by the [International Committee of Medical Journal Editors](#)
- Co-author at least one peer-reviewed publication
- Attend conferences affiliated with the Pandemic EVIDENCE Collaboration in-person: 1) Banff, Canada, May 2025 and 2) Oxford, United Kingdom, June 2026
- Present in-person (via poster or oral presentation) at one or both conferences affiliated with the Pandemic EVIDENCE Collaboration

Progress will be reviewed by the Scientific Planning Committee annually and EIFs who are not on track to meet these deliverables will require discussions, planning and remedial actions to ensure deliverables will be met.

Term

The term of each EIF shall end on 31 December 2026, unless extended, non-participation is agreed upon or terminated early by the Pandemic EVIDENCE Collaboration Scientific Planning Committee and the Operations Management Group.

Reporting structure

The Pandemic EVIDENCE Collaboration shall include no more than 18 EIFs; of which, four will be designated Founding EIFs (one from each Founding Partner organization). Evidence-Informed Fellows will report to the [Scientific Planning Committee](#).

Meetings

The EIFs will meet at the discretion of the Founding EIFs and/or Scientific Planning Committee. EIFs are encouraged to establish their own meeting schedule to work on specific projects identified by themselves and/or the Scientific Planning Committee.

Management Support

EIFs will be supported by the Founding EIFs and members of the Scientific Planning Committee as appropriate. EIFs may request feedback from any collaborators within the Pandemic EVIDENCE Collaboration as needed to fulfil their goals. There will be responsibility for the EIFs to report back to their line manager at their host institutions.

Remuneration

EIFs will receive a £6500 travel and accommodation allowance for the duration of the Fellowship. Remaining funds can contribute to additional skills training (e.g., short courses, specific research skills development and visiting knowledge exchange programs at another institution). Funds will be held and managed at Kellogg College, University of Oxford. Expenses will be paid for by Kellogg College via re-imbursement following submission of receipts and approval or directly via invoice.

Professional conduct and ethics

Confidentiality

EIFs should assume all shared information and documents in the course of the work of the Evidence-Informed Fellowship by way of the Pandemic EVIDENCE Collaboration are confidential, unless explicitly stated otherwise by the Pandemic EVIDENCE Collaboration Management Committee.

Transparency and COIs

EIFs are expected to behave professionally. If a conflict of interest arises, or the appearance thereof, in the course of the work of the Evidence-Informed Fellowship, the individual involved must declare its existence and remove themselves from participating in the discussion or from any further participation in the Evidence-Informed Fellowship depending on the specific circumstances of the conflict of interest.

Amendments to the terms of reference

The terms of reference will be reviewed annually. Amendments to the terms of reference will be made by the Scientific Planning Committee and communicated to EIFs electronically and at the first scheduled meeting thereafter.

Appendix 2: Evidence Informed Fellows Grading Criteria

Excellent (4) Meets all or majority of requirements

- Active interest in improving the generation and use of evidence for Non-Pharmacologic Interventions (NPIs) in public health emergencies
- Current experience working in acute viral respiratory infections or related areas
- Current experience working in evidence-based medicine (EBM)
- Current experience in developing high-quality evidence related to issues germane to pandemics and/or epidemics
- Excellent relevant publication record in the generation and use of evidence related to NPIs, acute respiratory viral infections, pandemics and /or epidemics and EBM
- Supported by home institution and line manager
- Available to travel

Average (3)

- Interest in improving the generation and use of evidence for NPIs in public health emergencies
- Previous experience working in acute viral respiratory infections or related areas
- Previous experience working in EBM
- Previous experience developing high-quality evidence related to issues germane to pandemics and/or epidemics
- Relevant publication record in the generation and use of evidence related to NPIs, acute respiratory viral infections, pandemics and /or epidemics and EBM
- Supported by home institution and line manager
- Available to travel

Fair (2)

- Knowledge of the generation and use of evidence for NPIs in public health emergencies
- Knowledge of areas related satisfactory to acute viral respiratory infection or related areas
- Knowledge of EBM
- Knowledge about developing high-quality evidence related to issues germane to pandemics and/or epidemics
- A publication record related to NPIs, acute respiratory viral infections, pandemics and /or epidemics and EBM
- Supported by home institution and line manager
- Available to travel

Poor (1)

- Unsatisfactory understanding of the generation and use of evidence for NPIs in public health emergencies
- Unsatisfactory understanding of acute viral respiratory infection or related areas
- Lack of knowledge in EBM
- Lack of knowledge in developing high-quality evidence related to issues germane to pandemics and/or epidemics and/or epidemics
- A publication record unrelated or not relevant to NPIs, acute respiratory viral infections, pandemics and /or epidemics and EBM
- Supported by home institution and line manager
- Available to travel

Appendix 3: Profiles of Evidence-Informed Fellows

Eman Abukmail, MD MSc

Dr Eman Abukmail is a PhD candidate (submitting Sep 24) at the Institute for Evidence-Based Healthcare, Bond University, Australia. She is also involved in teaching evidence-based medicine, shared decision making and communication skills for medical students at Bond University. Her research focuses on improving the communication of prognosis and natural history of illnesses and the related 'wait and see' option to support informed decisions.



Dr Abukmail leads the Shared Decision Making Early and Middle Career Researcher (ISDM EMCR) Network. She is actively engaged in initiatives to enhance healthcare communication and delivery, particularly in low- and middle-income countries (LMICs). As an Evidence-Informed Fellow at The Pandemic Evidence Collaboration, Eman will contribute to Pillars 2 and 3.

Google Scholar: [Eman Abukmail - Google Scholar](#)



Kevin Bardosh, PhD

Kevin Bardosh is the Director and Head of Research of Collateral Global (<https://collateralglobal.org>), a UK-based think tank focused on improving pandemic response through deep study of the lessons learnt from Covid. A medical anthropologist, he has worked in more than 20 countries worldwide on infectious disease control, including Ebola and Zika. His current work focuses on the social harms (or unintended consequences) of public health policies, political decision-making, the politicization of science (i.e. infection control

and vaccination), legal and constitutional issues, and viewpoint diversity in medicine and public health.

Yuan Zhang, PhD

Yuan Zhang, an Assistant Clinical Professor (Adjunct) in the Department of Health Research Methods, Evidence, and Impact at McMaster University, and an assistant professor at Brock University. Yuan's research focuses on evidence-based decision making, guideline development, patient and public values, economic evaluation, and health technology assessment. He has published more than 60 peer-reviewed articles.





Adam S. Komorowski, MD

Adam S. Komorowski is a Canadian-Italian consultant medical microbiologist and research methodologist with a clinical infectious disease practice at McMaster University, where he is a part-time Assistant Professor. Adam completed his bachelor's degree at the University of Toronto and his medical degree in Ireland, ultimately returning to Canada to pursue his speciality training in medical microbiology at McMaster University. He is currently completing a master's degree in Health Research Methodology through a

government-funded Clinician-Investigator Program fellowship at McMaster University.

Adam has published over 30 peer-reviewed papers, including pharmacologic guidelines co-authored with the COVID-19 Science Advisory Table in the Canadian province of Ontario.

He currently serves on the steering committee of the phase 2 AeroVax trial evaluating a novel multivalent SARS-CoV-2 vaccine delivered by inhaled aerosol.

Pillars of interest: Diagnostics and Transmission; Interventions and Evidence

Websites:

- <https://www.researchgate.net/profile/Adam-Komorowski-2>
- <https://scholar.google.com/citations?user=BeOGMoYAAAAJ&hl=en>

Guosong Wu, PhD

Guosong Wu is a CIHR postdoctoral researcher at the Centre for Health Informatics, University of Calgary. With a robust background in health services research and medicine, Dr. Wu's expertise lies in measuring care quality and safety through machine learning-driven analytics of structured and unstructured electronic medical records and administrative databases. During the COVID-19 pandemic, he developed ICD-10 algorithms that improved case identification, enabling large-scale cohort studies and the evaluation of both clinical and non-pharmaceutical interventions. Currently, he leads research on the impact of non-pharmaceutical interventions on adverse events in hospitalized patients, aiming to evaluate the effectiveness of these interventions and improve the accuracy of adverse event detection.





Nashit Chowdhury, MSc

Nashit Chowdhury is a dedicated researcher and PhD student at the University of Calgary, specializing in the Population and Public Health. With a background in medicine (MBBS from Bangladesh) and Data Analytics, Nashit brings a unique interdisciplinary approach to his work. His thesis focuses on the mental health impacts of COVID-19, particularly on visible minority essential workers, and he is deeply committed to improving the healthcare system by addressing social determinants of health. Nashit has contributed to 50 publications

and has been involved in both qualitative and quantitative studies that explore population and public health topics.

As a fellow of The Pandemic Evidence Collaboration, Nashit aims to engage in generating high-quality evidence for non-pharmacological interventions during pandemics, helping to inform policy and care decisions. This collaboration allows him to apply his expertise in public health to contribute to the development of research protocols that can be rapidly deployed during future pandemics. In addition to his research, Nashit is passionate about community engagement, knowledge translation, and developing equitable health policies that improve the lives of vulnerable populations.

Ingeborg Hess Elgersma MA

Ingeborg Hess Elgersma is a researcher with the Centre for Epidemic Intervention Research at the Norwegian Institute of Public Health. She conducts pragmatic randomised trials of public health and social measures for infection control. During the pandemic, Ingeborg authored several quasi-experimental studies based on Norwegian registry data. She also focused her research on social disparities in COVID-19 prevalence.



Ranjani Somayaji, MD MPH

Ranjani Somayaji completed medical training followed by residency training in internal medicine and fellowship training in infectious disease through the University of Calgary. Dr. Somayaji completed a Master's in Public Health through Johns Hopkins University with a focus on quantitative methodologies. Following this, Dr. Somayaji completed three-years of post-doctoral training focused on cystic fibrosis and epidemiologic research. Dr. Somayaji has expertise in the implementation of prospective cohorts and clinical trials and runs a

large clinical-translational research program with international collaborations. She also holds the

GSK Professorship in Inflammatory Lung Disease focused on building research capacity through an equitable and inclusive lens. As an early career investigator, Dr. Somayaji has more than 145 published manuscripts focused on improving outcomes of acute and chronic infections.

Elissa Rennert-May, MD MSc

Dr Elissa Rennert-May is an Infectious Diseases physician and an assistant professor at the University of Calgary in the Departments of Medicine, Community Health Sciences, and Microbiology, Immunology and Infectious Diseases. Dr. Rennert-May does research related to health economics and health services particularly in the areas of antibiotic stewardship/antibiotic resistance and infection prevention and control. She has done several research projects around the COVID pandemic including the creation of a COVID database, and is currently working on projects related to non pharmaceutical interventions to prevent transmission of respiratory viruses. Her pillars of interest are Pillars 2 and 3 – Interventions and Evidence, and Practice and Policy.



Elizabeth Thomas, MD PhD

Elizabeth Thomas is a Pandemic Evidence Fellow based in Brisbane, Australia. She recently completed her DPhil as a Clarendon Scholar at the Centre for Evidence-Based Medicine, where her research examined variation in paediatric diagnostic testing. She is currently undertaking her specialty training in paediatrics. Her research interests include strengthening the evidence base in paediatric diagnostics and reducing unwarranted variation to improve the quality of care delivered to children. Her work within the collaboration

will primarily focus on Diagnostics and Transmission (Working Pillar 1) as well as Interventions and Evidence (Working Pillar 2).

Fariba Aghajafari, MD PhD

Fariba Aghajafari is an Academic Family Physician and Associate Professor in the Department of Family Medicine and Community Health Sciences at the University of Calgary. Her expertise includes evidence-based medicine, pregnancy and child health, nutrition, refugee health, and health services research. She has extensive experience in both qualitative and quantitative research, including systematic and scoping reviews, with her most recent work focusing on vaccine delivery models for refugee populations during pandemic.



During COVID-19, Fariba analyzed public health, acute care, and primary care data to assess how the COVID-19 Integrated Pathway (CIP) supported informational continuity. She also investigated vaccination models for newcomers and refugees, emphasizing the role of partnerships and trusted intermediaries in overcoming vaccine hesitancy and barriers to care.



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