



2022

CHAIN AT A GLANCE

Annual Report 2022



COVID-19 cannot be isolated from its social context

The world has suffered an immense death toll due to the COVID-19 pandemic, with more than 5 million officially registered deaths. Yet this burden has not been felt equally between countries, or between social groups within countries.

According to CHAIN researcher Clare Bambra, the pandemic is a syndemic pandemic, as mortality and morbidity from the pandemic exacerbate existing inequalities in social conditions and chronic disease rates. During 2022, many of CHAIN's activities have therefore been centered around examining the impact of social conditions on both morbidity and mortality in light of the COVID-19 crisis.

First, regarding mortality, CHAIN has established a global network of researchers who are now assessing the impact of social inequalities on COVID-19 mortality, as part of CHAIN's involvement in the UN WHO Technical Advisory Board on COVID-19 mortality. The work is progressing fast, and 15,000 articles are currently being screened, extracted, and analysed.

Secondly, with respect to morbidity, we are excited to share the news that the data collection of the 11th round of the European Social Survey (ESS) is about to start, in which CHAIN has its own "health module". When our first module was implemented in the 7th round of the ESS in 2014, it became the first health survey, which included rich questions on the stratification systems of societies. This allowed us to identify the deeper mechanisms linking social inequality with health. With the follow-up module, we will now be able to monitor the cross-national development of the social determinants of health, including their associations with many

subjective health measures, through the COVID-19 crisis (from 2014 to 2023). More than 50,000 interviews will be conducted in Europe and beyond.

COVID-19 has put all health and welfare systems to the ultimate test. We also believe that the pandemic represents a unique opportunity to measure the value of welfare systems in insulating their populations from rising social inequalities in health. Through the ESS we may even test the merits of the Nordic welfare model as a global example for reducing social inequalities in health.

In sum, we expect that CHAIN's data capacity building on both morbidity and mortality, and the outcomes of our analyses, will make the UN, WHO, and governments better prepared for future health crises.

I hope you will find interest in learning more about these and other contributions from CHAIN and our key partners from the past year in this report, including many of our policy events, which you can read more about on our social media channels.

2022 has been another productive year for CHAIN in our fight against rising global inequalities, and we have further manifested our position as the leading research centre in this research and policy field.

I want to thank the whole CHAIN team and our collaborators for all the excellent work during the past year, and I look forward to what the next may bring.

*Terje Andreas Eikemo,
Leader of CHAIN*

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1

CHAIN

Centre for Global Health Inequalities Research

CHAIN is the leading centre and interdisciplinary research network for global health inequalities, based at the Norwegian University of Science and Technology (NTNU) in Trondheim. It brings together expert researchers in the field of health and social determinants, civil society and the UN system to advance health inequalities research, especially for children's health.



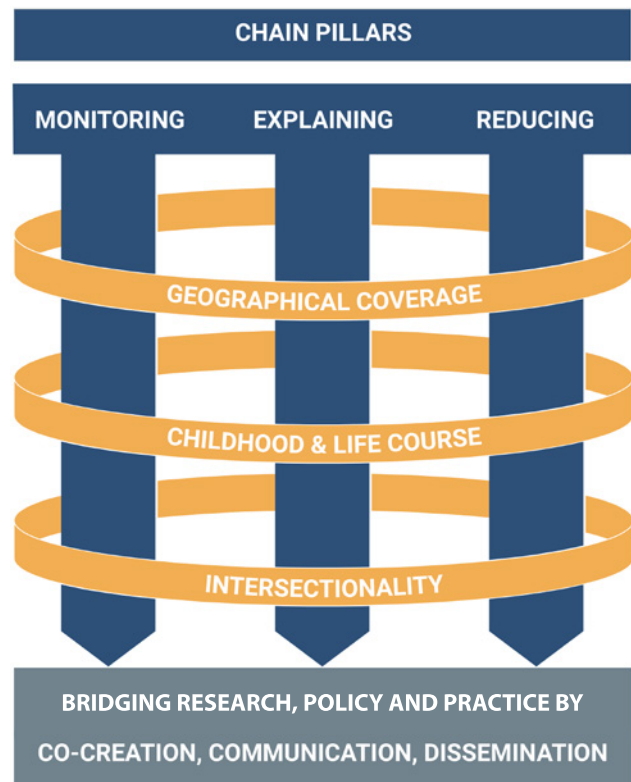
The CHAIN structure

CHAIN is the leading centre and interdisciplinary research network for global health inequalities, based at the Norwegian University of Science and Technology (NTNU). It brings together expert researchers in the field of health, social determinants, civil society and the UN system to advance health inequalities research, especially for children's health. CHAIN is working towards a global transformation in actionable health inequalities research.

Our 5 main objectives are:

1. To monitor health inequalities, by describing the magnitude and variation of socio-economic inequalities in health and mortality in the world through time and space.
2. To explain how these inequalities arise.
3. To reduce health inequalities by evaluating interventions that are effective in promoting health equity.
4. To reduce the distance between research, policy and practice through outreach activities.
5. To develop the next generation of health inequality researchers.

Our work covers three pillars: Monitoring, Explaining, and Reducing health inequalities. Their results feed into CHAIN's co-creation, communication and dissemination activities aimed at making bridges between research, policy and practice.



CHAIN is the result of a unique partnership between academic institutions, policy agencies, international organisations, and the UN system. Together, we are reducing the distance between research, policy and practice.



2

MONITORING HEALTH INEQUALITIES

Data on health inequalities and determinants of health needs to be continuously expanded and updated to inform adequate policies and interventions. A core CHAIN priority is to ensure the availability and quality of data on health inequalities and determinants of health by building capacity to collect, analyse and share. The work of the Monitoring pillar helps monitor health inequalities in Europe and beyond, and lays the groundwork for all other CHAIN activities.

“The need to reduce socioeconomic inequalities in health and cancer is receiving greater attention today than ever before, and it has been recognised as a matter of social justice and human rights.”

Vaccarella, S., Georges, D., Bray, F., et al. (2022)

*Socioeconomic inequalities in cancer mortality between and within countries in Europe: A population-based study. The Lancet Regional Health - Europe, 25, 100551.
<https://doi.org/10.1016/j.lanepe.2022.100551>*

What is the global association between adult education and mortality?

That is what CHAIN is determining together with its partner the [Institute for Health Metrics and Evaluation \(IHME\)](#). All-cause and cause-specific mortality will be examined. The work is a follow-up of the 2021 Lancet article that led to the [discovery of a global association between parental education and child mortality](#).

The work has so far led to a study of the association between education and adult mortality of the [Asia Pacific Region](#). The long-term ambition is to include education as the first socioeconomic risk factor in the [Global Burden of Disease Study](#).

Using individual-level stratification as an approach to integrating social inequalities into the Global Burden of Disease Study

While the Global Burden of Disease (GBD) tool allows to stratify data according to socioeconomic factors between countries, it does not allow to do so within. A study by CHAIN researchers conducted a Cox regression analysis to stratify on educational groups to examine inequalities in cause-specific mortality and years of life lost, exploring this approach as one [possible solution to the integration of social inequalities into the GBD Study](#) or when using a burden of disease framework approach more generally.

Systematic reviews of the Global Burden of Disease Study for 2019 and 2020 shed further insight into the commercial determinants of health

Led by CHAIN's partner the Institute for Health Metrics and Evaluation (IHME), the Global Burden of Disease (GBD) Study provides a comprehensive picture of mortality and disability across countries, time, age, and sex.

A review of the 2019 GBD Study demonstrates patterns in the [prevalence of tobacco use](#) and attributable disease burden, signalling a large implementation gap in tobacco control. An analysis of the 2020 GBD Study showcases the population-level [risks of alcohol consumption](#) and calls for stronger interventions to reduce the substantial global health loss attributable to alcohol, particularly in younger individuals.

CHAIN proposes strategy to assess inequalities in COVID-19 mortality

In an [article published in the Bulletin for the World Health Organization \(WHO\)](#), CHAIN presents a strategy to assess social inequalities in COVID-19 mortality worldwide and asks the global research community to contribute. CHAIN is undertaking this work along with the leadership of the Global Public Health Observatory of the Johns Hopkins Bloomberg School of Public Health, under supervision of the Inequality Working Group within the [WHO/UN Technical Advisory Group on COVID-19 Mortality Assessment](#) and in collaboration with a global network of over 50 researchers. As noted in the editorial, more than 15 000 abstracts will be screened, extracted and analysed.

CHAIN becomes a partner of new EU-funded project to implement EuroCohort survey on child wellbeing



The [COORDINATE project](#) aims to secure funding to implement the EuroCohort study, the first European comparative birth cohort survey, to build an infrastructure to collect high-quality data on child wellbeing to inform policy and policy makers across Europe.

Its objectives are threefold: (1) to initiate a community of researchers working to enhance child wellbeing, (2) to facilitate improved access to longitudinal survey data on child wellbeing, and (3) to give children a voice in research that concerns them.

IARC to strengthen cancer screening data for the European Cancer Information System (ECIS)

[CanScreen-ECIS](#), coordinated by WHO's International Agency for Research on Cancer (IARC), will increase the availability of cancer screening indicators in the installation of a pilot-tested web application to display indicators from different European programmes. Over the medium-term, this project will also support the preparation of a 3rd EU Cancer screening report.

CHAIN's participation in this consortium will contribute towards the harmonised collection and monitoring of social inequalities in cancer screening. This significant contribution will ultimately lead to the goal of improving the quality of and equal access to breast, cervical and colorectal cancer screening programmes in Europe.

3

EXPLAINING HEALTH INEQUALITIES

How do socioeconomic determinants interact with health and lead to health inequalities? That is the core question examined by our Explaining pillar.

In 2022, CHAIN researchers looked into a wide range of determinants to explain health disparities, including environments, trade, COVID-19 and the effectiveness of welfare policies and employment.

“Persistent health inequalities pose a challenge to researchers and policymakers. Decades of research have illuminated mechanisms that underlie health inequalities, now we must move beyond these observations to enable policies that can reduce them.”

Kelly-Irving, M., Ball, W. P., Bambra, C., et al. (2022)

Falling down the rabbit hole? Methodological, conceptual and policy issues in current Health Inequalities Research. Critical Public Health, 33(1), 37-47.
<https://doi.org/10.1080/09581596.2022.2036701>



CHAIN-UNICEF collaboration produces new Report Card on healthy environments for children

Report Card #17 explores how 43 OECD/EU countries are faring in providing healthy environments for children. It assesses access to clean drinking water, good air quality and greenspaces, and exposure to overcrowded and unhealthy housing environments and unsafe traffic.

The report finds that even in wealthy nations, too many children are deprived of a healthy home – and that over-consumption

in these nations is destroying children's environments globally. It lays out a set of policy recommendations to ensure safe and healthy environments.

The Report Card was produced in collaboration between UNICEF Innocenti and CHAIN researchers, and received particular input from Neurotox, a CHAIN-affiliated study on exposure to environmental pollutants during pregnancy and brain development.

Falling down the rabbit hole? CHAIN researchers explore issues in current health inequalities research

While decades of research have illuminated mechanisms that underlie health inequalities, we have yet to move beyond observations to enable policies that can reduce them.

CHAIN researcher Clare Bambra and colleagues published a paper that highlights tensions in the field of health inequalities research regarding the relationship between social determinants and health outcomes, and the effectiveness of welfare policies. It provides insight into the evidence on causality, welfare systems and policies aiming to address the social determinants of health inequalities.

CHAIN study explains the Nordic paradox

Why are social inequalities in health relatively large in the Nordic countries? This CHAIN study explains this “Nordic paradox” of inequality. Through the application of multiple correspondence analysis using data from the European Social Survey, the study finds that the magnitude of health inequalities in Norway is mostly driven from the increased social resilience of higher educated groups with increasing levels of morbidity rather than from the loss of resources of lower educated groups.

Cancer mortality in Europe is largely driven by levels and trends in groups with lower socioeconomic status

The WHO International Agency for Research on Cancer (IARC), a partner of CHAIN, contributed to a European-wide population-based study on socioeconomic inequalities in cancer mortality. The study shows that cancer mortality in Europe is predominantly driven by levels and trends of cancer mortality rates in groups with lower education levels. More systematic measures, monitoring frameworks and actions are needed to address the prevailing socioeconomic cancer inequalities in Europe.



Exploring the link between health and regional inequalities, and economic performance in the United Kingdom

CHAIN researcher Prof Clare Bambra and Dr Luke Munford published a blog post on the links between health and economic inequalities. The analysis suggests investing in place-based public health, which provides a more holistic approach to improving outcomes in the labour market and promoting health and prevention services across care systems.

The blog post was built on findings of the Northern Health Science Alliance report, which addresses differences in productivity and health between the north and the rest of the England.

What can past economic downturns teach us about the health consequences of the current recession?

In an editorial in the Scandinavian Journal of Public Health, CHAIN researchers have drawn lessons from past economic crises on how to protect people in response to the economic crises resulting from the COVID-19 pandemic. They warn about the obvious threat to health and wellbeing, the unequal economic consequences, the inevitability of austerity measures, and the risk of greater isolation and loneliness caused by further decentralisation and growing precariousness of work.

What is the link between trade agreements and health across different sectors and settings?

Dr Courtney McNamara and experts from Public Health Wales gave an interactive masterclass on health and trade, looking at the public health impact of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) on communities in Wales.

Watch the recording here: Masterclass – International Trade and Health - Public Health Network Cymru



Professor Clare Bambra contributes to report of inequalities in Northern England

The [Child of the North](#) report paints a stark picture. The report shows, among other things, that children in the North of England face higher rates of poverty, are more likely to die under the age of one, received worse education during the pandemic, and report higher rates of loneliness. It sets out 18 clear recommendations that can be put in place to tackle the widening gap between the North and the rest of England.

CHAIN research shows better access to pharmacies in areas with higher deprivation in England

A team of researchers led by CHAIN's Adam Todd has analysed the distribution of community pharmacies in England, and how having a pharmacy within walking distance relates to social deprivation and urbanity. The [study](#) showed that the majority of the population has access to a pharmacy within 20 minutes' walk, and that access is greater in areas of higher deprivation, implying a positive pharmacy law.

Examining effects of changes in employment on the mental health of single mothers during UK welfare reforms

A [study](#) by Julia Simpson, Professor Clare Bambra and Heather Brown showed that employment was associated with better mental health for all women. Higher job hours were associated with lower mental health for all women, but the association was not statistically significant for single mothers. Mental health inequalities potentially have increased post reforms.

Global paid security and women's rights are undermined when female health workers are unpaid or poorly paid

CHAIN's PhD student Roosa Tikkanen contributed to the Women in Global Health (WGH) policy brief "[Subsidizing global health: Women's unpaid work in health systems](#)". The briefing reports that women have shouldered the burden of health systems delivery for more than two years of the pandemic. Poor working conditions faced by women workers further perpetuate gender inequalities, reduce women's economic empowerment and weaken health systems.

How does one's field of employment impact health-related behaviour?

CHAIN researchers have published a paper exploring the general relationship between peoples' health-related practices and their affiliation with different fields in the occupational structure. It argues that 'healthy behaviour' may be particularly induced in the field of service occupations (jobs where one is providing a service, rather than producing a physical product), rendering such practices an emerging capital in the sense advanced by Bourdieu.

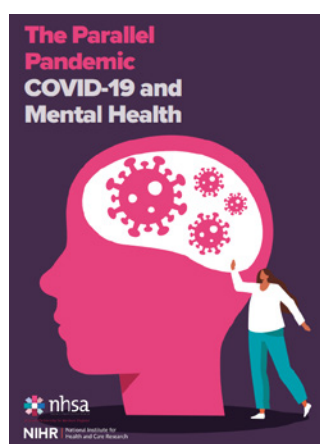
Do socioeconomic conditions impact the development of COVID-19 antibodies?

CHAIN researchers have analysed the association between socioeconomic conditions and having developed antibodies for COVID-19 in a population-based sample in the canton of Geneva, Switzerland. The results showed that people who had been facing financial hardship had antibodies more often, and that educational level, occupational position and household income were not associated.

CHAIN publishes on the radically unequal distribution of COVID-19 vaccinations

A paper published in the Nature journal Humanities and Social Sciences Communications, explores vaccines through the lens of fundamental cause theory and diffusions of innovation theory. These theories predict that better resourced individuals and countries will work to harness the greatest vaccine benefit for themselves, leaving large populations of disadvantaged people unprotected.

These theories also help illuminate other processes that generate health inequalities (e.g. introduction of other new technologies). Understanding counter moves and measures that can be applied to avoid inequitable distribution can subsequently help ensure greater vaccine equity.



CHAIN researcher co-authors report on COVID-19 and the parallel mental health pandemic

The report, co-authored by Prof Clare Bambra, demonstrates the disproportionate impact of COVID-19 on mental health in the North of England. These findings reiterate the unequal nature of the pandemic, with people in the most deprived communities suffering the most.

Study on structural environmental violence in the Tijuana River demonstrates link between poor health outcomes and homeless, deported inhabitants

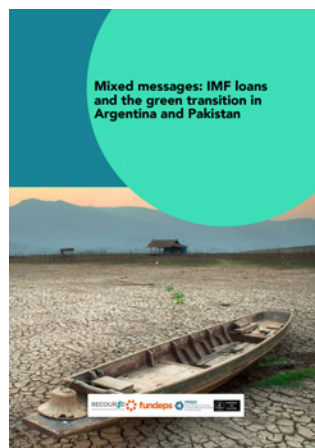
An analysis driven by CHAIN draws on the environmental injustice perspectives to document how social forces drive poor health outcomes through the environment.

Many Mexicans that are deported by the US take refuge in the Tijuana River Canal. Results in CHAIN's study demonstrate that the Tijuana River water most proximate to its human inhabitants fails numerous water-quality standards, posing acute health risks. Such risks are additionally exacerbated by routine police violence, which propels individuals into involuntary contact with contaminated water.

CHAIN study finds high levels of lead in Greek refugee camp

Following a deadly fire in September 2020, 13 000 children and their families in the Greek refugee camp Moria were relocated to the nearby Mavrovouni site. The new camp was built on the site of a military shooting range, which are known to have dangerous concentrations of poison. A CHAIN study found extremely high levels of lead (Pb), antimony (Sb), and bismuth (Bi), where children live and play in the camp.

On top of the multiple existing public health crises and traumas that these asylum-seeking families face, exposure to toxic ammunition residues may have profound impacts on children's development and health for years to come.



The International Monetary Fund in review – diving into the green transition

As one of the contributing writers, CHAIN's Alexander Kentikelenis assesses the IMF's emerging climate activist role by looking at two countries currently participating in IMF programs: Argentina and Pakistan. The publication further examines the extent to which IMF programs enable these countries to transition away from dependence on fossil fuels, as well as whether such efforts also focus on achieving a fair and just transition in their respective societies.

4

REDUCING HEALTH INEQUALITIES

In CHAIN's third pillar, our researchers identify what works to reduce health inequalities. In several ongoing research projects, journal articles and commentaries, we raise awareness of key public health challenges and the need to take action.

"To reduce inequalities, national, regional and local governments and authorities should prioritise investments designed to improve the quality of housing and neighbourhood conditions for the poorest families, so that all children have environments that are fit for them to grow up in."

Timar, Eszter; Gromada, Anna; Rees, Gwyther; et al. (2022)

*The World of the Child. Places and Spaces, 17–29.
<https://doi.org/10.18356/9789210019330C004>*

How do local healthcare systems in England conceptualise health inequalities and why?

CHAIN researchers reviewed plans for reducing health inequalities brought forth by local healthcare systems in England. The [analysis](#) found that they often conceptualised health inequalities in a vague and varying manner, and their conceptualisations did not reflect established health inequalities frameworks. The paper argues that a clear, conceptual, national framework for addressing health inequalities is needed to support local healthcare systems, so they can address health inequalities meaningfully and sustainably.

CHAIN examines the impact of increased pension income on mental wellbeing in England

This [study](#) provides tentative evidence that an increase in pension income in England for low-income pensioners can reduce inequalities in mental wellbeing particularly for men. Findings therefore recommend that future state pension policies need to take this into consideration.

Interventions to reduce exposure to toxic metal cadmium in the early years can help improve public health

Cadmium pollution is widespread and particularly prevalent in low- and middle-income countries. This presents a threat to children's health in the earliest years, and so far, there are few identified solutions to tackle this problem. In a [systematic review](#), CHAIN looked into interventions to reduce exposure to cadmium in these countries during pregnancy and childhood.

CHAIN researcher to work on the newly funded EU-project "EU Navigating Multilateral Cooperation"

Through the project, CHAIN researcher Alexander Kentikelenis will support the development of a [new analytical tool intended to guide policymakers on the EU's future role in multilateral cooperation](#). This tool will allow the EU to assess multilateral organisations, and—on this basis—devise action strategies to strengthen multilateralism on climate change, digitalisation, finance and tax, health, migration, and security.

CHAIN in new Horizon project (BEST-COST)

CHAIN will take part of a new Horizon Europe project, which focuses on the calculation of health effects and societal costs related to outdoor environmental stressors, such as air pollution and noise from traffic. The project will develop a novel methodological framework to quantify the burden, cost and social and health inequalities caused by air and noise pollution.

The outdoor environment has a significant impact on our health and wellbeing. Environmental stressors disproportionately affect socially disadvantaged groups, and therefore contribute to large socioeconomic inequalities in health. The BEST-COST project is based on the burden of disease method and calculation of health loss-adjusted life years (DALY). CHAIN collaborators from the Norwegian Institute of Public Health and The Global Burden of Disease Study, as well as its partners EuroHealthNet, are also involved in the project.

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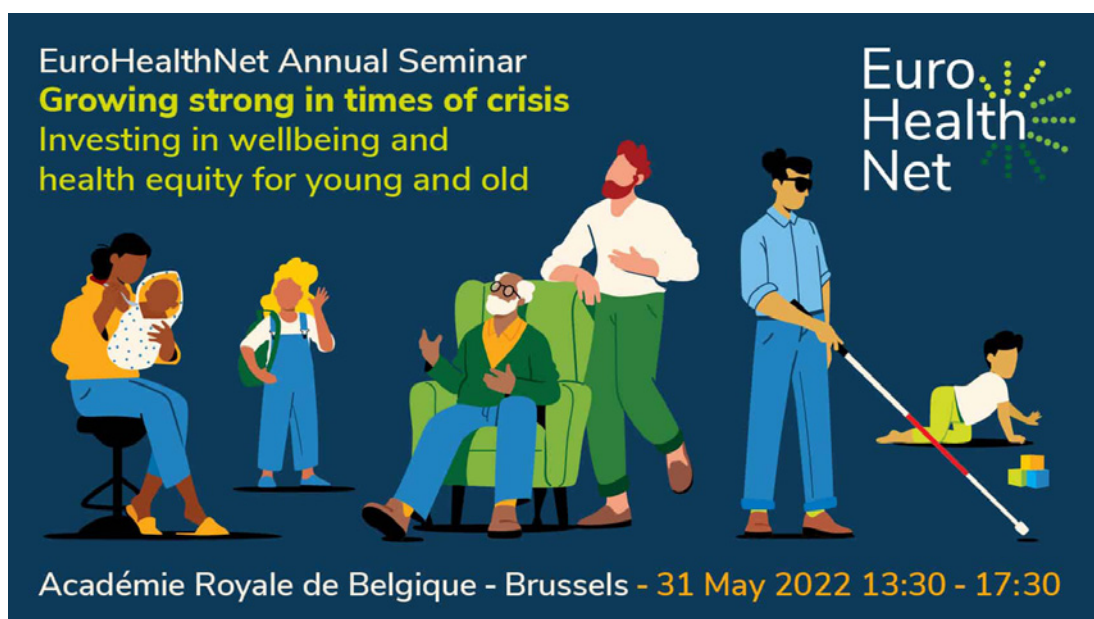
POLICY AND OUTREACH

CHAIN's policy and outreach activities ensure that research from its three pillars lead to concrete action on the determinants of health. To make this happen, we engage with researchers and policymakers in- and outside of the public health community and use the evidence we have produced to demonstrate the need for and benefits of taking action.

"The pandemic has been very unequal. People in our most deprived communities have suffered most, in terms of death rates, dying younger and in on-going ill-health such as long COVID. These health inequalities reflect long-term inequalities in the social determinants of health, how we live, work and age.

Bambra, C., Munford, L., Bennett, N., et al. (2022)

The Parallel Pandemic: COVID-19 and Mental Health, Northern Health Science Alliance, Newcastle.



CHAIN speaks at EuroHealthNet seminar on investing in wellbeing during childhood and later stages of life

The seminar featured Professor Terje Andreas Eikemo, Leader of CHAIN, along with speakers from the European Commission, the UNESCO Chair for Global Health and Education, the [Joint Action for Health Equity Europe \(JAHEE\)](#), among others. It was organised by EuroHealthNet, the European Partnership for Health, Equity and Wellbeing, which is also a partner of CHAIN. A video and the report of the Seminar are available [here](#).

CHAIN advocates for the protection of children in a changing environment during COP27

During the COP27, the Climate Justice Pavilion organised a session on [protecting our children in the face of a climate crisis](#). CHAIN researcher Dr Kam Sripada contributed as a panellist to this discussion, sharing her expertise on environmental health research and the protection of children from toxic chemicals.

Norwegian SciTech News covers CHAIN evidence on reducing children's exposure to microplastics

The [article](#) was based on an interview with Kam Sripada PhD, a neuroscientist who works with CHAIN and heads the Centre for Digital Life Norway. Children may be more exposed to microplastics than adults, just as children are more exposed to many other environmental toxins. The article covers the knowledge as well as the evidence-gaps in this field and provides a number of recommendations for parents to reduce children's exposure to microplastics.

Kam Sripada and colleagues also published a commentary in Environmental Health Perspectives called [A Children's Health perspective on Nano-and Microplastics](#).

Earthlings podcast spotlights CHAIN research on the impact of plastics on child health

Dr Kam Sripada explains the negative effects of microplastics, and other environmental hazards on children's health in the Earthlings Podcast episode "[Plastic Diet](#)". The podcast discussed the main sources of plastic pollution, the impact on the Global South and research on the health effects of plastics.

CHAIN researcher joins UK Commission on Health and Prosperity

Prof Clare Bamba, CHAIN researcher and Professor of Public Health at Newcastle University, has been invited to join a landmark initiative in the United Kingdom. The Commission on Health and Prosperity, which was established by the Institute for Public Policy Research (IPPR), will explore a fundamental hypothesis: that a fairer country is a healthier one, and that a healthy country is a more prosperous one. A [report](#) published to mark the Commission's launch warns that the UK's deep health inequalities and ineffective policies mean that people are living shorter lives, with more years spent in poor health, and face greater barriers to staying in and getting on at work. Read about the Commission [here](#).

CHAIN at the European Public Health Conference: Advancing the health equity agenda

During the 15th European Public Health Conference, CHAIN representatives Prof Terje Andreas Eikemo and Dr Mirza Balaj presented [results on the external evaluation](#) of the EU Joint Action on Health Inequalities (JAHEE). As project evaluator, CHAIN analysed JAHEE's impact on health inequalities, as well as the sustainability of its outcomes. During the conference, CHAIN also highlighted efforts related to [incorporating social inequalities](#) in the [Global Burden of Disease framework](#) at a workshop organised by the [European Burden of Disease Network](#). CHAIN's partner EuroHealthNet was also well-represented at the 2022 EPHC, most notably with its plenary on [Reorienting health services: the transformational potential of health promotion](#).



Celebrating 50 years of the Scandinavian Journal of Public Health

Prof Terje Andreas Eikemo, leader of CHAIN and Chief Editor of the Scandinavian Journal of Public Health, presented a [special edition of the journal](#) ahead of the [Nordic public health conference "Folkehelsekonferansen,"](#) marking 50 years of public health research in the region. The special issue commemorated five decades of the journal and presented research related to health inequalities, social determinants and new public health concepts and methods.

The special edition also included articles from CHAIN researchers, including:

- [Levelling up: Global examples of reducing health inequalities](#), by Clare Bambra
- [Alienation: A useful concept for health inequality research](#), by EmilØversveen and Conor A. Kelly
- [Nordic research on health inequalities: A scoping review of empirical studies published in Scandinavian Journal of Public Health 2000–2021](#), by Jon Ivar Elstad, Kristian Heggebø, and Espen Dahl



Strategies for promoting workplace wellbeing and protecting older workers from psychosocial risks

Mounting evidence shows that workers' health is affected by psychosocial risks, such as conflicting work-family life obligations, job insecurity and work-related stress, with older workers (55-65+) tending to be more at risk than other age groups. However, when adequately supported and protected, older workers are an asset to an organisation, economy, and society. EuroHealthNet launched a [policy brief offering strategies for mitigating psychosocial risks to older workers' health](#) in the workplace for employers and policy-makers.

Reducing inequalities by investing in health-promoting care

EuroHealthNet has published a [Policy Précis](#) that sets out models of 'health-promoting' care. Such models value care workers, empower those who need care, strengthen collaboration across sectors, and encourage and enable people to become more socially engaged, and to participate in the formal economy. The Policy Précis provides an overview of EU policies, tools and programmes that can help governments at all levels strengthen the organisation of care and transition to delivery of care models that promote health, equity and wellbeing. It also showcases inspirational examples from public authorities in Austria, Slovenia and Spain.

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THE CHAIN TEAM

NTNU-based team

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- Tim Huijts

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- Emil Øversveen
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- Besi Gjylbegaj
- Jenny Reid
- Liubov Borisova
- Monica Machado
- Nathalie Bennett
- Ricardo Ortega
- Emma Rose Froystad
- Nicole Quattrini
- Costanza Cardillo

Work package 1: Monitoring health inequalities

Erasmus MC, Netherlands:

- Wilma Nusselder
- Frank van Lenthe

Institute for Health Metrics and Evaluation, IHME, University of Washington:

- Emmanuela Gakidou
- Joseph Friedman
- Claire Henson
- Erin Mullany

Norwegian Institute of Public Health:

- Carl Michael Baravelli
- Ann Kristin Knudsen
- Jonas Kinge

KEY PROJECTS: GBD Education, European Social Survey round 11, GBHI, Expansion

Work package 2: Explaining health inequalities

IARC, WHO:

- Partha Basu
- Andre Carvalho
- Isabel Mosquera
- Eric Lucas

Norwegian Public Health Institute:

- Gro Dehli Villanger
- Thea Steen Skogheim
- Adriano Winterton

University of Geneva:

- Silvia Stringhini
- Hugo Santa

Erasmus MC:

- Tanja Houweling
- Leah Prencipe
- Wilma Nusselder
- Di Long

KEY PROJECTS: NeuroTox and CanScreen5

Work package 3: Reducing health inequalities

Newcastle University, UK:

- Clare Bamba
- Courtney McNamara
- Viviana Albani
- Adam Todd
- Heather Brown
- Sarah Darbyshire-Evans

Bocconi University:

- Alexander Kentikelenis
- Manuel Serrano Alarcon

KEY PROJECTS: Heal-Tech project
Environment and child health

Work package 4: Bridging research, policy and practice

EuroHealthNet:

- Caroline Costongs
- Gabriella Sutton
- Chantal Verdonschot
- Alison Maassen
- Caoimhe Kelly

UNICEF Norway:

- Kyrre Lind

UNICEF Innocenti:

- Kerry Albright
- Gwyther Rees

KEY PROJECTS: UN WHO TAG on COVID-19-mortality, UNICEF Report Card 17, policy-exchange, publication material

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PUBLICATIONS

Agostinelli, F., Doepke, M., Sorrenti, G., & Zilibotti, F. (2022). When the great equalizer shuts down: Schools, peers, and parents in pandemic times. *Journal of Public Economics*, 206, 104574.

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Albani, V., Brown, H., Vera-Toscano, E., Kingston, A., Eikemo, T. A., & Bambra, C. (2022). Investigating the impact on mental wellbeing of an increase in pensions: A longitudinal analysis by area-level deprivation in England, 1998–2002. *Social Science & Medicine*, 311, 115316.

Bahl, N. K., Øversveen, E., Brodahl, M., Nafstad, H. E., Blakar, R. M., Ness, O., Landheim, A. S., & Tømmervik, K. (2022). In what ways do emerging adults with substance use problems experience their communities as influencing their personal recovery processes? *Journal of Community Psychology*, 50(7), 3070–3100.

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CHAIN AT A GLANCE

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CHAIN is the leading centre and interdisciplinary research network for global health inequalities, based at the [Norwegian University of Science and Technology \(NTNU\)](#) in Trondheim. It brings together expert researchers in the field of health and social determinants, civil society and the UN system to advance health inequalities research, especially for children's health. To find out more about CHAIN, visit our [website](#) and follow us on [Twitter](#) and [Facebook](#), and sign up to our [mailing list](#).

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