




EarlyCause

Causative mechanisms & integrative models linking early-life-stress to psycho-cardio-metabolic multi-morbidity

D1.4: Dissemination, communication & outreach strategy

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Executive Summary

This document describes the dissemination, communication and outreach strategy and stakeholder analysis of the EarlyCause project. It includes the approach, channels, activities, and strategies for the management of the external dissemination (project outputs and results) and communication (project activities) during the project lifetime. It aims at circulating the key project results, raising awareness, targeting the audiences interested in or affected by the project, while in parallel generating a supportive and welcoming point of view among stakeholders involved in early life stress (ELS) and psycho-cardio-metabolic (PCM) research, treatment, industry and policy making. T1.4 reaches out and strategizes the *Who* (principal stakeholders and audiences), *How* (principal channels and strategies), *What* (the project's significant outcomes and messages) and *When* (the most impactful time) of the EarlyCause project's communication and dissemination efforts.



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1 Introduction

This report results from Task 1.4 (“ Outreach strategy & stakeholder analysis”) under Work Package 1 “Scientific coordination, dissemination & communication”. Work in both T1.4 and WP1 is horizontal and will be carried out throughout the entire lifecycle of the EarlyCause project (M1 to M48). The main objective of T1.4 is to lead and coordinate internal and external communication and dissemination activities and all efforts to reach out to relevant and specific external stakeholders. The task stipulates the development of a communication strategy which considers different audiences: scientific/academic stakeholders including psychiatrists, paediatricians and health institutions; biomedical researchers in companies dealing with mental health; cardio-metabolic researchers; pre-clinical studies; as well as biomedical/pharmaceutical industry and public agencies. The report documents communication and publication strategies agreed upon by the consortium for the duration of the project lifecycle.

1.1 Summary

The report is divided into three chapters (2, 3 and 4) covering communication strategy, stakeholder analysis and dissemination and publications strategies of the project.

Chapter 2 presents the EarlyCause communication strategy and contains the following sections:

- Overview: specifies what is understood under the terms communication and dissemination and an outline of what the strategy encompasses is provided.
- Definition of the outreach strategy.
- Objectives: lists and elaborates on the identified objectives.
- Focus: an outline of foreseen topics covered in communication and dissemination activities.
- Branding and visual identity: outline of efforts undertaken to make the project recognizable as to audiences.

Chapter 3 focuses on stakeholder analysis, lists identified target audiences, elaborates on their selection and introduces viable channels for reaching out to them. A subchapter specifies the multiple channels for communication and dissemination integrated into the strategy and the actions and efforts associated with and planned for each.

The fourth chapter focuses on the EarlyCause dissemination and publication strategy and covers the publication policy, the publication plan and relevant journals.



2 Communication strategy

2.1 Overview

Communication and dissemination activities are horizontal activities in the EarlyCause project, and thus closely intertwined with the work that is carried out in the other work packages: receiving input from various work tasks depending on the ongoing project phase is crucial.

The EarlyCause communication strategy differentiates between communication and dissemination as defined in the H2020 Programme. Thus, communication is understood as covering the whole project, from the outset of the project and targeting multiple audiences with the purpose of informing and engaging with the broader public. Dissemination on the other hand covers project (key) results only and accompanies results as they become available, targeting specialist audiences, and facilitating the take-up and post-project use of results.

Project aims, plans and (interim) results are to be communicated and disseminated to all relevant parties from kick-off onwards. More precisely, the EarlyCause communication strategy will ensure that communication and dissemination activities:

- Are oriented towards the needs of the audience, using appropriate language and information levels.
- Leverage existing resources, relationships, and networks fully; interact with and effectively link to other relevant projects and initiatives; which is possible via the cross-project working groups and establishing communication with the projects receiving funds under the same call (creating synergies).
- Utilize several channels: online channels (project website and twitter); face-to-face events when useful (and justified during the Covid-19 pandemic); and scientific publications to reach as many audiences as conveniently as possible (defining the “HOW to reach the audiences”).
- Are conducted at different geographical levels of outreach, from regional to national and European/international (defining the “WHERE and scope of activities”).

2.2 Definition of the outreach strategy

Outreach is the means to engage the target audience and stakeholders. The outreach strategy could therefore be defined as a preparatory method to look for the right people, groups, organisations, synergies (WHO); for the most appropriate and impactful message to be delivered, adjusted to the requirements of the audiences (WHAT); at the right time/time intervals and the right place for achieving the maximum effect (WHEN and WHERE); through the most appropriate (fast and time saving, economical and money saving) methods and channels available (HOW).

2.3 Objectives

The overarching goal of the EarlyCause dissemination, communication and outreach strategy is to implement the procedures and processes ensuring this project is well communicated about and its achievements adequately disseminated to the stakeholders relevant to ELS. The relevant general objectives of WP1 are:

- Implement the scientific dissemination and multi-stakeholder communication plans detailed in section 2.2 of the Grant Agreement. Sustain the engagement of stakeholders who are already involved at the same time as involving all those who should be part, but who are not yet involved due to lack of awareness, resources or incentives.
- Create synergies with other initiatives in the field of multi-morbidity, particularly with the projects funded as part of the present call.



- Facilitate the scientific publications and organisation of conferences; EarlyCause is a research project foremost and will pursue feeding knowledge directly to the relevant research communities as a step in ensuring the transition of medical knowledge to patients.

The more specific dissemination objectives to satisfy the general WP objectives include:

<p>Establish future clinical research directions</p> <ul style="list-style-type: none"> • Raise awareness on the biological pathways linking ELS to co- and multi-morbidity. • Specify the role of each biological mediator. • Promote biomarkers. • Share generated data and experimental setups for future researchers through the EarlyCause platform. • Point towards ideas for prevention and diagnostics, and management. • Promote more research in the domain of resilience, by targeting both the cause and the biological pathways. • Stress the importance of multi-level/multi-omics approaches. 	<p>Accelerate innovation and technology transfer</p> <ul style="list-style-type: none"> • Disseminate machine learning approaches for predictive modelling considering life-course trajectories and multi-disease associations. • Demonstrate methods to extend single disease to multi-disease clinical decision support tools. • Point to pathways for drug development. • Provide multi-morbidity biomarkers for screening during clinical assays. • Promote the use of the EarlyCause platform for access to data, tools and standards. • Promote investments for leveraging the biomarkers identified in EarlyCause (e.g. epigenetic or microbiome).
<p>Positively influence patients and citizens</p> <ul style="list-style-type: none"> • Specify and promote the role of lifestyle changes to improve future health outcomes. • Increase awareness on the negative role of stress on physical health, particularly for children and mothers(-to-be). • Raise awareness on the importance of prevention from early age to reduce burden of major diseases. • Highlight the benefits of reducing the effects of ELS on society, and for social cohesion. • Reduce health disparities between men and women by studying the impact of ELS in both groups, including differential mechanisms underpinning co- and multimorbidity. 	<p>Improve clinical guidelines and prevention</p> <ul style="list-style-type: none"> • Communicate on the role of environmental modifiers in reducing multi-morbidity. • Provide knowledge to train a new generation of practitioners that consider ELS effects. • Provide evidence for new guidelines considering ELS screening and early risk estimation. • Recommend improved allocation of social and clinical resources (e.g. towards high-risk groups). • Relevance of omics markers for improving patient stratification and screening in clinical practice. • Promote socio-economic benefits, such as reduction of healthcare costs. • Improve communication between medical specialties (e.g., psychiatry and cardiology).

Table 1 Dissemination objectives and messages for maximising expected impacts.



2.4 Focus

The focus of communication and dissemination activities will be adapted throughout the project lifetime, particularly following the main outputs as they emerge; communication and dissemination actions will thus accompany the expected main outputs, listed below:

- Interoperable EarlyCause Data Management and Harmonisation Module.
- Validation on Clinical Data.
- EarlyCause platform.
- Roadmap to markets.

2.5 Branding and visual identity

The project's branding policy and visual identity are integral to its communication and dissemination strategy. For this purpose, a project logo as well as deliverable and presentation templates have been developed in Deliverable D1.2, together with the homepage, and a twitter account.

In line with T1.5, other branding and communication material necessary for creating the project's visual identity will also be prepared. These include, but not limited to infographics, social media accounts, regular press releases or blog articles. EC funding will be appropriately acknowledged through the inclusion of the European emblem accompanied by a statement of acknowledgement in all communication and dissemination activities.



3 Stakeholder analysis and channels to reach target audiences

EarlyCause communication and dissemination activities will reach out to a wide range of actors to maximise visibility in multiple stakeholder groups. To achieve this goal, communication and dissemination target audiences and groups were identified. The wide geographic coverage ensured by the Consortium at a European level (14 partners from 8 different countries), will also facilitate a wide coverage of our communication and dissemination messages and results from the project. Planned activities will thus distinguish between different target audiences according to geographical levels: local/regional; national; European (majority of cases) and international. Similarly, messages will be adapted to optimally target the private or public sectors, or the public-private sectors.

The identified target audiences could comprise: industry players; health insurers (statutory and private); investors and enterprises; public authorities (from the fields of health, care and lifestyle management); the research community (including universities); SMEs; social enterprises; standardisation bodies; start-ups; trade unions; user-related associations (covering communities of many age cohorts).

In order to reach relevant stakeholders, the above list is detailed even more in the below tables. Both, list and tables, may be subject to adaptations over the project lifetime if need occurs, to reflect new insights.

Stakeholder	Specific areas / groups	Exemplary dissemination targets
Clinical researchers	<ul style="list-style-type: none"> • Early health programming • Mental health research • Cardio-metabolic research • Epigenetics • Microbiome • Biology of stress • Inflammation • Pre-clinical research • Drug research • Social sciences 	<ul style="list-style-type: none"> • Journals: Journal of Developmental Origins of Health and Disease, Journal of Comorbidity, Circulation, Nature Metabolism, Epigenetics Journal, Neurobiology of Stress, Psychological Medicine and Translational Psychiatry • Conferences: DoHAD World Congress, MIT's Symposium "Early Life Stress & Mental Health", International Conference on Microbiome Research, Psychoneuroimmunology Research Society; Society for Research in Child Development • Interactions with other EU projects: From the same call (SC1-BHC-01-2019) or related future HorizonEurope projects.
Clinicians & healthcare professionals	<ul style="list-style-type: none"> • Paediatricians • Psychiatrists • Cardiologists • Diabetes specialists • General practitioners • Nutritionists • Clinical Pharmacologists 	<ul style="list-style-type: none"> • Professional associations: European Alliance against Depression, European Paediatric Association, European Association of Psychosomatic Medicine, European Society of Cardiology. • Journals: Journal of Clinical Psychiatry, Diabetes Care, EJournal of Cardiology Practice, Pediatrics. • Events: International Conference on Clinical Paediatrics, World Congress of Cardiology, Translational Microbiome Conference, European Psychiatry, European College of Neuropsychopharmacology, European Society of Cardiology annual conference.



<p>Technical researchers & technologists</p>	<ul style="list-style-type: none"> • Data management • Bioinformatics • Machine learning • DigitalHealth professionals • Decision support modules 	<ul style="list-style-type: none"> • Journals: IEEE Journal on Biomedical & Health Informatics, Artificial Intelligence in Medicine, Molecular Data Science, BMC Bioinformatics. • Conferences: Machine Learning for Healthcare, European Conference on Computational Biology, Big Data in Precision Health Conference, Annual Biomarkers Congress. • Websites: European Bioinformatics Institute (EMBL), ELIXIR Europe, European Genome-phenome Archive (EGA), Euro-BiImaging, Barcelona Centre for New Medical Technologies (UPF).
<p>Industries & entrepreneurs</p>	<ul style="list-style-type: none"> • Pharmaceutical • Biomedical software • Biomarker quantification • Omics 	<ul style="list-style-type: none"> • Biotech exhibitions: BIO-Europe, e-Health Annual Conference & Tradeshow, European Biotech Week. • Biotech associations: EuropaBIO, European Federation of Pharmaceutical Industries and Associations, Digital Health Society, European Biotechnology Network. • Digital innovation hubs: Pan-European Network of Digital Innovation Hubs, Barça Innovation Hub (BIHub).
<p>Public agencies & policy groups</p>	<ul style="list-style-type: none"> • Social services • Public health policy • Prevention policy • Clinical guidelines • Collaborative care • Health economics 	<ul style="list-style-type: none"> • White papers: EarlyCause's impact on clinical practice, potential prevention strategies (WP8). • Public agencies: Catalan Agency for Health Quality Assessment (AQUAS), Regione Lombardia, Public Health England. • Advocacy groups: EuroChild, Childcare UK, Global Alliance of Mental Illness Advocacy Networks, European Heart Network, European Association for the Study of Obesity.

Table 2 An overview of EarlyCause stakeholder groups for dissemination.



The table below details some exemplary stakeholder networks and representative associations that were identified for the dissemination and communication strategy.

Association	Type	Mission	Twitter handle
European Patients' Forum	P	Putting patients at the heart of the EU health policy and make health an issue that gets citizens to vote and make a difference.	@eupatientsforum
Global Alliance of Mental Illness Advocacy Networks-Europe	P	Patient-driven pan-European organisation, representing the interests of people affected by mental illness and advocating for their rights.	@GamianE
European Association for the Study of Obesity - Patient Council	P	Elevating and promoting the needs and interests of the European patient community in obesity (from >20 countries);	@EASOpatients
European Heart Network	R, C, H, P	Preventing and reducing cardiovascular diseases through advocacy, networking, capacity-building, patient support.	@ehnheart
European Academy of Paediatric Societies	C	Improving care and optimising treatment for children.	@EAPaediatrics
European Association of Psychosomatic Medicine	C, R	Promoting an integrated psychosomatic (biopsychosocial) approach to health and disease.	@EAPM_psych
European Alliance against Depression	C, P, H	Improving care and optimising treatment for depression patients.	@EAAD_Research
International Diabetes Federation European Region	P, C, R	Advance diabetes care and prevention.	@IntDiabetesFed
The Patients Association, UK	P	An independent patient charity campaigning for improvements in health and social care for patients.	@PatientsAssoc
Somos Pacientes (We are Patients), Spain	P	A community that offers a shared space of information, participation, training, and collaborative work aimed at all patient groups in Spain.	@somos_pacientes

Table 3: Examples of associations relevant to the EarlyCause communication plan. Type stands for "P": patient representatives; "R" researchers; "C": clinicians; "H": healthcare/social services/therapists.

Throughout the project lifetime and aligned with T1.7 ("Networking and synergies with other initiatives"), an interactive relationship with other consortia in the multi-morbidity domain (e.g. the C3-Cloud projects) as well as with other EU projects who are receiving funds under the same call will be sought. The partner empirica (EMP), utilising its experience working with partners in multi-morbidity related projects, proposes to establish cross-project working groups, which will in turn broaden the project audiences and ease the dissemination activities to other groups reaching both scientific communities and general public at large. The working groups can also focus on data analysis, experimental studies and/or giving support



in communication and ethics. The key contact person(s), who oversee dissemination and communication in projects of the same call were identified. The table below is the list of these projects, related websites, and their social media channels. The responsible task leads have been identified where this was possible. Their contact details are excluded for confidentiality reasons (as this is a public deliverable).

Project	Website	Social media
Molecular mechanisms of comorbid cardiovascular disease in cases of severe mental disorder (CoMorMent)	https://www.comorment.uio.no/	Twitter handle: @CoMorMent YouTube: https://www.youtube.com/channel/UCZY1XlWlzA9SktDBV---vWg
Better diagnose, prevention and treatment (DISCOvERIE)	https://discoverie.eu/	Twitter handle: @DiscoverieEU Linkedin: https://www.linkedin.com/company/discoverie-project
Comorbidity Mechanisms of Anxiety and Parkinson's Disease (AND-PD)	https://www.and-pd.com/	Twitter handle: @ANDPDPProject1 Linkedin: https://www.linkedin.com/in/and-pd-project-28bb141a6
Molecular Mechanisms Associating Chronic Pain with Fatigue, Affective Disorders, Cardiovascular Disease and Total Comorbidity (PainFACT)	https://cordis.europa.eu/project/id/848099/de	Not yet confirmed
Brain Involvement in Dystrophinopathies (BIND)	https://bindproject.eu/	Twitter handle: @EU_BIND Facebook: https://www.facebook.com/EU.BIND/ Linkedin: https://www.linkedin.com/company/bindproject
Associative mechanisms linking a defective minipuberty to the appearance of mental and nonmental disorders: infantile NO replenishment as a new therapeutic possibility (miniNO)	https://cordis.europa.eu/project/id/847941	Not yet confirmed
Comorbid Analysis of Neurodevelopmental Disorders and Epilepsy (CANDY)	https://www.candy-project.eu/	Twitter handle: @candy_h2020
Prevention and Remediation of Insulin Multimorbidity in Europe (PRIME)	https://prime-study.eu/	Twitter handle: @PRIME_H2020 LinkedIn: https://www.linkedin.com/company/prime-horizon2020/
Retinal and cognitive dysfunction in type 2 diabetes: unraveling the common pathways and identification of patients at risk of dementia (RECOGNISED)	https://cordis.europa.eu/project/id/847749	Not yet confirmed



A high-dimensional approach for unwinding immune-metabolic causes of cardiovascular disease-depression multimorbidities (TO_AITON)	https://www.to-aiton.eu/	Twitter handle: @AitionTo Linkedin: https://www.linkedin.com/showcase/to-aiton
Obesity and intellectual disability may result from a genetic 'overdose' (GO-DS21)	https://go-ds21.eu/	Twitter handle: @GO_DS21
MiCrovasculaR rarefaction in vascUlar Cognitive Impairment and heArt failure (CRUCIAL)	https://www.crucial-project.eu/	Twitter handle: @EuCrucial

Table 4 Contact details of synergy suitable projects receiving funds under the same call.

The following additional twitter handles were identified for sharing content from individual partners and their organizations:

- @KarimLekadir (UB)
- @Ka_Heil (UB)
- @IsabelleMMansuy (UZH)
- @JanineFF (EMC) with her department @GenerationR_010 and the institution @ErasmusMC
- @maltevt (EMP) with the institution @empirica_Bonn

3.1 Channels

Communication and dissemination actions carried out by the EarlyCause consortia will follow a multi-channel approach and will be implemented by UB in T1.5. The strategy primarily relies on:

- Online communication (project website <https://earlycause.eu/> and different community websites of our partners (e.g. European Genome-phenome Archive <https://ega-archive.org/>, GenR <https://genr.eu/wp/>, DynaHealth¹ <https://www.dynahealth.eu/>)); social media: Twitter (@EarlyCause) and ResearchGate for publications); and potentially blog platforms (e.g. Inspire the Mind, hosted by KCL (<https://www.inspirethemind.org/>) will be the primarily diffusion channel for awareness campaigns, project news (meetings, events) and achievements (publications, prototype releases of the EarlyCause platform).
- Print material (project factsheet, banners and posters for conferences or workshops).
- Public events (webinars, workshops, conferences).
- Scientific publications (peer-reviewed publications, reports, presentations and deliverables will be promptly added to ResearchGate or Zenodo according to the applicable open-access policies).

The consortium will closely co-operate with the European Commission to communicate and disseminate information through EU supported R&D initiatives, including scientific and political events of the EC and international conferences and workshops as well as online social media campaigns. To maximise dissemination effects and capability, options for co-operating and creating synergies with other EU-funded projects will be considered actively. Furthermore, each partner of the EarlyCause consortium, especially Universities and Research Organizations, has the required scientific interest and capability to contribute to EarlyCause communication and dissemination activities and enhance the sustainability of the project results through scientific publications. In addition, the clinical partners are opinion leaders on the ELS and PCM domain and its visibility online and offline.

¹ Our partners' websites will be exploited to deploy the project's Dissemination and Communication



The following subsections explain in more detail the planned actions associated with each channel.

3.1.1 Online communication

The EarlyCause online communication strategy is divided between maintaining the official project website, exploiting other partners' websites, utilising multimedia communities, the circulation of project updates and maintaining an active social media presence (i.e. Twitter, LinkedIn, ResearchGate) for the project.

The online communication strategy sets several progressive thresholds to be reached by the end of each reporting period over the project lifecycle. The proposed threshold indicators are specified in the table below:

Indicator (cumulative)	Year 1	Year 2	Year 3	Year 4
# of unique visits to the project website	250	500	1000	2000
# of posts on partners websites	10	15	20	20
# of EarlyCause newsletters published each reporting period	1	2	2	2
# of search engine references from search engines by period end	200	1000	2500	5000
# of followers on Twitter by period end	50	100	200	300
# of published Tweets by period end	15	30	65	100
# of Tweet impressions using the hashtag #EarlyCause	200	500	1000	1500
# of posts on LinkedIn by period end	8	15	30	45

Table 5: Online communication strategy thresholds.

3.1.1.1 Official website

The project website (<https://earlycause.eu/>) is at the centre of EarlyCause's online communication strategy. The website has been active since June 2020 and will be continuously updated with news. Since its launch, it has undergone search engine optimisation, becoming the few results when searching "EarlyCause" on Google, Bing, Yahoo or DuckDuckGo. An archive of the project factsheet as well as a repository of the project's public downloadable output (deliverables) will be integrated into the website's structure.

At the end of each reporting period, the website's analytic data will be consulted to assess whether the targeted number of visits has been met and to potentially gain insight into website visitors' profiles.



3.1.1.2 Partners' web channels

The online channels of members of the consortium (websites, social media, subscriber lists) will act as multipliers for communication activities in EarlyCause. Partners will be encouraged to publish additional press releases, also in national languages, informing the public about project developments. Also, consortium members are encouraged to expanding the reach of communication and dissemination activities once project results emerge using their professional Twitter, LinkedIn or ResearchGate accounts. Moreover, different community websites of our partners will also be exploited to deploy the communication and dissemination strategy. The table below lists patient and professional associations that will be contacted as well as the community websites of our partners:

Stakeholder	Channel (frequency)	Content	Strategy
Consortium members, Researchers, General Public, Industry	Website (ongoing)	Initial contact point with the project; go-to place for information and updates	Visualisation (images, videos); news; factsheet; deliverables; link to social media
General Public, patients; Researchers; Policy Makers; Clinicians	Twitter account (bi-weekly)	General messages to communicate with external researchers and the general audience	Best practices; guidelines; visualisation
General Public, patients; Researchers; Policy Makers; Clinicians	Blog platform (up to two times)	Easy to read story to communicate with external researchers and the general interested public	Best practices, guidelines; story telling; visualisation
Researchers, interested in results & collaboration	ResearchGate account (ongoing)	Share papers, ask and answer questions, and find collaborators	Scientific publications; targeted messages; conference attendance
Collaborators and partners; business oriented profiles, e.g. exploitation	LinkedIn Account (monthly)	Allowing to build a professional network, linking experts from different areas of expertise	Scientific results for a lay and professional audience

Table 6 EarlyCause's (foreseen) social media channels per stakeholder.

3.1.1.3 Social media

Communication and dissemination activities are conceived as a 'push out' toward target audiences, however, they can only be considered effective when the public has the means to provide feedback and become involved. Social media are a particularly effective channel for audience engagement and also represent an essential part of the EarlyCause online communication strategy.

A Twitter account (@EarlyCause) was set up and has been active since the start of the project. Publishing news on the project website will be accompanied by a corresponding announcement on Twitter. Through Twitter, the project can reach out directly to the larger ESL, PCM and other multi-morbidity researchers as well as the various official channels of the European Commission (e.g. @eHealth_EU, @DSMeu) and the accounts of consortium members which will serve as multipliers for communicating about the project and disseminating project results. Emphasis will be placed on orchestrating campaigns on Twitter to raise awareness of the project as well as announcing project events. These campaigns will make use of specific hashtags (#EarlyCause, #EU_H2020, #EarlyLifeStress, #MultiMorbidity) and will engage with the broader ESL, PCM research community on Twitter (using also the twitter handles of communities and associations listed under table 4.



Through Twitter the project will also engage with relevant Horizon 2020 campaigns launched by the European Commission through its official accounts. The number of impressions generated by EarlyCause on Twitter, as well as statistics on the number of followers and engagement with the account will be monitored using the free built-in twitter analytics and documented in each period report on communication and dissemination activities.

An extended version of selected tweets will be published as a short piece on selected partners' LinkedIn profiles, including illustrative images. Twitter, LinkedIn and the blog platform "Inspire the Mind", hosted by KCL (Carmine Pariente) will be utilised for awareness campaigns, spreading the word about project news (meetings, events) and achievements (publications, prototype releases of the EarlyCause platform).

3.1.1.4 Newsletter

The online project newsletter, published at 12-month intervals and distributed via Twitter, LinkedIn and the project website, will be responsible for reporting project achievements to a broader, non-specialised audience, describing them in common language, making large use of images and infographics. A template for the newsletter will be created based on the project's visual identity. The newsletter will be shared also with the project officer for dissemination through additional EC channels (the newsroom of the digital single market website; the EU eHealth in Focus newsletter; and EC social media). Depending on project outputs, we aim to submit a narrative to the HorizonMagazine via editorial@horizon-magazine.eu or the EuroNews Futuris report (<https://www.euronews.com/programs/futuris>).

3.1.2 Print material

3.1.2.1 Factsheet

A project factsheet will condense information about the scope and objectives of the project. It will also include contact and project team information into maximum two pages. Links to the project website and twitter account will be featured visibly.

The first version of the factsheet will be ready to use as an online PDF version by the end of the first reporting period. Once the COVID-19 pandemic allows for face-to-face meetings and conferences, the factsheet can be printed for sharing it at events (workshops, conferences, other meetings). The content of the factsheet itself may be updated as work in the project progresses in the following periods and the new versions will be distributed using EarlyCause online media channels (website, Twitter, LinkedIn and newsletters).

3.1.2.2 Posters, brochures, ID cards

As part of the presentation at conferences and on-line events, preparation of diversified communication materials and to design a coherent project branding, the consortium will design posters or brochures in accordance with the project branding described in deliverable D1.2 ("Project website and communication materials").

3.1.3 Public events

In order to share findings and boost awareness on ELS-related multi-morbidity and identified causative mechanisms, targeting more specific audiences and setting up follow-up and exploitation collaborations, the project's strategy includes both organising two workshops and participating in a range of public events by project partners, from meeting and webinars to workshops, congress and conferences.

3.1.3.1 Workshops

Two project-dedicated workshops were originally planned as satellite events along two key international conferences (the DOHaD World Congress 2022 in Vancouver, possibly as joint events



with the LifeCycle project or the EUCanConnect project; and the World Congress on Pediatrics). The year 2021 will show if and how these events will take place due to the COVID-19 pandemic. As a contingency plan, the workshops will be planned as stand-alone online events or as a partnered event with H2020 projects from the same call. The programme of the workshops will include specific EarlyCause research topics (e.g. role of epigenetics or microbiome), knowledge-to-action themes to discuss prevention and public health policies related to ELS and PCM, as well as industry-relevant sessions for showcasing the identified biomarkers, druggable pathways, and decision support tools for integrated care. The workshops will also create synergies with WP8 (focus group discussions with experts in the field). The table below depicts a rough plan for event organisation and participation for the project lifecycle:

Indicator	Year 1	Year 2	Year 3	Year 4
# of workshops organised by the consortium		1 (M30)		1 (M47)
# external participants in workshops		20		50
# of participations at H2020 (online) events, industry exhibition or other scientific conferences	2	4	10	10

Table 7: Public events strategy overview.

Table 7 provides a draft overview of the workshop’s agendas. The second workshop may include discussions on post-project follow-up ideas and initiatives, as well as training sessions/tutorials by the consortium’s experts to promote research in this field for young researchers.

Workshop 1 (~M30)	Workshop 2 (~M47)
<ul style="list-style-type: none"> ● Presentation of version 1 of the EarlyCause platform (Lead: EMBL). ● Presentation of the latent modelling of PCM multimorbidity (EMC). ● Presentation of the results of the GWAS on ELS (OULU & UOB). ● Description of a preliminary list of biological mediators (EMC, VUMC & CSIC). ● Description of a first list of environmental modifiers (UOB & EMC). ● Description and discussion of the experimental setups for the animal and cellular models (UZH, KCL, IRCCS & CERBM). ● Preliminary tests of the predictive models (with reduced number of predictors) (UPF). ● Initial insights from the life-course integrated cohort (OULU & UPF). ● Brainstorming sessions with experts from outside of the consortium (e.g. regarding ethical and clinical implications) (UPF & EMC). 	<ul style="list-style-type: none"> ● Description of the identified and validated biological pathways (UZH & OULU). ● Description of differences between men and women (CERBM). Hands-on-sessions with the EarlyCause platform (EMBL). ● Demonstration of the predictive models and clinical decision support prototype (UPF & COMBI). ● Discussion of the final list of environmental modifiers and potential lifestyle interventions (UOB & EMC). ● Industrial session and discussions on exploitation (EMP & COMBI). ● Scientific discussions with researchers/projects from the same H2020 call, as well as with related projects on multi-morbidity (UPF & EMP). ● Discussions of follow-up initiatives (UPF, EMP & OULU). ● Training sessions for future researchers in the fields of ELS and multi-morbidity (UPF, ALL).

Table 8 Draft agenda for the two EarlyCause workshops.

3.1.3.2 Participation in external events

Out of the fourteen partners in EarlyCause, twelve partners are directly engaged in research in the fields of mental health (EMC, VUMC, KCL), cardio-metabolic research (EMC, OULU, CSIC), pre-



clinical studies (UZH, IRCCS, KCL and CERBM), as well as biomedical technologies (UB, COMBI, EMBL, UPF). Given this potential, EarlyCause partners can commit themselves to submitting conference papers and participate in research conferences at both national and international level throughout the project lifecycle. A list of candidate events is shown in the below table for each area and partner. The participation in such events must be conditional to the COVID-19 developments across the EU and the formats these events may take.

Event Name	Topic	Audience	Partner
Developmental Origins of Health & Disease World Congress	Early-life origins of disease	Researchers	EMC
Annual Conference of the European Academy of Paediatric Societies	Paediatrics	Researchers, paediatricians	UOB
Annual Meeting of the Society of Biological Psychiatry	Inflammation, neuro-endocrine system	Researchers, psychiatrists; biologists	KCL
European Psychiatric Association Congress	Psychiatry; clinical psychiatry	Researchers, clinical psychiatrists	VUMC
Psychoneuroimmunology Research Society	Psychiatry, psychology, neuroscience, immunology	Researchers, clinicians	KCL
European Congress on Obesity	Obesity & comorbidities	Researchers, nutritionists, healthcare professionals, companies	OULU
European Society of Cardiology Congress	Cardiovascular research & medicine	Scientists, cardiologists, companies	EMC, OULU
International Human Microbiome Conference	Microbiome in health & disease	Researchers, nutritionists	CSIC
International Congress on Stress Responses in Biology and Medicine	Biology of stress	Researchers, psychiatrists, biologists	IRCCS
European Molecular Biology Conference	Molecular biology	Molecular biologists, biotech SMEs	CERBM
European Conference on Translational Bioinformatics	Bioinformatics & applications	Bioinformaticians, biotech SMEs	UZH
International Conference on Biomedical and Health Informatics	Informatics & computing in healthcare	Researchers, health technologists, companies	UPF
Health 2.0 Europe	Digital health	Industry, academia, policy makers	COMBI
Research Data Alliance Plenary Meeting	Data-driven research	Academia, industry and government	EMBL
European Public Health Conference	Public health, health policy	Healthcare providers, agencies, researchers	EMP

Table 9 Examples of conferences and events that will be targeted by the EarlyCause consortium.



4 Dissemination and publication strategy

Peer reviewed articles will be carefully addressed to the most appropriate journals according to their clinical or technological relevance, discipline, and impact factor. An illustrative list of selected target publications is reported in Table 10 and will be further expanded throughout the project lifetime. Major publications will be also accompanied by production of dedicated press releases on the channels. Dissemination of scientific achievements of EarlyCause will be also conducted through non-specialised publications, including two white papers on the “*Potential clinical impact of new biomarkers and causative pathways*” and a “*Blueprint for new prevention and treatment strategies*” (WP8, D8.2 and D8.4).

The EarlyCause project recognizes the importance of making the research output of the project accessible as widely as possible. Therefore, the consortium has taken an active approach to the open access policy in Horizon 2020 and seeks to make all publications freely accessible. Partners will publish in open access (gold) journals when they are on the same level or higher than the best journals in their field. A combined other cost budget of approximately €34,000 has been reserved for publishing.

UB, as the Coordinator of EarlyCause, will ensure the compliance with H2020 rules regarding Open Access to scientific publications, by making freely accessible any scientific publications that will be generated. The e-repository, which is the institutional repository of the UB (<http://diposit.ub.edu/dspace/>), meets all the requirements established by the European Commission within the framework of open-access publishing. The bibliographic metadata will be in a standard format determined by the European Commission and include all required information. We will thus not only ensure the acknowledgment of EU funding but also enhance the discoverability of all publications and maximize the impact of EarlyCause results.

In those cases where the publisher does not allow open access within the allowed embargo period, authors will make their best effort to retain their rights to deposit their article in a repository. In cases where publications can be considered of interest to a broader non-specialist audience, or deal with controversial issues and address societal challenges, the consortium will consider paying the article processing charge to any journal (be it a hybrid or an OA journal) that offers the best return on investment in terms of author/project visibility and impact. Whenever possible, the full text of published articles or corresponding accepted manuscript will also be made available on the project website and spread out through concomitant updates on the relevant social media channels upon publication, particularly Twitter, LinkedIn and ResearchGate. Consortium partners, whenever applicable, will deposit the underpinning research data of the article in Zenodo, the open-access archive funded by EC, the OpenAIRE project and CERN, ensuring public availability of research materials including journal articles, conference proceedings, reports, deliverables and presentations; links between data and publication and vice versa will also be added.

The project places great value on disseminating its results to the scientific community, considering that no similar efforts have been undertaken to address the topic of PCM and ELS in the literature. The project’s strategy stipulates scientific papers published both in journals and in conference proceedings over the project lifecycle, as depicted below.

Indicator	Year 1	Year 2	Year 3	Year 4
# of scientific papers on ELS-related PCM submitted to leading journals	0	2	8	15
# of scientific papers published in conference proceedings	0	2	6	6

Table 10: Scientific publication strategy overview.



One paper, describing the study protocol for EarlyCause, is already published on the project's website and it will later be published in a peer-reviewed journal. The paper will identify the Causative Mechanisms that Link Early-Life Stress to Psycho-Cardio-Metabolic Multi-Morbidity leading to a better management of the impact of multi-morbidity on human health and the associated risks.

4.1 Relevant journals

The project is expected to produce a broad variety of research advancements: (1) new clinical knowledge, (2) new biomarkers, (3) new computational tools, (4) new research data and protocols, and (5) new public health insights. A preliminary list of related journals was prepared already for the Grant Agreement and will be enriched over the project lifetime.

Journal Name	Publisher	Open Access	IF
J. of Developmental Origins of Health & Disease	Cambridge University Press	Open access	1.73
Journal of Comorbidity	SAGE Journals	Open access	n/a
J. of Child Psychology & Psychiatry	Wiley	Green	6.23
Biological Psychiatry	Elsevier	Green, gold supported	11.41
Psychosomatic Medicine	Wolters-Kluwer	Hybrid open access	3.81
Brain Behavior and Immunity	Elsevier	Gold	6.30
International Journal of Obesity	Springer Nature	Green, gold supported	5.20
Diabetes & Metabolism	Elsevier	Gold supported	6.36
Circulation	Lippincott Williams & Wilkins	Gold supported	19.30
International Journal of Epidemiology	Oxford University Press	Green, gold supported	8.40
Journal of Affective Disorders	Elsevier	Gold	3.78
Molecular Psychiatry	Nature group	Green, gold supported	13.20
Epigenetics	Taylor & Francis	Green, gold supported	4.91
Microbiome Biology	BMC	Green	10.90
Nature Microbiology	Springer Nature	No	14.18
Bioinformatics	Oxford Academic	Gold supported	5.48
Journal of Biomedical and Health Informatics	IEEE	Gold supported	3.85
Nature Communications	Springer Nature	Gold default	12.40
PLOS One	PLOS	Green	2.80
Scientific Reports	Nature Publishing	Green	4.25
European Journal of Public Health	Oxford University Press	Green, gold supported	2.43
Pediatric Obesity	Wiley	Green, gold supported	3.4

Table 11 Examples of journals that will be targeted by EarlyCause.