



Crystallise
Insights



LONGEVITY NEWSFLASH

November 2025



Crystallise

About this Bulletin

Welcome to the Newsflash , your monthly signpost to emerging research.

This complimentary digest highlights newly published peer-reviewed studies and key updates from public health and statistical agencies in the UK, US, and Canada, all selected for their relevance to the insurance and longevity sectors.

Rather than providing in-depth analysis, Newsflash is designed to guide you quickly and efficiently to valuable new material beyond the scope of our main bulletins, helping you stay informed and ahead of the curve.

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Newsletter Highlights

Journal updates - Highlights

Early-onset cancers, particularly colorectal, kidney, uterine and multiple myeloma, are rising faster than later-onset cancers. Several countries show simultaneous increases in both incidence and mortality, especially for colorectal and uterine cancers. The steepest growth is seen in very high-HDI countries. Rising obesity rates strongly correlate with increases in early-onset, obesity-related cancers, underscoring obesity's key role in this emerging trend.

Updates from statistical bodies - Highlights

Smoking in Great Britain has fallen to a record low in 2024, with only around 9% of adults now smoking. Vaping has overtaken smoking for the first time, and the sharpest declines continue to be seen in young adults, though rates remain higher in more deprived groups.

Updates from other health bodies - Highlights

ESPAUR report 2024-2025: new data sound the alarm on antimicrobial resistance. Antibiotic-resistant infections in England surged to nearly 400 new cases a week in 2024, with resistant bloodstream infections rising 9.3% since 2023. Despite overall NHS antibiotic prescribing falling, increased use via private prescriptions and the new Pharmacy First scheme contributed to a rebound in resistance, underlining a growing threat from drug-resistant "superbugs."



Journal Updates

Cardiovascular



Global, regional, and national burden of peripheral artery disease: a systematic analysis of prevalence, incidence, deaths, and DALYs with projections for the next 15 years

Kou 2025

Nutr Metab Cardiovasc Dis. 2025 Dec;35(12):104226.

GBD analysis of the burden and epidemiological characteristics of peripheral artery disease (PAD) from 1990 to 2021, assess inequalities among nations, and projected PAD burden trends over the next 15 years.

[10.1016/j.numecd.2025.104226](https://doi.org/10.1016/j.numecd.2025.104226)



Cardiovascular disease

Peripheral artery disease

Cardiovascular disease-specific and all-cause mortality across socioeconomic status and lifestyles among patients with established cardiovascular disease in communities of China: data from a national population-based cohort

Wang 2025

Heart. 2025 Oct 29;111(22):1092-1100.

Analysis of cardiovascular disease-specific and all-cause mortality across socioeconomic status and lifestyles among patients with established cardiovascular disease in communities of China.

[10.1136/heartjnl-2024-324766](https://doi.org/10.1136/heartjnl-2024-324766)



Cardiology

Cardiovascular disease



Global, Regional, and National Burden of Pulmonary Arterial Hypertension from 1990 to 2021 and Projections to 2040: A Systematic Analysis of Incidence, Mortality, and Disability-Adjusted Life Years

Yu 2025

Curr Med Sci. 2025 Oct;45(5):1068-1078.

GBD analysis of the burden of pulmonary arterial hypertension from 1990 to 2021 and projected trends to 2040, across diverse socio-demographic contexts.

[10.1007/s11596-025-00108-1](https://doi.org/10.1007/s11596-025-00108-1)



Cardiology

Pulmonary arterial hypertension





Journal Updates

Endocrinology



Association of biological age acceleration with mortality in adults with diabetes or prediabetes: a mediating role of physical activity

Wu 2025

Aging Clin Exp Res. 2025 Oct 30;37(1):310.

An investigation into the association between biological age acceleration and mortality among adults with diabetes or prediabetes and an assessment of whether physical activity mediates this association.

10.1007/s40520-025-03204-3



Genetic /
Metabolic

Diabetes



Journal Updates

Hepatology



Global, Regional, and National Burden of Chronic Hepatitis B-Related Cirrhosis From 1990 to 2021 and Projections to 2050: A Finding From the Global Burden of Disease Study 2021

Sun 2025

Clin Transl Gastroenterol. 2025 Oct 1;16(10):e00890.

GBD analysis of the global, regional, and national burden of CHB-related cirrhosis from 1990 to 2021 and projections of the disease development from 2022 to 2050.

[10.14309/ctg.00000000000000890](https://doi.org/10.14309/ctg.00000000000000890)



Hepatology

Chronic Hepatitis B-Related Cirrhosis



Journal Updates

Lifestyle



Association between cigarette smoking status, intensity, and cessation duration with long-term incidence of nine cardiovascular and mortality outcomes: The Cross-Cohort Collaboration (CCC)

Tasdighi 2025
PLOS Medicine. 2025 Nov

Investigation into the relationships between smoking burden, intensity, and cessation duration across multiple cardiovascular outcomes.

[10.1371/journal.pmed.1004561](https://doi.org/10.1371/journal.pmed.1004561)



Lifestyle

Smoking



Journal Updates

Longevity and Mortality



The association of triglyceride-glucose index and related indices with all-cause and cardiovascular mortality in biologically aging populations

Cheng 2025

Medicine (Baltimore). 2025 Nov 21;104(47):e46036.

A study into the association of triglyceride-glucose index and related indices with all-cause and cardiovascular mortality in biologically aging populations using NHANES data

10.1097/MD.00000000000046036



Longevity & Mortality

All cause and cardiovascular



Heat- and Cold-Related Mortality Burden in the US From 2000 to 2020

Chu 2025

JAMA Netw Open. 2025 Nov 3;8(11):e2542269.

Overview of the mortality burden associated with heat and cold in the entire contiguous US from 2000 to 2020.

10.1001/jamanetworkopen.2025.42269



Longevity & Mortality

Temperature mortality



Gender gaps in healthy life expectancy as indicators of inequality for disability and chronic disease: cross-sectional evidence from 24 countries, years 2014-2019

Di Lego 2025

BMJ Open. 2025 Nov 19;15(11):e096968.

This study estimated gender gaps in disability- and chronic disease-free life expectancy and decomposed those gaps to distinguish mortality from morbidity contributions.

10.1136/bmjopen-2024-096968



Longevity & Mortality

Longevity and mortality





Journal Updates

Longevity and Mortality



Ensemble Bayesian modelling with dynamic population to estimate excess deaths due to extreme temperatures

Konstantinoudis 2025

Spat Spatiotemporal Epidemiol. 2025 Nov;55:100760. Epub 2025 Oct 13

Evaluation of excess mortality during summer 2022 in Switzerland, identification of vulnerable populations and estimated temperature thresholds relevant for heat adaptation policies.

[10.1016/j.sste.2025.100760](https://doi.org/10.1016/j.sste.2025.100760)



Longevity & Mortality

Temperature mortality



Journal Updates

Neurology



Technology Activities and Cognitive Trajectories Among Community-Dwelling Older Adults: National Health and Aging Trends Study

Hsu 2025

JMIR Aging. 2025 Nov 25:8:e77227.

This study aimed to examine the associations between transitions into and out of various technology activities and trajectories of cognitive domains among community-dwelling older adults without dementia.

[10.2196/77227](https://doi.org/10.2196/77227)



Neurology

Aging





Journal Updates

Oncology



Global, regional, national incidence, and mortality of breast cancer in older women: A population-based cancer registry data analysis

Li 2025

Chin Med J (Engl). 2025 Nov 20;138(22):2917-2924.

This study aims to describe the global burden of breast cancer in older adults, analyze trends in incidence over time, and assess socioeconomic inequalities in incidence and mortality related to human development index levels.

10.1097/CM9.0000000000003667



Cancer

Breast cancer



Diverging global incidence trends of early-onset cancers: comparisons with incidence trends of later-onset cancers and mortality trends of early-onset cancers

Terashima 2025

Mil Med Res. 2025 Nov 14;12(1):79.

Investigation of the incidence and mortality rates for early-onset and later-onset cancers diagnosed between 2000 and 2017 from the Cancer Incidence in Five Continents and World Health Organization (WHO) mortality databases.

10.1186/s40779-025-00670-8



Cancer

Early-onset cancer



Global, regional, and national burden of tracheal, bronchus, and lung cancer attributable to polycyclic aromatic hydrocarbons occupational exposure from 1990 to 2021: worsening or improving?

Wu 2025

BMC Public Health . 2025 Nov 24;25(1):4118.

GBD analysis of the incidence, deaths, disability-adjusted life-years (DALYs), years lost due to disability (YLDs), years of life lost (YLLs), and corresponding estimated annual percentage changes (EAPC) attributable to polycyclic aromatic hydrocarbons.

10.1186/s12889-025-25156-z



Cancer

Tracheal bronchus and lung cancer





Journal Updates

Oncology



Global, regional, and national epidemiology and risk factors of geriatric digestive system cancers from 1990 to 2021

Xu 2025

Front Public Health. 2025 Oct 21:13:1629101. eCollection 2025.

GBD analysis of the incidence, mortality, disability-adjusted life years (DALYs), and risk factors for six geriatric digestive system cancers (GDSC) in adults aged ≥ 60 years from 1990 to 2021 and projected trends to 2050.

[10.3389/fpubh.2025.1629101](https://doi.org/10.3389/fpubh.2025.1629101)



Global, regional, and national burden of early-onset and late-onset colorectal cancer attributable to high body-mass index from 1990 to 2021: a trend analysis and forecasts up to 2040 based on the global burden of disease study 2021

Yue 2025

BMC Gastroenterol. 2025 Nov 19;25(1):816.

GBD analysis to systematically quantify the burden of EOCRC and LOCRC attributable to HBMI at global, regional, and national levels from 1990 to 2021 and projections of the burden to 2040.

[10.1186/s12876-025-04432-7](https://doi.org/10.1186/s12876-025-04432-7)





Journal Updates

Other



Multifactorial predictors of falls in older adults: a decade of data from the National Health and Aging Trends Study

Kohler-Voinov 2025

BMC Geriatr. 2025 Nov 25;25(1):950.

This study reports on the development of a robust, comprehensive model of fall risk among community-dwelling older adults.

[10.1186/s12877-025-06515-2](https://doi.org/10.1186/s12877-025-06515-2)



Frailty

Falls



Global, regional, and National burden of falls among midlife women from 1990 to 2021 and projections to 2050: A systematic analysis for the global burden of disease study 2021

Wang 2025

Aging Clin Exp Res. 2025 Nov 14;37(1):324.

This study is the first to analyze mortality and disability-adjusted life years (DALYs) due to falls among perimenopausal women using the Global Burden of Disease (GBD) 2021 database. It examines the burden of falls from 1990 to 2021 and projects trends through 2050.

[10.1007/s40520-025-03210-5](https://doi.org/10.1007/s40520-025-03210-5)



Frailty

Falls





Journal Updates

Respiratory



Global, Regional, and National Burden of COPD Among Women from 1990 to 2021 and Projections to 2050: A Systematic Analysis for the Global Burden of Disease Study 2021

Hu 2025

Ann Glob Health. 2025 Oct 27;91(1):73. eCollection 2025.

The trend of COPD burden in women was evaluated using percentage changes. Predicted trends for the years after 2021 were assessed by utilizing the Bayesian age-period-cohort (BAPC) model.

10.5334/aogh.4883



Respiratory

COPD



One-year healthcare trajectories after COVID-19 hospitalisation in patients with chronic respiratory diseases: a nationwide study

Sabte-Elabbadi 2025

BMJ Open Respir Res. 2025 Nov 17;12(1):e003580.

An evaluation of the outcomes and healthcare utilisation trajectories 1 year after hospitalisation for COVID-19 in patients with chronic respiratory disease in France.

10.1136/bmjresp-2025-003580



Respiratory

Chronic respiratory disease





ONS Update

Endocrinology



Relationship between the NHS Diabetes Prevention Programme and monthly earnings, employee status and unplanned hospital admissions, England: April 2014 to December 2022

Modelled estimates of the changes in monthly employee earnings, employee status and probability of unplanned hospital admissions before and after attending the NHS Diabetes Prevention Programme by sex, age group, ethnic group, area deprivation, and body mass index category.

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/relationshipbetweenthenhsdiabetespreventionprogrammeandmonthlyearningsemployeestatusandunplannedhospitaladmissionsengland/april2014todecember2022>



Diabetes

Genetic /
metabolic



ONS Update

Lifestyle



Adult smoking habits in the UK: 2024

Cigarette smoking habits among adults in the UK, including how many people smoke, differences between population groups, changes over time and use of e-cigarettes.

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2024>



Lifestyle

Smoking



Other Health bodies

Healthcare Resource Use



Opiate and crack cocaine use: prevalence estimates 2016 to 2020

Estimates of the number and rates of people using opiates and/or crack cocaine in England between 2016 and 2020.



Lifestyle

Drug addiction

<https://www.gov.uk/government/publications/opiate-and-crack-cocaine-use-prevalence-estimates>



Other Health bodies

Lifestyle



English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) report

The ESPAUR report includes national data on antimicrobial prescribing and resistance, antimicrobial stewardship implementation and awareness activities.

<https://www.gov.uk/government/publications/english-surveillance-programme-antimicrobial-utilisation-and-resistance-espaur-report>



Infection

Antimicrobial resistance

Other Health bodies

Longevity and Mortality



Climate change and mental health

The climate change and mental health thematic assessment report synthesises the evidence base relating to climate change and mental health.

<https://www.gov.uk/government/publications/climate-change-and-mental->



Mental health

Climate change



Other Health bodies

Mental Health



Updating the Canadian Mortality Data in the Human Mortality Database and in the Canadian Human Mortality Database

The report assesses standard HMD methods to produce consistent death rates, exposures, and life tables for Canada and its provinces, aligning with Statistics Canada estimates. The updated datasets enhance post-pandemic mortality analysis, offering actuaries and longevity specialists improved data for trend assessments, regional comparisons, and modeling.

<https://www.soa.org/4ab706/globalassets/assets/files/resources/research-report/2025/canadian-mortality-database-update.pdf>



Mortality

Mortality



Our Ethos

At Crystallise we seek to clarify decision-making from biomedical evidence. Whether you are a pharmaceutical executive, healthcare manager or an actuary, we deliver high quality, competitively priced biomedical evidence syntheses, analyses and models – quickly, reliably and efficiently.

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Crystallising medical evidence to improve decision making.

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To make the synthesis and analysis of biomedical evidence more efficient, objective and reliable.

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Innovation

Integrity

Reliability

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Transparency and Disclosure

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Consideration

Respect for Privacy and
Confidentiality

Avoiding Conflicts of Interest

Accountability and Professionalism

Probity

Justice

Honesty

Environmental Responsibility

Scientific and Methodological
Rigour

Commitment to Continuous Ethical
Reflection



Disclaimer:
No data analysis was performed in the studies included in this newsletter.

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