

# STRATEGIC PLAN 2024–2027

Amsterdam Public Health

## Preface

The Amsterdam Public Health (APH) research institute connects and engages over 1,900 researchers with a wide variety of disciplinary backgrounds within an interactive research network. As a public health network, APH generates and implements knowledge through high-quality and sustainable research to improve public health and well-being, while creating positive societal impact. In doing so, APH takes responsibility for promoting the transformations needed to address urgent societal and public health challenges. Improving public health and creating societal impact requires collective effort, which is why APH increasingly connects and collaborates with society, as well as strategic and societal stakeholders. In the coming years, the APH research institute will focus outward on strengthening and expanding these societal collaborations and focus forward with strategic attention to the innovative developments and grand challenges facing public health in both current and future decades. This is embodied in APH's slogan: *Health for all, now and in the future*. APH will continue to build on the robust infrastructure of the affiliated organizations - Amsterdam UMC, Vrije Universiteit and University of Amsterdam and strengthen the connections among public health researchers from different disciplines, departments, faculties, and stakeholders across our research network. As a facilitator, APH enables researchers in the research network to conduct state-of-the-art research with both scientific and societal impact by offering knowledge, network support and services, as well as by making strategic investments. Among other initiatives, APH will strengthen its nine research programs and enrich them through Special Interest Groups that address cross-cutting public health themes. Moreover, APH will invest in co-creation, implementation, dissemination and valorization skills of its researchers.

This strategic plan outlines the internal and external ambitions of the APH research institute for the years 2024-2027. In summary, APH aims to facilitate and sustain the research network of public health researchers, strengthen connections and collaborations with strategic and societal partners and take responsibility for responding to societal and public health challenges. APH will pay special attention to environmental and social sustainability, diversity, equity and inclusion and continuous improvement of health services and systems. By doing so, APH will ensure high-quality research evidence to support researchers, healthcare providers, educators, policy-makers, patients and communities in advancing public health for current and future generations.

Board of Directors Amsterdam Public Health



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## Mission

The mission of the Amsterdam Public Health research institute is to generate, translate, disseminate, and implement knowledge based on high-quality research that upholds ethical standards, is transparent, and is respectful of planetary boundaries. APH is committed to improving population health and well-being, reducing health inequalities, improving healthcare and empowering citizens, to create meaningful societal impact both locally and globally. As part of this mission, APH actively fosters (inter)national collaboration, prioritizing comparative research

### Box 1

'Public Health' refers to all organized measures (whether public or private) to prevent disease, address health hazards, promote health and societal participation, and enhance quality of life. The focus is both on entire populations, small communities, individual patients and future generations.

*Adapted from WHO*

and cross-border learning. The research institute connects and engages researchers from diverse disciplinary backgrounds with societal stakeholders in an interactive public health research network (see box 1). APH actively responds to societal changes, health care transformations and external public health challenges around us. All of the research conducted within APH is designed to have a positive impact on society, health policy, practice and future generations. This is implicit in APH's slogan: Health for all, now and in the future. For the upcoming years, APH will focus its actions outward on strengthening and expanding societal collaborations and forward with strategic attention on active and impactful responses to grand challenges for public health in future decades.

## *Health for all, now and in the future*

Improving public health and creating societal impact requires collective effort. Therefore, APH researchers team-up with academic and non-academic partners and invest in sustainable connections and collaborations. Subsequently, APH researchers increasingly involve citizens, communities and society from the start to the end of the research process, in order to ensure relevant, actionable and impactful research. Last but not least, APH unites and facilitates researchers from different institutions, faculties, departments and disciplines, to perform state-of-the-art research with both scientific and societal impact to actively respond to the grand public health challenges. The research institute conducts its research while pursuing the following aims: (i) to aid policy-makers at all levels of the public health and care system in assessing health needs, fostering a healthy environment, strengthening the health and healthcare system, and safeguarding its financial, social and environmental sustainability, and resilience; (ii) to strengthen the research community in performing their research while anticipating on societal developments; and (iii) to empower patients, citizens and society in managing and improving their own health and well-being.

APH attributes great importance to the public's interest in its mission as well as in its research culture. It is unique in its sheer mass of excellent researchers who recognize themselves in the research institute's mission and who team up with other researchers as well as with patient and citizen communities, health care providers, educators, and policymakers. The research institute believes that public health is best served by the openness of its research network and of the way it conducts science with state-of-the-art research of high quality. APH thrives to be a strong, trustworthy and collaborative partner. Therefore, APH builds on the excellent research reputation of its affiliated organizations Amsterdam UMC, VU and UvA and the opportunities for synergy derived from merging thriving communities of public health researchers with complementary skills. APH is fully integrated in the two Amsterdam universities and has strong ties with partners in education, research and health care practice in its environment. APH researchers communicate effectively with all stakeholders, APH's research is highly cited

by academic colleagues and used by decision-makers and healthcare providers to improve health, reduce health inequalities, transform healthcare, empower citizens and create societal impact.

## Core values

As a research institute, APH has set the following core values:

- *Sustainable scientific excellence.* APH pursues high-quality research performed by well-equipped researchers with a commitment to sustainability, respecting planetary boundaries, upholding ethical standards, and transparency in research.
- *Diversity, Equity, and Inclusiveness.* APH embraces diverse perspectives and fosters inclusive research and working environment to promote fairness and address health disparities across all populations and generations.
- *Engaging partnerships.* APH fosters collaborations across sectors, disciplines, and regions and engages communities and societal stakeholders to address public health challenges effectively on both local, national and international levels.
- *Impactful responsiveness.* APH is responsive to and addresses emerging public health challenges in order to create meaningful health (care) improvements and societal impact.

## Grand challenges for public health

As a public health research institute, APH takes responsibility to contribute to promoting the transformations needed to respond to urgent societal and public health challenges. The grand challenges we are facing today and in the near future are listed below and categorized on population, system and global level. As a research institute we anticipate on these grand challenges by adequately reshaping our strategic ambitions and direction, and by strengthening and stimulating the actions, mindset and research topics and ambitions of APH researchers within the research network.

### Population

- An aging population with increasing disease burden, and complex health care needs.
- Rising number of chronic, non-communicable diseases and multimorbidity.
- Complex mental health problems, and substance abuse.
- Large health inequalities in populations, challenging societal participation in groups with lower socioeconomic status.
- A population of increasing diversity in migration background, health literacy, and health needs.
- A society with growing distrust in health information, public health actions, and government-initiated solutions.

### System

- A society with challenges in (un)healthy lifestyle and diet choices
- An increasingly individualized and digitalized society in which not everyone can manage their own health.
- An ongoing shift in responsibility for managing health care is diffusely assigned to public and private providers as well as citizens themselves.
- Insufficient capacity of health care systems to respond to unexpected events, such as pandemics (meaning limited health care system resilience).
- Increased demand for and expenditure of health and long-term care usage, and labor-force shortages.

## Global

- Climate change and its adverse impacts on health and the ability of countries to achieve sustainable development.
- Recognition for the complex interaction between environmental factors and health-related problems, across borders.
- Inequalities in access to health care, and representation in decision making processes.

## Areas of action

In order to adequately respond to the grand public health challenges and to fulfill its mission, the Amsterdam Public Health research institute is founded by a research institute-wide strategy, that is recalibrated every four years. APH's previously set strategic priorities reflect its strong focus on implementing the knowledge gained from national and international research in our direct surroundings and to seeking partnerships to promote public health for all residents of the Amsterdam area. The urban context of the research network consistently provides a large, richly diverse living lab that not only inspires new research questions and ideas but also enables understanding of how to effectively implement and disseminate the findings in collaboration with local stakeholders. The emphasis on the Amsterdam metropolitan area does not, however, preclude a wider national and international view of public health, as evidenced by the broad nationwide and international networks maintained by APH researchers. With its renewed strategy for the coming years, APH complements previously set strategic priorities with a focus on outward and forward actions to contribute to the health and well-being of current and future generations. In this renewed strategic plan APH defines four areas of action that are concentrated around the role and activities of the research network defined as 'facilitate and support', 'connect and collaborate', 'develop and improve', and 'innovate and create impact'.



The research institute provides multiple [facilities and support services](#) to its researchers, of which some are delegated to APH by the line organization, and some are complementary to what is already available within the affiliated organizations, based on structural dialogues and agreements, and strategic choices. APH stimulates its researchers to actively engage in the research network and make use of its services, knowledge and resources in order to enrich APH's supportive research environment. APH's services and facilities are varied, from quality handbooks and guidelines, educational programs on valorization and impact, and strategic research grants, to network events and talent development programs, and dedicated committees.

The research institute is an open and interactive research network that connects public health researchers with a wide variety of disciplinary backgrounds and talents from multiple faculties and departments of the affiliated organizations. APH builds on the robust and internal structures of its affiliated organizations and [connects and stimulates collaborations](#) leading to knowledge exchange for its public health researchers across the affiliated organizations. APH research programs connect its researchers within smaller networks and stimulate cross-cutting collaborations in research program-overarching Special Interest Groups. Moreover, APH researchers

connect and collaborate with societal stakeholders, professionals in and outside healthcare, policymakers, and with national and international external strategic partners. APH researchers also increasingly engage citizens and society and include them in all phases of research. It requires collective efforts to improve health and well-being and to create societal impact, therefore APH thrives to be a strong, trustworthy and collaborative partner.

To tackle complex public health challenges, APH needs talented and skilled researchers and high-quality research that is continuously [developing and improving](#). Therefore, the APH research institute seeks to provide an inspiring and stimulating research environment that stimulates lifelong learning, encourages transparency and open science, protects scientific integrity and aims for high quality of research. APH developed a number of strategic procedures and quality instruments to ensure the fundamental quality structure and open research culture within the research network. APH established activities on talent development that aim to support its researchers in developing both their academic competencies and more generic professional (transferable) competencies. All with which APH embraces the Recognition and Rewarding initiative to stimulate all of its researchers.

As a research institute, APH needs to ensure being future-oriented by making strategic choices that are sustainable, i.e., supporting long-term viability, [innovative and create impact](#). Urgent environmental threats, growing health disparities and other external public health challenges are already impacting public health and will continue to do so for current and future generations. Therefore, APH's research efforts need to have societal relevance and create impact. Within its research network, APH actively shares knowledge on research developments, fosters collaborations between research groups, and combines efforts across disciplines to strengthen research initiatives and to collectively improve public health. As an open and interactive research network, APH researchers actively engage and cocreate with external academic and societal partners, as well as with citizens and patients, to address the grand challenges society is facing. The research institute is committed to reshaping and innovating in response to public health challenges, encouraging its researchers to continuously develop their expertise, especially in the areas of environmental sustainability, diversity and inclusiveness, participatory research, system science, implementation, valorization and societal impact.

In the following section APH's strategic ambitions are further described according to the four areas of action. In [Appendix A](#), an overview of the associated activities is listed, as a roadmap over the period 2024 to 2027.

## [Facilitate and support](#)

### **Supportive research environment**

The APH research institute aims to profile itself as a supportive, facilitating and stimulating research network. By informing APH researchers about APH's network, knowledge and services, we aim to stimulate APH researchers to actively engage in the research network and make use of its knowledge and services, which leads to enrichment of APH's supportive research environment. Most of APH's services and facilities are complementary to what is available within the affiliated organizations, and thereby additional value for actively joining the research network is created. APH has various services and facilities, from quality handbooks and guidelines, and strategic research grants, to network events and talent development and training programs, and dedicated committees. APH's communication channels are actively used to inform its researchers about the research network and its services and facilities. New researchers are also stimulated to actively join the APH network.

### **Internal communication and cohesion**

APH's internal communication strategy aims primarily to inform all affiliated researchers about the network, knowledge and services, and secondary to stimulate collaborations and knowledge exchange within the network. The research institute has an important role to support APH researchers with making their research and expertise visible and findable to all affiliated researchers, in order to stimulate knowledge exchange and new collaborations. APH also invests in sharing its best research practices within the research network. To increase cohesion in the research network, APH actively aligns its strategy and activities with prominent internal stakeholders, such as departments, divisions and faculties of Amsterdam UMC and VU.

We consistently improve the visibility of past, ongoing, and future APH activities to all APH researchers, and increase awareness of the APH assets and potential among APH researchers, support staff, and other stakeholders. APH has therefore developed a comprehensive communication strategy, including a matching web strategy and communication guidelines. Complementary activities and platforms are employed to facilitate an active research network, such as the APH website, e-newsletters (both institution-wide and research program-specific), and other communication materials, including social media. APH has a website within the overarching Amsterdam UMC website, on which personal pages for all APH researchers from affiliated organizations are available. To engage effectively with its researchers, APH organizes multiple APH network-wide events, such as the Annual Meeting – an event for all APH researchers, research support staff, and external stakeholders, with an overarching theme and with internal, and external keynote speakers; and since 2021 APH Junified – an event organized for and by junior and mid-career APH researchers, offering workshops and interesting presentations around specific themes. Affiliated researchers are informed about relevant news within APH and their respective research programs to foster a sense of engagement. They will also receive updates on funding calls and upcoming network events, giving them the opportunity to broaden their perspectives by, for example, meeting other researchers in the same field.

Internal cohesion and active engagement is important in APH's research network. Therefore, strengthening the connections within APH and promoting APH and its research programs to everyone in the research network is needed. APH will invest in its strategy to incorporate active APH membership and participation into its researchers' professional identity. APH will focus on supporting and strengthening researchers and research programs by providing them with good examples of how their APH peers from other research programs approach their work. APH will intensify sharing APH stories and APH impact stories via the website, newsletter, and social media. By showcasing these impactful APH research examples to all APH researchers, the research network is provided with the opportunity to become inspired. In this way, researchers strengthen each other through the research network, with communication serving as the bridge that connects them.

The research institute is enhancing its strategy to promote the research institute more effectively within the participating departments, and faculties of the affiliated organizations. For example, the APH onboarding meeting - an online meeting to inform new APH researchers about the research institute - will be evaluated and a new format will be developed incorporating the needs and preferences of recently started APH researchers and aligned with the existing onboarding meeting at central or departmental levels. Also, the organizational roles within the research programs (i.e., Program Leaders, Junior and Senior Program Councils) and committees have been evaluated and formalized, in order to derive clearly defined tasks and responsibilities. Finally, APH wants to strengthen its connections with heads of departments of the affiliated organizations, in order to formalize its collaborations, align strategic ambitions and clarify the added value of the research institute to departmental activities.



## **External communication and branding**

APH's external communication strategy aims to primarily inform external societal and strategic stakeholders about APH's research and researchers, and secondary to stimulate collaborations with them. An important goal for the coming years is to position APH and its research programs as a strong, trustworthy and collaborative partner to these external stakeholders. Our priority is to invest in getting to know the Amsterdam metropolitan area better and vice versa and improving the embedding of prominent APH researchers in Amsterdam networks. APH researchers will continue to engage effectively with all stakeholders regionally, nationally and internationally to meet common objectives, to demonstrate the success of combined research efforts, and to ensure that external stakeholders and society actively participate in our collaborative activities and initiatives to enhance public health. The external communication strategy will also incorporate stimulating and strengthening dissemination efforts of APH researchers to share knowledge and improve societal impact. The research institute will develop a matching press plan to raise its profile through the media - print, broadcast and online – and a web plan, to strengthen its online presence in a way that is in line with the overall Amsterdam UMC and VU communication strategy, and that is tailored to different target groups and external stakeholders. Various scientifically renowned opinion leaders have embedded their line of research within APH. APH encourages them to position themselves as role models for APH researchers, and as ambassadors of the affiliated organizations Amsterdam UMC, VU, UvA in the public debate and towards policymakers. The research institute will further develop active external branding and public relations strategies using our website, conference banners, templates for roadshows and presentations and assistance in connecting to the media. For all communication efforts, APH cooperates closely with the central communication office of Amsterdam UMC and VU.

## **Connect and collaborate**

### **Robust organizational embedding**

APH builds upon the strong reputations of Amsterdam UMC, VU and UvA, leveraging the synergies created by merging thriving public health research communities with complementary expertise and infrastructure from these organizations. The research institute is fully embedded within both Amsterdam universities and seeks to complement the efforts of these organizations through strategic alignment in areas such as research strategy, facilities and services. The research institute stimulates cross-cutting research themes and initiatives to increase coherence between the research programs. It is essential to identify and strengthen areas where we can reinforce and complement researchers and research programs, ensuring that researchers are effectively connected in a focused and efficient manner that extends the connections through departments of the affiliated organizations. Strengthening the internal cohesion and branding of APH is crucial, along with developing a strategy to integrate APH more deeply into the researchers' professional identities so that researchers experience the added value the research institute offers and are encouraged to actively participate in its research network..

### **Large research community**

APH has built a network of researchers and research support staff with shared interests, from a wide variety of disciplinary backgrounds, from four faculties and multiple departments. Drawing on this diverse expertise, APH embraces a national and international leading role where complex public health challenges call for multidisciplinary and timely approaches. To foster collaboration, APH organizes network-wide events where its researchers can connect and exchange knowledge, as well as research program-specific gatherings to cultivate smaller research communities. APH also aims to increase visibility within the research network by making researchers' expertise, activities and interests more visible, enabling faster connections and fostering long-term

collaborations. As the research network has grown rapidly in recent years, there is a risk of diminished belonging and connection within APH and its research programs. Moreover, expanding collaborations with societal and strategic partners underscores the importance of safeguarding the research network's cohesion. To address these challenges, APH will continuously invest in strengthening its research network. This includes for instance ensuring that APH's public health scope, strategic plans, and ambitions are well-aligned with all research network participants, such as Program Leaders, committee members, and department heads and university faculties of the affiliated organizations. This collaborative effort should enhance connection and commitment across the research institute. In addition, APH will continue to engage its researchers, understanding their needs and preferences to ensure a well-supported mission and strategy.

### Collaborations with societal and strategic partners

APH aims to further strengthen its research collaborations with strategic and societal non-academic organizations in the Amsterdam metropolitan area and beyond, thus enhancing its strategic position in the region and making the research institute a natural collaborations partner in areas such as implementation and valorization. To ensure a more direct impact on health policy and practice, APH researchers have created and contributed to considerable numbers of academic collaborative centers (*'academische werkplaatsen'*) over the years. In such centers, practice, research, education, and policy are brought together with mutual benefits in direct collaboration between clinicians, teachers, researchers, and policymakers, with an emphasis on public health settings outside university medical centers. Such collaborations are an important vehicle for achieving societal impact. APH has a collaborative arrangement with the *'Amsterdam Vitaal en Gezond'* (AV&G) initiative. AV&G engages all regional stakeholders that are essential to the urgent transformation of the healthcare services coordinated by the interagency cooperative SIGRA. That transformation is stimulated and funded by the national-level Integrated Healthcare Agreement (IZA). APH will also closely collaborate with the Amsterdam Prevention Network (APN), that has been created within Amsterdam UMC, with financial investments by the so-called *'Sectorplannen'*, provided by the Dutch Ministry of Education, Culture and Science. The need to unite all knowledge institutions working in public health is also recognized by the Public Health Service of Amsterdam (GGD), the UvA Faculty of Social and Behavioural Sciences, the universities of applied sciences (HvA, InHolland), and regional schools for vocational education. APH will intensify active collaborations with these knowledge institutions. APH researchers will also actively participate in regional and societal initiatives, including the Thrive initiative, Hacking Health Amsterdam, and public debates. In the years to come, APH will invest in further strengthening sustainable informal and formal collaborations with our regional knowledge partners in research,



practice, and policy. APH will develop, nurture and cherish its connections with non-academic partners, particularly in the voluntary and community sectors, and connect them more proactively to APH researchers. APH will hereby explore the opportunity for collaborative agenda setting for public health with these regional partners.

## **Connecting with society**

Within the research institute individuals in society are increasingly involved in all phases of APH research, to combine scientific evidence with knowledge from practice. Actively involving the target population throughout the research process, is known as participatory research. This is important as it is seen as a relational process through which knowledge is produced collectively with the people whose lives are at the center of the research. It aims to bring about some form of change or action. The added values of participatory research include co-creating knowledge, increasing ownership among participants related to the health problem and potential solutions, which in turn can promote societal change within the community. Furthermore, due to their active engagement in participatory research, participants can become empowered when the participatory process includes active involvement, co-creation and capacity building. Moreover, APH researchers learn from their interactions with participants, and thereby APH research will be more useful and valuable. With this form of inclusive research, APH researchers improve the chance of creating impact together within society. For the coming period, APH will invest in creating awareness among APH researchers about the importance of this form of research, and with workshops and training APH researchers will be better equipped to perform these research approaches.

## **Develop and improve**

### **Scientific quality and research integrity**

APH seeks to provide research output of the highest quality, which adheres to the prevailing standards of openness, transparency, and integrity. APH complies with the European and Netherlands Codes of Conduct for Research Integrity to ensure an academic culture in which researchers are encouraged and supported in performing research to the highest ethical standards. The principles of good research practice, including those applying to research integrity, are a recurrent theme in APH events, workshops, and e-newsletters. The Amsterdam Research Board (ARB), where directors of have membership, represents the research community within Amsterdam UMC and provides advice to the Executive Board on research policy. At centralized levels, dedicated Research Support teams are in place in Amsterdam UMC and VU to provide hands-on support and to aid researchers in complying with integrity and quality requirements. The VU and UvA Executive Boards have appointed several independent confidential counselors focusing on research integrity. These also provide research integrity training, for instance within the Introductory Clinical Research Organization course (BROK) for clinical investigators conducting research that is subjected to WMO. Research integrity training is mandatory for all APH PhD candidates as part of their PhD educational pathways. APH has an established Scientific Quality Committee (SQC), which aids and monitors the development and maintenance of a range of instruments to facilitate scientific quality and research integrity at all stages of the research cycle. The APH SQC advises the APH Board of Directors, on request or otherwise, about all matters relating to scientific quality. APH developed a number of strategic procedures and instruments to further shape and define the fundamental quality structure and culture within APH. A core product is the online APH Quality Handbook (based on the former '*Kwaliteitshandboek*' from EMGO+) which is a valuable source of information for APH researchers and serves as an example for other Amsterdam UMC research institutes. APH's Quality Handbook, with 86 chapters, is structured alongside the research life cycle to navigate the user easily through the handbook. In 2021, the Amsterdam UMC used APH's Quality Handbook as a model in developing its research life cycle-based roadmap for (clinical) research that is subject to WMO regulation. The APH Quality Handbook is continuously adapted in line with the research quality activities newly employed by APH, Amsterdam UMC and VU.

## **Open culture and Open Science**

APH stimulates an open, inspiring research community among its researchers. The SQC started the implementation of research quality visits (RQV) to stimulate such an environment. These visits are peer-led conversations that can take place at any point during the life cycle of a research project, upon request of the researcher or upon invitation by the APH Scientific Quality Committee. The idea behind these visits is that discussion on scientific quality and the barriers to achieving it is more effectively conducted in a peer-to-peer conversation than in a formal auditing process. The conversations are between APH SQC members and an APH peer researcher with the aim of identifying potential barriers to carrying out good-quality research and discussing possible solutions to overcome such barriers. The RQVs also are intended to collect best practices to share within the research network. Openness to colleagues about research practices in the course of ongoing research is expected to foster a culture of transparency, trust, mutual support, and continuous improvement. That is in line with the Open Science principles and academic culture that are part of APH's core values and strategic ambitions.

APH has endorsed the Open Science guidance from Amsterdam UMC and the VU and encourages its researchers to make research data, methods, and other research processes freely available, under terms that enable the reuse, redistribution, and reproduction of the research. APH strongly believes that Open Science enhances trust among researchers, promotes the building of new collaborations with researchers and societal partners, and helps reduce research waste among others by enabling the reuse of data. Open Science principles have been integrated throughout the research life cycle as set out in the APH Quality Handbook. The publishing of research output by APH researchers in an open-access format is enabled by institution-level open-access agreements with academic publishers signed by the Amsterdam UMC and the VU. Research data management support made available by the Amsterdam UMC and the VU at central levels has facilitated the adaptation of FAIR (findable, accessible, interoperable, and re-usable) principles in research. It provides APH researchers with tools and support for drawing up data management plans. APH researchers, for instance, make use of various open data repositories (including Figshare, DANS, OSF and PURE) to publish and share their FAIR datasets. Support for storage and archiving is provided by the research data management helpdesk of Amsterdam UMC and the (medical) library of Amsterdam UMC and VU. The APH Quality Handbook facilitates FAIR data production with guidance on issues such as requesting informed consent for data sharing, metadata standards, and good data management practices.

## **Cohort studies and (data) research infrastructure**

Research groups within APH coordinate and maintain more than 25 large- or smaller-scale longitudinal cohort studies and health and healthcare registries. These long-standing studies provide access to unique cross-sections of society and include a wealth of (often) nationwide long-term data. APH has prioritized its efforts to strengthen and sustain the assets formed by such cohort studies. That is necessary because the sustainability and viability of cohort studies and registries are under constant pressure due to a lack of long-term funding to safeguard and improve the data infrastructure.

APH has invested resources and organized funds to support cohort studies. In 2022, that development accelerated as a result of financial investments by the '*Sectorplannen*', provided by the Dutch Ministry of Education, Culture and Science. This boosted the development of the Amsterdam Cohort Hub (ACH). ACH is building a research infrastructure that will improve visibility through a single umbrella organization for facilitating long-running, active, and sustainable cohort studies for its researchers. The hub will offer state-of-the-art support for FAIR data management and linkage, multimodal longitudinal data analysis, findability of methodological expertise for cohort data research, and visibility of research results and their impact, all aligned with (inter)national standardization and data sharing initiatives such as HealthRI en the European Health Data Space.

In addition, connections between the cohorts in Amsterdam will be established by the positioning data stewards and researchers in the affiliated organizations. APH has supported the building phase and has a strong connection with ACH through its participation in the steering committee. By virtue of the increased recognition of APH's cohorts and registries as core facilities within Amsterdam UMC and VU, and having ensured stable external funding, APH has played a key role in securing the infrastructure required for the support and management of its longitudinal data in the coming years through ACH. ACH will continue to invest in linking and sharing the data according to FAIR data principles, thereby enhancing the value of these assets and seizing modern data science opportunities. In the coming years, APH will further invest in the development of ACH.

### **PhD educational policy**

The APH research institute works to support, guide, train, and prepare the next generation of public health researchers. PhD candidates affiliated with APH are subject to the doctoral regulations of either the University of Amsterdam (for candidates from Amsterdam UMC and UvA) or the Vrije Universiteit (Amsterdam UMC and VU candidates). As a result of the merge between AMC and VUmc, within one department of Amsterdam UMC, PhD candidates can be subject to the doctoral regulations of either the University of Amsterdam or Vrije Universiteit, depending on the position of the first promotor or PI at UvA or VU. Differences in procedures applying to those respective PhD pathways continue to exist. The launch of the Amsterdam UMC Doctoral School in 2022 has increasingly harmonized services for former AMC and VUmc candidates, notwithstanding their different university regulations. The Doctoral School offers (free) courses to Amsterdam UMC PhD candidates on general academic skills (like academic writing, presenting, personal development, research ethics, academic integrity, and scientific methods), research skills (broadening and deepening of scientific understanding), and social and personal competencies. The Doctoral School also provides services to their academic supervisors. At VU and Amsterdam UMC, additional administration support for PhD education is provided by the faculty or research institute involved. APH provides this support while also setting additional educational requirements. To facilitate this, APH has a collaboration with the Amsterdam UMC's epidemiology master (EpidM) to enable reduced fees for all APH PhD candidates for courses in epidemiology and advanced methodologies.

APH has installed a dedicated PhD Education Committee. The committee supports and guides PhD candidates affiliated to APH in procedures for compliance with training requirements, assesses training plans and portfolios, develops PhD training manuals, coordinates a peer supervision facilitation program, and provides informative presentations at APH onboarding meetings. APH will actively encourage PhD candidates to join one of the PhD networks (Association of Amsterdam UMC PhD Candidates (ASAP), Forum for Young Scientists at the VU). These offer training and development programs, social events, and peer support. For the upcoming period, APH will explore the perceived work pressure of our junior and midcareer researchers and will invest in a safe and healthy work environment in which a broader preparation for the next (academic or non-academic) career steps is stimulated. This requires improving policies and the availability of information on career development and promotion criteria and portfolios, and the recognition of different research profiles incorporating the Recognition and Rewarding initiative.

### **Postdoctoral policy**

Midcareer researchers within the academic setting are a potentially vulnerable population, because of the highly competitive environment with constant funding needs and temporary positions at departments. As a research network APH wants to intensify its support for this group of researchers in the coming years and wants to retain talented mid-career researchers within the research institute and academia. Therefore, APH will provide services and facilities for midcareer researchers about career progress monitoring and will increase the availability and



transparency of information on academic and personal development and promotion criteria, incorporating research profiles linked to the Recognition and Rewarding initiative. It is also important that APH plays an active role in monitoring the experiences, preferences and needs of APH midcareer researchers in their respective departments and organizations. And to stimulate midcareer researchers to actively participate in a postdoc network within Amsterdam UMC or VU, where postdocs from all research institutes are connected. APH will also increase support for funding possibilities and encourage participation in independent acquisition courses for midcareer researchers. APH will offer grants to postdoctoral researchers for strategic fellowships or grant writing. Within the APH research network possibilities will be provided for midcareer (and junior) researchers to improve their visibility in the scientific field, to advance communication and dissemination skills, and to strengthen or set up new collaborations with international institutes. This will be stimulated by award competitions and presentation possibilities at APH events, joining the organization committees of APH events to develop organization skills, and opportunities for work visit grants with national research groups or abroad.

### **Talent development and future leadership**

APH seeks to facilitate researchers in developing their talent in both academic competencies and transferable professional competencies to conduct high-quality public health research with societal impact. Over the years, APH has improved its system for identifying talented researchers and facilitating their nomination for prizes, awards, and funding opportunities. To improve the visibility and impact of early- and mid-career researchers, APH also encourages international exchanges via work visit grants and researchers' collaboration with academic and societal partners by awarding targeted research grants and co-organizing network events. In collaboration with IXA the research institute also stimulates participation of the researchers in impact and valorization programs and learning paths. APH Program Leaders and Senior Program Council members are diverse in terms of seniority, gender, and institutional affiliation (Amsterdam UMC, VU), and all APH research programs have appointed Junior Program Councils. Such an environment with visible and formal roles can strengthen leadership skills within the research network.

Together with partners from the research school CaRe, APH developed the internationally oriented Public Health and Care Research Leadership Program (PHCR). It is a two-year program for high-potential mid-career researchers who have ambitions to refine their knowledge and skills so as to qualify as distinguished leaders in public health. The program was positively evaluated by its first cohort, enabling its continuation with a new cohort of researchers every year, and 2024 onwards every two years. We will explore the benefits of creating an alumni group of program completers. Alongside such APH talent development programs and initiatives, the Amsterdam UMC, VU, and UvA offer several central-level talent programs that APH researchers can benefit from, including the Amsterdam UMC Fellowship, the Diversity and Inclusion Talent Fellowship, the Amsterdam UMC Postdoc Career Bridging Grant, the Amsterdam UMC Talent Mentoring Program, and the VU mentoring scheme and leadership courses. Fellowship laureates have been embedded into the tenure track schemes of the Amsterdam UMC and VU, which have guided limited numbers of very talented mid-career researchers to tenured positions within five years. Amsterdam UMC has a Committee for Talent and Appointments (CTA), whose tasks are to shape the talent policies for academic staff and to give advice on appointments of mid-career and top-level academics. The APH Board of Directors are also involved in advising on these appointments. The CTA also provides advice on the implementation of the Recognition and Rewards initiative, which advocates a broader evaluation of academic staff, in line with the current national and international debate on that topic. In line with this broader evaluation of academic staff, also the VU re-shaped its rewarding system for academic career tracks with a central role for leadership at different levels and team science. APH researchers and the APH Board of Directors often participate in multiple evaluation committees in

these talent development initiatives. APH will intensify its efforts toward early identification of high potential researchers, in order to prepare them for future career opportunities. Efforts will be made to recognize and reward diverse talents, thereby supporting diversification with respect to academic career pathways. We will continue to offer capacity-building events and training.

### **Internal and external accountability**

APH will monitor its strategy, policies and internal procedures, by developing action plans and roadmaps for each year based on the strategic plan for APH and its research programs and committees. Moreover, APH will incorporate regular process monitoring moments within the organization structure including progress and financial reports. Also, the internal governance will be evaluated regularly, in which the formal roles of the APH Board of Directors, APH Support staff, APH research programs (Program Leaders, Program Support Officers, Junior Program Councils, Senior Program Councils) and APH committees will be evaluated and improved, in order to increase responsibility and clearly defined tasks.

All research institutes of Amsterdam UMC and the parent universities (VU and UvA) are evaluated once every six years according to Strategy Evaluation Protocol (SEP) set by the KNAW, NWO and UNL. In their self-assessment, research institutes are expected to describe a clear mission and strategy for the coming six years and a reflection on the past six years. The quality of the research, social relevance and viability are assessed. The self-assessment must be interwoven with how the research units address the topics Open Science, PhD Education, Academic Culture and Human Resources Policy in its strategy. The SEP expects a good, concise description by means of a self-assessment of the results achieved and their quality on these subjects, including examples and, where applicable, substantiated with robust figures. At the aggregate level, the Amsterdam UMC will also be externally evaluated once every six years in the form of an external quality control of the governance, policy and support (research support, graduate school, core facilities) of the research that takes place within the institution.

## **Innovate and create impact**

### **Implementation and dissemination**

Much of the research carried out within the APH research institute potentially has a direct impact on clinical, non-clinical and preventive care. Like other knowledge institutions, APH is expected to produce knowledge appropriate for addressing societal health challenges and suitable for use in health(care) policy and practice. Yet the path from the academic setting to practice is often unpaved, and many factors can influence the uptake of research findings at different levels. APH is building a strong infrastructure to disseminate and implement its research knowledge in society. APH established the Amsterdam Center of Implementation Science (AmsCIS) in 2020. It operates as an online knowledge hub, providing APH researchers with an overview of tools, resources, master classes, and guidance in the world of implementation studies and practices. This will also heighten researcher's awareness of the importance of implementation throughout the research life cycle. Researchers are encouraged to consider intended results in practice settings at an early stage for potential applications, and to develop appropriate strategies for stakeholder engagement and research inclusivity and diversity (e.g., of study participants). AmsCIS is increasingly recognized at a national level and collaborates with the Netherlands Organisation for Health Research and Development (ZonMw). For the coming period, APH will monitor and evaluate the governance, course and ambitions of AmsCIS together with all stakeholders. Thereafter, APH will strive to embed AmsCIS at a permanent and suitable place within the line organization, where it can serve as an expertise center and can operate independently, overarching the research institutes. APH may then offer support

with communication, network events and facilitating educational activities. In this way it can reach a larger audience and can create more effects and impact.

### **Valorization and societal impact**

APH supports researchers in producing high quality research, but such research fulfills its best potential if it benefits society at large. Efforts to achieve societal impact by implementing and valorizing research knowledge not only help justify the use of public funding, but they also sharpen the focus of APH research projects and give direction to the research institute's policy. APH has developed over the years a concise strategy towards valorization activities. Through its membership in the Amsterdam UMC valorization board, the research institute succeeded in extending the definition of valorization from a solely economic perspective to include a societal impact aspect. Amsterdam UMC developed 4 impact strategies: inside-out, out-side in, partnerships and societal outreach (Position paper Valorization: from academic knowledge to societal impact 2023). For APH, all four strategies are relevant. Partnerships and societal outreach are the most obvious and common. Good practices include for example, Academic Collaborative Centers and consortia with public and private parties, licensing of questionnaires, developing guidelines, influencing national and local policies and interviews in newspapers. From this perspective, APH appointed a dedicated impact developer in late 2022. Support for researchers to create impact takes place in various ways and is embedded in the basic structure of APH and also Amsterdam UMC and VU. Societal outreach activities for example, are jointly supported by APH and the Amsterdam UMC and VU Communication departments.

Support is offered as easily as possible while impact is not yet commonplace within the APH research community. Researchers or research groups can contact the APH impact developer as soon as they have an impact idea and have ambition to take their impact idea further. The value and feasibility of the idea is assessed and explored to see which impact strategy or route fits best. Finding external partners and setting up collaborations is also part of the valorization process and impact support. The impact developer is dedicated to APH researchers and part of IXA, the valorization center of the four Amsterdam knowledge institutions. APH researchers can further improve their skills on valorization and impact by attending trainings and workshops provided by IXA. Customized workshops are also an option for research groups and APH research programs. Impact is a task of every institution; Amsterdam UMC sees societal impact as an oath to society and APH as well. APH stimulates all researchers to show ambition at their own level to explore and take up opportunities, with the right support. On the APH website, APH created an 'Impact' section where tools and checklists are published to support the APH researchers in creating more societal impact.

### **Diversity, Equity & Inclusion**

The Dutch population is highly diverse and will become more diverse in coming decades, which means themes relating Diversity, Equity & Inclusion (DEI) remain relevant both within and outside public health research. Individuals have different traits and social identities across different dimensions such as, but not limited to, ethnicity, national origin, age, language, sex, gender identity, gender expression, physical ability, neurobiology, religious beliefs, political beliefs, sexual orientation and socioeconomic status. Diversity refers to a quantitative aspect (e.g., how many individuals of different groups are present in a given setting). Inclusion refers to the qualitative aspects (e.g., the extent to which these different groups are and feel included in a given setting) and equity has similarities to equality but also refers to aspects of fairness and justice for all individuals to ensure that identity is not a predictor of (health) outcomes. People working in health and care sectors need to acknowledge that such differences can lead to inequalities in health, care and well-being. Public health programs must strive for equity in all their activities, so as to ensure equal participation and benefits for all people in the

Amsterdam metropolitan area and beyond. Research often fails to take the diversity of populations and societies into sufficient account, and inclusiveness in research must be improved. Moreover, the public health research workforce will be increasingly diverse. APH is convinced that science is best pursued with a wide diversity of staff members and teams: different people who bring their own knowledge, values, and experiences to the task and who respect one another within the context of team science. This implies a diverse and inclusive working environment offering equal chances and opportunities to all.

The Amsterdam UMC and VU have policies in place to ensure openness, healthy and safe working environments and inclusivity and diversity. Specifically, Amsterdam UMC has appointed a Diversity & Inclusion (D&I) Program Group and a D&I Steering Group to embed diversity and inclusion within Amsterdam UMC, by carrying out concrete actions and, stimulating and supporting colleagues and other stakeholders with ideas and initiatives. The Amsterdam UMC and VU have established support offices to ensure a safe social environment, to combat unethical or undesirable behavior, to increase employees' and managers' sense of ownership and responsibility in response to evidence of misconduct, and to promote an open reporting culture and a caring organizational attitude. Amsterdam UMC and VU have also installed a diversity officer to increase awareness and implement DEI-related activities within the organization. By signing the Talent to the Top charter, Amsterdam UMC and its research institutes have committed to ensuring that more women are in top and sub-top levels. An example of how this is promoted is the UMC's Female Career Development program. Both Amsterdam UMC locations use their institutions' portions of the NWO Aspasia Grants to help female researchers progress to higher career levels.

APH complies with such institution-level policies and ambitions and, where possible or needed, develops additional policies or activities. APH is committed to intensifying its efforts on the topics of DEI in the coming years. In late 2022, the APH DEI Committee was created as a bottom-up initiative with dedicated APH researchers. The committee was introduced in 2023 at the APH Annual Meeting, with DEI as the overarching day theme. The DEI committee aims to promote diversity, equity and inclusion in research practice and the research environment (e.g., the APH researcher's workplace). The committee organizes and facilitates different DEI-related activities such as workshops to create awareness and meetings to share knowledge with fellow researchers. For the upcoming period, the DEI committee will further solidify its strategy and action plans, implement a communication strategy in which they use APH communication channels to promote the committee and DEI-related topics and lastly, continue with actions that are aligned with the overall goals of the committee. These goals are to focus on improving research practice and the research environment by aligning with DEI-principles and practices. After the committee establishes itself further within APH, options to strengthen their connections and embedding within the affiliated organizations will be explored further.

## **Sustainability**

Both environmental and social sustainability are challenged nowadays. With regards to environmental sustainability, climate change is the greatest public health challenge for the 21st century and future generations. With regards to social sustainability, increasing health inequalities and staff shortages in for instance healthcare are major challenges.

In autumn 2021, APH organized a networking afternoon entitled Sustainability and Health. It formed the kick-off for active APH involvement in promoting research on environmental sustainability, health, and healthcare in Amsterdam UMC and the VU. The session was followed by an inventory among APH researchers to identify ongoing research activities and research gaps relating to sustainability. Overall, this research field is still clearly in its infancy. To further stimulate such research, several APH research programs have included sustainability in their priority themes for funding opportunities. APH will strengthen their connection with the

Centre for Sustainable Healthcare established by the Amsterdam UMC. One result has been the formation of an online community of researchers and health professionals who share interests in health-related environmental sustainability and who exchange activities and developments on that topic. To further boost awareness across organizations of the environmental footprint of the healthcare sector, APH initiated a PhD project in 2021 on assessing and mitigating the environmental footprint of clinical care pathways. APH researchers are also increasingly taking part in internal and external activities and discussions (such as Amsterdam UMC Green Teams, the Amsterdam Sustainability Institute, or network meetings in organizations like Royal Netherlands Academy of Arts and Sciences (KNAW) and Netherlands Federation of University Medical Centres (NFU)) to prioritize sustainability on research and knowledge agendas. For the upcoming years APH will further strengthen sustainability efforts within its research network and with its affiliated organizations focusing on environmental (planet) and social (people) sustainability. APH will stimulate efforts on three interrelated categories: (i) research towards a sustainable healthcare system; (ii) research on the interactions between climate change, health, and healthcare; (iii) sustainable (planet & people) approaches to conducting medical, biomedical, and public health research. Given the dynamics in the field of sustainability, health and healthcare, and the importance of increasing researcher involvement, there is an all-embracing need to ensure financial, methodological, and research support to researchers. APH will closely work with the Center for Sustainable Healthcare to fulfill that need and will redirect funding to the research areas in question. APH will also focus on sustainable (planet & people) practices of researchers themselves. For example, we will adopt the tighter travel guidelines of Amsterdam UMC for APH's work visit grants that are provided to most often junior and mid-career APH researchers for conferences and work visits abroad. Social sustainability is also given attention by the content of our research on e.g., reducing health inequalities, or promoting healthy work environments to improve sustainable employability, particularly in sectors with staff shortages. In addition to environmental and social sustainability, financial sustainability is essential for a sustainable healthcare system. Although financial sustainability is not a key topic in APH research, it is intertwined with staff shortages, limited natural resources and challenges with regards to respecting planetary boundaries.

### **Digitalization and artificial intelligence**

Digital solutions, technological innovations (e.g., Artificial Intelligence), and big data offer new opportunities in the areas of diagnostics and treatment, prevention, and the organization and management of healthcare services at individual, institutional, and system levels. Digitization is pivotal for addressing the health and healthcare challenges our society faces today. Innovations can help to curb healthcare costs and keep healthcare manageable and responsive. Digital technology and big data can play a decisive or catalytic role in predictive medicine and personalized disease prevention, in decision support tools for healthcare practitioners and policymakers, and in supporting people in self-managing their health through wearable technology and health apps. Despite the many promising applications of digital technology in healthcare, there are still many limitations and challenges to overcome from medical, ethical, legal, and social perspectives before sustainable implementation can take place. APH sees opportunities to be at the forefront of rapid developments in data science and artificial intelligence. To this end, we will build on collaborations of APH researchers with expertise in quantitative methods, ethics, and implementation with computer scientists at the VU, UvA, and technical universities. APH is additionally funding a PhD project on the ethical requirements for the use of digital technology in healthcare. In 2023, APH created a new research program specifically dedicated to digitalization and its underlying research theme: Digital Health. The aims are proactively stimulating research on the development, evaluation, and implementation of digital tools and by fostering the smart, fair, and ethical use of data that can ensure health equity for all. The purpose is to support individuals, patients, providers, and



healthcare systems in their respective roles and responsibilities. Alongside this new research program, the APH SQC will enrich the APH Quality Handbook with guidelines for APH researchers around the developments and sustainable use of AI, and the benefits and impact on public health research. For the upcoming period, APH will search for the added value of efficient implementation of technological instruments for health and care services, while seeking to overcome the inherent risks, by optimally engaging health practitioners, policymakers and the public.

## Governance structure

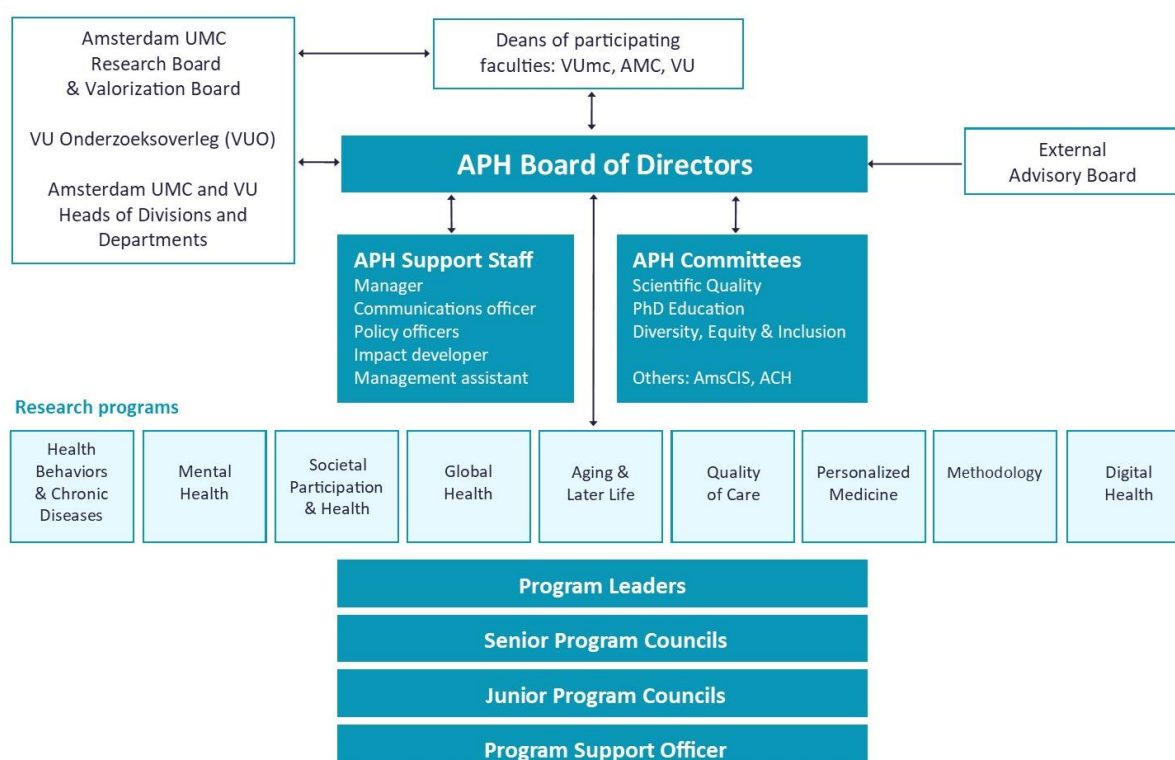
The Amsterdam Public Health research institute is a research network incorporating over 1,900 researchers with a wide variety of disciplinary backgrounds. APH was officially launched in 2016 and is one of the eight research institutes within Amsterdam UMC. As interfaculty research institute APH connects Amsterdam UMC researchers with researchers from two other health-related VU faculties, i.e., Faculty of Science, and Faculty of Behavioural and Movement Sciences. APH forms an important link between academic research and inpatient clinical care, outpatient care, society, and health policy. Beside these formal collaborations, APH welcomes other partner organizations. Researchers working in additional faculties in the VU and the UvA, and in other organizations like the local universities of applied sciences (HvA, InHolland) and the Public Health Service of Amsterdam (GGD), are increasingly joining our network. Much research performed within APH is designed to have a direct impact on society, policy, and practice to improve health of current and future generations. Together with academic and non-academic partners, APH promotes state-of-the-art scientific research to enhance the health and well-being of individuals, communities, and populations across the life course.

## Building phases

As part of the merger between the medical centers VUmc and AMC (into Amsterdam UMC), a then-existing research institute known as EMGO+ (Institute for Research in Extramural Medicine), with about 750 researchers from VUmc and VU in four research programs, was expanded in 2016 into the Amsterdam Public Health research institute, affiliating over 1,250 researchers in eight research programs. In 2017 APH began initiating new APH research efforts, while also completing all of the ongoing EMGO+ activities. A major focus from 2017 to 2019 was on merging the three public health research communities (from the VU, VUmc, and AMC). As a result of that scale expansion, APH was seeking an identity and a best fit into a larger, more complex academic setting. In this building phase the focus was on achieving internal cohesion. From 2020 onwards, the focus expanded slightly to external profiling and to mitigating the impact of the COVID-19 pandemic on the well-being, health, and work of APH researchers. Over the years, APH grew to more than 1,700 researchers participating in the research network. APH's activities are founded by a strategic plan that forms the basis for innovations and initiatives to support APH researchers and to connect with partners in society, health policy, and practice, especially in the Amsterdam metropolitan area. As part of the six-year accountability cycle, in 2023 APH performed an external full-term evaluation of the years 2017 to 2022, based on the Strategy Evaluation Protocol established by UNL, NWO and KNAW, which also included an onsite visit by an external evaluation committee. Thereafter, APH recalibrated its strategy for the period 2024 to 2027, incorporating the recommendations of the external evaluation committee and responding to upcoming grand challenges for public health. As from 2024, the APH research institute with almost 1,900 researchers, will be looking forward and outward, in order to be a future-proof research institute anticipating on the societal developments and challenges around us and assuming responsibility to actively contribute to health and well-being of current and future generations.

## Governance and organization

The APH research institute is led by a team of one director and two vice directors, forming the *APH Board of Directors* and representing Amsterdam UMC and VU. The board leads the research institute, and in consultation with the deans of faculties of the affiliated organization, fellow research institute directors and heads of division and departments, sets strategic research policy within the APH research network complementary to central policies of Amsterdam UMC, VU and UvA. Daily operations of the research institute are delegated to *APH Support Staff*, which include a manager, communication and policy officers, an APH-IXA impact developer and a management assistant. The organizational structure of the research institute is depicted in **Figure 1**.



**Figure 1** – Organizational structure of the Amsterdam Public Health research institute

## Research programs roles

APH has organized its research into nine research programs (further described in the next chapter). These are aligned with major public health themes: Health Behaviors and Chronic Diseases; Mental Health; Societal Participation and Health; Global Health; Aging and Later Life; Quality of Care; Personalized Medicine; Methodology; and Digital Health. Each of these nine research programs is led by two *Program Leaders* and supported by a *Program Support Officer*. Program Leaders are responsible for shaping a broadly supported strategic course of their own research program, contributing to APH's overall course, and fostering cohesion and synergy between the research programs. They also ensure a favorable environment for collaborations among researchers both within and between research programs. The Program Leaders chair their *Senior Program Council*, composed of 4 to 6 senior researchers, who meet at least semi-annually to implement or update program-specific strategies and to discuss proactive or reactive responses to external developments and opportunities. Each research program additionally has an appointed *Junior Program Council*, composed of 3 to 5 junior or mid-career researchers. This council provides Program Leaders with recommendations, either upon

request or on its own initiative, from the perspective of junior researchers. Additionally, the council helps to organize program-specific activities, workshops and networking events.

### **Dedicated committees**

APH has established three committees: the Scientific Quality Committee (SQC), the PhD Education Committee and the Diversity, Equity & Inclusion (DEI) Committee. The *Scientific Quality Committee* co-develops and supports the implementation of APH-specific policies on research quality, while also monitoring policies of Amsterdam UMC and the VU related to the quality and integrity of academic research. The *PhD Education Committee* coordinates APH-specific doctoral education activities, provides guidance and support to PhD candidates – such as ensuring adherence to university education policies and guidelines – and increasingly supports the network of postdoctoral researchers within the research institute. The *Diversity, Equity & Inclusion Committee* aims to co-create initiatives with APH researchers to promote an inclusive working environment and inclusive and diverse academic research within APH. The committee advises the APH Board of Directors, shares best practices on DEI-practices within the research institute, implements various DEI-related activities and events to enhance knowledge and awareness, and collaborate with internal and external stakeholders, as well as APH researchers, to embed DEI-practices through educational activities and leadership programs.

### **External advisory board**

APH installed an External Advisory Board consisting of external members from national partners such as GGD Amsterdam, National Institute for Public Health and the Environment (RIVM), Trimbos Institute, Dutch Federation of Patients, Lareb, and the Netherlands School of Public and Occupational Health. The External Advisory Board provides guidance on the overall strategy of the research institute including the viability of existing research programs or the need for new research programs. Members are selected on their administrative, academic and/or policy experience deemed relevant to the adopted broad definition of public health research, APH and for their interest in transmurals and extramural healthcare and research. Members have no direct interest in the research institute. The APH Board of Directors strives for a balanced composition of members representing the various areas within APH, and continues to organize an advisory board meeting once a year.

### **Board of deans**

The APH Board of Deans consists of the corresponding deans of the faculties of the affiliated organizations: Faculty of Medicine of VU and UvA (Amsterdam UMC), Faculty of Science (VU) and Faculty of Behavioural and Movement Sciences (VU), vice dean of research (Amsterdam UMC) and head of division 10 (Amsterdam UMC). The APH Board of Directors meets the board 1-2 times a year, where the board monitors the research institute regarding strategy, funding and viability.

## Research programs

We organize our research in nine research programs covering public health areas. There are five research programs (horizontal) focusing on specific public health themes/topics and different target groups form the life course which are complemented by four research programs (vertical) focusing on innovation and methodological advancement.

### Health Behaviors & Chronic Diseases

#### Background and research themes

The APH Health Behaviors & Chronic Diseases (HB&CD) research program focuses on health behaviors (alcohol use, dietary behavior, physical activity, sedentary behavior, sleep and smoking), and their role in the prevention and management of chronic (non-communicable) diseases such as diabetes, cardiovascular disease and cancer and their consequences for functioning, quality of life, and wellbeing. Health behaviors are shaped by a complex interplay of factors; conditions in which people are born, grow up, live, work, age and individual features. Promoting healthy behaviors requires multifactorial interventions in the complexity of real-life settings. Interventions should both address the environment and the individual and therefore demand consideration of various factors and actors within a broader system.



The mission of the HB&CD research program is to create, exchange and disseminate knowledge on health-related behaviors and develop, implement and evaluate policy and interventions. We focus particularly on the mechanisms shaping these behaviors, their impact on health, and health promotion strategies. In doing so, we aim to reduce the burden of chronic diseases and related functional limitations and improve quality of life/wellbeing. We prioritize groups with a

high risk of developing chronic diseases across the life course, including people in lower socio-economic position and from ethnic minority groups, to reduce social health inequities.

Our research centers around:

- The distribution and patterns of health behaviors across the population and changes over time.
- The mechanisms and determinants underlying health behaviors across micro-, meso- and macro-levels, including individual, environmental and genomic factors.
- The measurement of health behaviors.
- The impact of health behaviors on chronic diseases, functioning, quality of life, and wellbeing.
- The development, implementation and evaluation of interventions, integrated- and system approaches promoting healthy behaviors.

The research program has a strong focus on maximizing the societal impact of research through close collaboration with actors in the public health domain and related domains such as the social domain, build environment and education and with policymakers and citizens. These collaborations ensure timely insight into societal needs, enabling us to adapt effectively to emerging public health challenges and achieve impactful responsiveness. We aim to apply a participatory and systems science approach, involving a diverse and inclusive range of end-users in the development, implementation and evaluation of interventions with special attention

to potential broader implementation. Our research is interdisciplinary, integrating insights and knowledge from a broad range of disciplines, such as epidemiology, psychology, anthropology, social- and human movement science, complexity and system science, and public administration. We are committed to conducting research that respects environmental sustainability and adheres to ethical standards.

### **Internal and external collaborations**

The main goal of the HB&CD research program is to improve collaboration and knowledge exchange between researchers from Amsterdam UMC, UvA and VU, creating a well-connected and inspiring network of HB&CD researchers. Specific strategies include:

- Organization of (subgroup) HB&CD meetings and sharing information on relevant events for HB&CD researchers via e-mail and social media to facilitate connections and keep members informed.
- Funding and supporting HB&CD working groups to facilitate a network for knowledge exchange, methodological discussion and innovative scientific approaches.
- Organize a yearly writing retreat and sharing news on grants, vacancies and activities of the Junior- and Medior Program Council to connect HB&CD researchers and facilitate collaboration.
- Awarding work visit grants and supporting the Junior- and Medior Program Council to strengthen the HB&CD research network and the professional development of junior and medior researchers.

To strengthen and expand collaborations with other APH research programs, we aim to:

- Organizing and supporting joint workshops and lectures, for example at APH Annual meetings, to foster knowledge exchange and networking.
- Encouraging Junior- and Medior Program Councils in organizing joint activities.
- Actively expanding outreach by opening our program-specific Special Interest Groups (SIGs) to researchers from other programs, strengthening cross-program collaborations and fostering broader engagement across the APH research community.

We closely collaborate with actors in the public health domain such as health promotion professionals, clinicians, sport coaches, neighborhood managers, midwives and policymakers, but also with the social domain, built environment and education. We apply a participatory and systems science approach, involving a diverse and inclusive range of stakeholders' end-users.

Our research program represents approximately 250 researchers, including 150 PhD students, mainly across the following departments:

- Amsterdam UMC: dept. of Public and Occupational Health, dept. of Epidemiology and Data Science, dept. of General Practice, dept. of Obstetrics and Gynecology, and dept. of Clinical Informatics.
- VU: dept. of Health Sciences and dept. of Biological Psychology.
- UvA: dept. of Communication Science, research group Health Communication.

The connection with our line organization is maintained through departmental representation in the Junior and Senior Program Council, ensuring consistent communication and shared decision-making.

To maintain and strengthen the connection, we will:

- Ensure balanced representation from the departments in Program leaders, and Junior and Senior Program Councils, which will help address diverse needs and perspectives and foster an inclusive approach to program strategy and activities.



- Establish cross-departmental meetings and workshops to discuss ongoing research activities, align priorities, and identify collaboration opportunities.

### **Innovative and futureproof research**

We are faced with the following public health challenges:

- Persisting socioeconomic and ethnic inequalities: Our research projects use a participatory approach, engaging citizens and stakeholders in the design and implementation of interventions that are culturally and contextually tailored, making health interventions more accessible and impactful.
- Digital inclusion: We recognize the increasing role of digital tools in health promotion and work to ensure that digital health interventions are accessible and user-friendly across varying levels of digital literacy. By involving end-users from different digital literacy backgrounds in the design phase, we create more inclusive interventions, bridging gaps in access and enabling more effective reach to underrepresented groups.
- Implementation of public health interventions beyond public health settings: Many interventions require implementation in a setting outside public health (e.g., schools, municipality). To facilitate effective implementation, we engage these stakeholders from the start of the research project.
- Increase in chronic diseases (e.g., cardiovascular diseases, diabetes, and obesity): This increase highlights a need for preventive interventions and measures targeting health behaviors. HB&CD research responds by developing, implementing and evaluating interventions that promote healthier behaviors using participatory and system-based approaches.
- The complexity of societal influences on health behavior: Our research applies systems science to address the broader built-, social-, political- and economic environmental influences. By collaborating with diverse stakeholders to create supportive environments, we aim to make healthy choices easier and more sustainable.
- Climate change: Lifestyle behaviors affect (e.g., dietary intake, food waste) climate change. Conversely, there is an impact of climate change on health and health behavior.

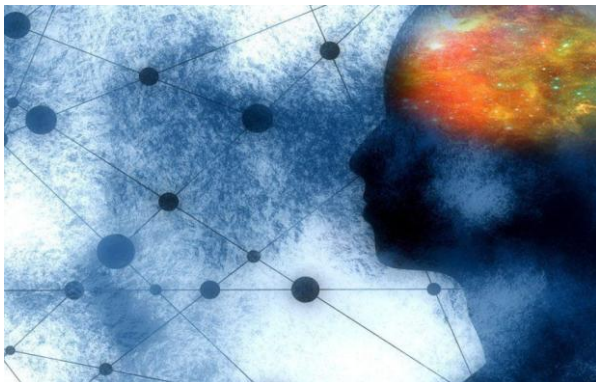
We apply the following strategies to futureproof our research program:

- Integrating sustainability principles: We explore pathways for achieving healthy behaviors while aligning with environmental sustainability while addressing the cultural and social needs of the population.
- Embracing diversity and inclusion: We engage diverse populations, including individuals from various socioeconomic backgrounds, levels of health- and digital literacy, and vulnerable communities. Including these perspectives enriches our understanding and ensures that findings are relevant and applicable to a broad spectrum of society, aiming to contribute to reducing socioeconomic health disparities.
- Advancing methodology and digitalization: HB&CD is at the forefront of developing systems science methodologies in public health. We integrate ethical principles to guide collaborative research with different population groups.
- Inter- and transdisciplinary collaboration and integration: To address complex health challenges, HB&CD promotes a transdisciplinary approach that integrates insights from different disciplines, making research more holistic, innovative and impactful.
- Investing in junior and medior researchers: By fostering talent development through Junior and Medior Program Councils, writing retreats, and work visit grants, HB&CD builds a resilient and adaptive research community.

## Mental Health

### Background and research themes

Mental health conditions have a high burden of disease. With the rise in mental health problems in society and an overstretched health care system, it is -now more than ever- important to tackle these current mental health societal challenges. The APH Mental Health (MH) research program aims to promote mental health and wellbeing by research on six current societal challenges in mental health. These challenges are defined in a MH Research Agenda incorporating the translation from understanding mental health to implementation in the treatment of mental health challenges to the implementation and organization of care. The themes of the research agenda can be summarized as follows: 1) Epidemiology and population health, 2) Promotion and prevention, 3) Etiology and development, 4) Application and intervention, 5) Implementation and evaluation, and 6) Policy and organization.



Our research approach aligns with APH's core values by for instance supporting and stimulating young talented researchers via work visit grants that specifically ask people to investigate green work visit options, project grants, by our network of researchers coming from different disciplines and sectors. In addition, persons with mental health conditions have historically been marginalized – by doing research in populations with mental health problems, and improving treatment and

care, we aim to reduce existing health disparities. Where possible, we strive to include people with lives experience in our research teams to ensure our work leads to meaningful outcomes.

### Internal and external collaborations

At the APH's Spring meeting of 2024, we asked departments to tell something about their research and how it aligns with the MH research agenda. This was very inspiring, mostly because it generated ideas on how the MH research program can be of added value to its members; identifying themes where we could join forces in the future. To be more connected to actual research, we have now implemented that in every Program Council meeting, we reserve time for a research presentation – it is after all the content of the work that connects us.

In 2025, we will have a call to establish Special Interest Groups (SIGs) where we will encourage proposals that include also external stakeholders. And as in 2024, our Junior Program Council will have a dedicated budget to organize events for junior researchers, one of which will be a writing retreat. We will have a work visit grant where this year for the first time it will not be about conference visits but work visits to external (research) groups.

Internal collaborations are abundant, with for instance much collaboration on themes such as Psyche & Soma. External collaboration exists directly already in the Senior Program Council with representatives from the Municipal Health Services (GGD) Amsterdam and the Center for Urban Mental Health, but our researchers also have strong collaborations with the other mental healthcare organizations such as GGZ InGeest, Arkin and Level, where various Academic Collaborative Centers have been formulated (e.g., Academic Collaborative Center for depression, anxiety, bipolar disorder, psychiatry for elderly, child psychiatry, Shift left (prevention and relapse prevention)). Via the to be formed SIGs, we hope to stimulate new external collaborations beyond the connections that are already present or strengthen existing collaborations with a joint project or proposal.

## **Innovative and futureproof research**

The societal challenges regarding mental health are the following (and incorporated in our Research Agenda):

- What is the impact of societal and environmental factors on mental health?
- How do we maintain and improve mental well-being?
- How do mental disorders arise and develop?
- How do we develop effective mental health interventions?
- How do we integrate interventions in accessible and effective care networks for all?
- How do we keep mental health care sustainable for patients and professionals?

The Mental Health research program houses multiple longitudinal cohort studies that help to address the first three challenges. In addition to these cohorts, a multitude of other study designs are being used that help address these societal challenges, including citizen science research, RCTs, qualitative research, care evaluations and cost-effectiveness research. Also, the MH community encompasses both clinical and research experts with diverse skills and expertise, including (P)ROMs, genetic designs, complexity science, digital monitoring, eHealth, epidemiology and so on.

An example of how the MH program's research can respond to challenges is the joint action of multiple mental health cohorts to rapidly implement the same COVID-19 questionnaire in their cohort studies, that allowed for the joint study of the mental health impact of COVID-19 on persons with and without depression, anxiety or obsessive-compulsive disorders. This study demonstrated that pre-existing mental illness did not necessarily seem to predispose to a greater level of emotional reactivity to the pandemic during the first weeks of lockdown (Pan et al. Lancet Psychiatry 2021). In the future, with the installment of SIGs that actively involve external partners/stakeholders, we aim to stimulate research that is addressing the societal challenges and that leads to meaningful outcomes.

## **Societal Participation & Health**

### **Background and research themes**

Participation in society is important to everyone. It provides purpose in life, structure and a social network, it is linked to better health and quality of life. Societal participation is defined as 'an individual's involvement in life situations' (WHO), including, among others, interpersonal relationships, paid work, informal care giving and digital participation. Due to increasing number of people with (chronic) health problems in the Netherlands, societal participation is becoming increasingly problematic for many people, warranting pragmatic, evidence-based solutions. At the same time, a significant group of people perceives difficulties in participating in a rapidly changing society. Government policies increasingly demand individuals to take on additional responsibilities, such as e.g., informal care giving, prolonged working careers and more self-management of health problems.



The aim of the APH Societal Participation & Health (SP&H) research program is to conduct research focused on engaging in, maintaining and improving societal participation. Special focus in our research is on people living in vulnerable circumstances, including groups with disabilities, with chronic health problems, workers with occupational disease or other complex work-related health issues, groups of youngsters transitioning from school to work, older workers, and groups with a lower socio-economic position. Societal participation is not an individual issue, but requires diverse, equitable, inclusive societies and organizations. In addition, within APH, our research program takes responsibility for a healthy academic work environment by setting good examples such as arranging support for high work demands, particularly in the postdoctoral career phase, facilitating discussions about scientific practice, including safe work environment. We will continue to support our Junior Program Council and Senior Program Council to participate actively in the research program.

The mission of the SP&H research program is to engage in, maintain and improve sustainable participation in society for all, including groups with and without health problems. The mission is furthermore, to set good examples for a healthy academic work environment for APH researchers and beyond. Our mission reflects APH's core values as follows:

- Diversity, Equity, and Inclusiveness: Topics of our research in which we promote equal opportunities for all, people with and without health problems, and contribute to reducing socio economic health inequalities.
- Engaging partnerships: Over the past years we have strengthened the relationships between different departments, to strengthen the connection between the different research groups focusing on societal participation and health in our program.
- Impactful responsiveness: Our researchers are working closely with societal groups, therewith ensuring societal relevance of our research.

#### **Internal and external collaborations**

- Connection and collaborations within SP&H: We will organize our second writing retreat to strengthen collaborations between the researchers within our research program. Furthermore, we have a very active Junior Program Council, and we have expanded our Senior Program Council with members who also work in practice. To end with, we organize events, provide project grants focused on starting new collaborations and on valorization of research findings.
- Connection and collaborations with other programs: We collaborate with the research program Digital Health, facilitated by two of our Senior Program Council members that are also actively involved in the Digital Health research program.
- External collaboration partners: We will continue and encourage further collaboration with other alliance research institutes, such as Cancer Center Amsterdam (CCA) and Amsterdam Movement Sciences (AMS). We will operate within our existing network of Academic Collaborative Centers, and other stakeholders and partners, such as Occupational Health and Safety Providers (HumanTotalCare (HTC), Arbo Unie, Zorg van de Zaak), the Employee Insurance Agency (UWV), municipality (Amsterdam) and (semi-)governmental applied research institutes (e.g. TNO, RIVM, and NIVEL). We liaise with family practitioners, medical specialists from departments within Amsterdam UMC and other healthcare

professionals. We also collaborate with the National Alliance Digital Society ('Nationale Alliantie Digitale Samenleving'), Dutch professional associations including the Netherlands Society of Occupational Medicine (NVAB), Netherlands Society for Social Insurance Medicine (NVVG) and the Federation of Medical Specialists (FMS), the Netherlands School of Public and Occupational health (NSPOH) in the medical specialist education of occupational and insurance medicine physicians. There is also a longstanding collaboration with Cochrane Work, Health and Social Security thematic group, that unites Cochrane Work review group and Insurance Medicine Field.

- Connection with the line organization: The SP&H research program was originally dominated by researchers focusing on work and health originating from the department of Public & Occupational Health. Over the past years, we have broadened our focus from paid work to participation in society, and network by connecting with other departments, such as Ethics, Law and Humanities (Amsterdam UMC), and more recently Sociology (VU). The coming years, we will strive to further strengthen this network to involve researchers from other departments of VU/Amsterdam UMC.

SP&H has the expertise on how to promote a healthy, safe and inclusive work culture in academia and we aim to contribute to the changes that are needed. We feel responsible to practice what we preach.

### **Innovative and futureproof research**

The main public health challenges we face are:

- Growing socio-economic health inequalities: These can be reduced by development and implementation of interventions that match the needs and preferences of the groups that need it the most. Targeting and engaging groups that are dealing with challenges with regards to health and participation rather than focusing on the total population is urgently needed.
- Social sustainability: Labor market shortages will increase in many sectors. Research on retention of e.g., healthcare personnel will contribute to social sustainability.
- A healthy, inclusive work environment in academia is a challenge, particularly in times of financial constraints: Taking care of our researchers by setting a good example and arranging support for high work demands, particularly in the postdoctoral career phase, is needed to protect the future of APH in particular and academia in general.

We apply the following strategies to futureproof our research program:

- We will use the SP&H grants to 1) support inclusive research designs to reach groups that need it the most and 2) continue to support collaboration between more departments within VU/UvA/Amsterdam UMC that focus on (aspects of) societal participation and health; 3) support implementation and valorization.
- We will organize SP&H meetings to facilitate connection with practice partners and exchange of experiences with collaboration between scientists and practice experts to promote inclusive research; to contribute to a safe, healthy and vibrant academic culture; and to support/contribute to implementation of open science practices, implementation and valorization etc.
- Organizing writing retreats and other combined scientific/social gatherings to strengthen cohesion within our research program.
- Support early and mid-career researchers (female- and diversity background) to stay in academia by contributing to a vibrant healthy academic work environment by promoting discussions about scientific practice, including safe work environment, scientific integrity and promote open science. Writing



retreats, and networking meetings can contribute to this. We will continue to support our Junior Program Council and Senior Program Council to participate actively in the research program.

## Global Health

### Background and research themes

The APH Global Health (GH) research program's mission is to contribute to health for all in a global context through research collaborations that foster interaction between theory, policy and practice. Its vision is to be leading in realizing the global elements in the Amsterdam UMC and VU's overarching and research-related strategic vision.



Several strategic objectives have been formulated as outlined below. These objectives align strongly with APH's core values; the Global Health research program strategy is supported by the explicit 'global health elements' in the Amsterdam UMC's overarching and research-related strategy for 2025-2030. In addition, a global health vision for Amsterdam UMC was formulated in 2024. Both the global health strategy and vision emphasize the importance of upholding ethical standards, and transparency in research, whilst

working together through sustainable partnerships. Given its mission, the GH research program can only exist by embracing diverse perspectives and fostering inclusive research and working environment to promote fairness and address health disparities across all populations and generations. Working across its rich disciplinary representation (clinical sciences, epidemiology, social science, psychology, data science, ethics - amongst others) and broad thematic basis (see below), the GH research program engages stakeholders and communities through its large international network including research institutes in low- and middle-income countries (LMIC).

The GH research program has a number of themes and topics that evolve over time, both in importance and in content and scientific direction, these include:

- Climate change and planetary health.
- Global child health.
- Global surgery.
- Health systems strengthening and governance.
- Infectious diseases of global importance.
- Migration and health.
- Non-communicable diseases and health problems of global importance, including cardiovascular and mental health and oncology.
- Sexual, reproductive and maternal health.
- Research fairness principle.

### Internal and external collaborations

The GH research program has formulated eight strategic objectives as indicated below:

- Provide young researchers with broad knowledge about the global health aspects of their topic/field of study.
- Stimulate a vibrant Amsterdam UMC and VU-wide discourse around topical themes in global health
- Develop new collaborative fields of research in global health within Amsterdam UMC/VU.
- Facilitate the award of collaborative grants in global health led by GH researchers.
- Engage additional disciplines within Amsterdam UMC/VU with activities in/potential for global health research.
- Stimulate research collaborations across the Amsterdam UMC/VU collective global research network in a mutually beneficial manner.
- Facilitate the availability, curation and analysis of datasets across the Amsterdam UMC/VU collective global research network in a mutually beneficial manner.
- Define and have adopted Amsterdam UMC and VU-wide standards for equity, diversity, inclusiveness and fairness in research collaborations with institutes and researchers abroad, in particular in LMIC.

In order to achieve these objectives, several activities have been identified on which to focus in the coming years including:

- Enhance new and existing collaboration in global health across APH research programs, e.g. through collaboration grants. The GH research program collaborates in various research programs within the Amsterdam UMC/universities, including the APH research programs Quality of Care, Methodology, Aging & Later Life, and Digital Health.
- Enhance new and existing collaboration in global health with the other research institutes of Amsterdam UMC and beyond, e.g. through symposia and workshops; these include the Amsterdam Infection & Immunity research institute, the Amsterdam Institute for Global Health and Development (AIGHD), the Amsterdam Municipal Health Service (GGD), Global Child Health, Global Surgery Amsterdam, KIT Health, PharmAccess, Amsterdam Health & Technology Institute (ahti) and Equator Foundation.
- There are extensive collaborations with research institutes in LMIC including University of Ghana, Makerere University (Uganda), College of Medicine (Malawi), Centre de Recherches Médicales de Lambaréné (Gabon), Mahidol and Chulalongkorn Universities (Thailand), Stellenbosch University (South Africa), African Population Health Research Center (Kenya), amongst others. Collaborations with European global health institutes include the universities of Barcelona, Oxford and Tübingen as well as the Institute for Tropical Medicine Antwerp, the London School of Hygiene and Tropical Medicine and the Liverpool School of Tropical Medicine.
- Given the extensive international collaborations, many PhD candidates of GH are physically located in overseas countries. In the coming years, these PhD candidates will need to be better connected and included in the Junior Program Council, e.g. by facilitating participation in activities online.

The GH research program aims to increase its visibility within APH as a whole and this will require stronger connection with the APH research program organization.

### **Innovative and futureproof research**

Strategic choices are made by the research program to make Global Health research sustainable, innovative, relevant and impactful:

- Broad knowledge to young researchers: Lecture and masterclass series on diverse themes in GH; dedicated work visit grants; and support to junior GH members and PhDs.
- GH discourse: Series of symposia/webinars on topical themes (e.g. accelerated product R&D, climate change and health, resilient health systems).
- New collaborative research fields: Seed grants associated with GH Discourse topics; small grants for secondary data analyses; and collaboration grants.
- Collaborative grant applications: Write shops and short-term postdoc grants to support large consortium applications (e.g. Horizon Europe, EDCTP3).
- Engage new disciplines: Bring on board clinical and preclinical disciplines with interest in GH in research program and Junior/Senior Program Council.
- Global/research network: Establish Amsterdam UMC-wide research fairness principles; develop catalogue of research collaborations and points-of-contact.
- Data curated and analyzed: Support data sharing and collation for secondary data analyses within existing and new research collaborations.
- Advise on Amsterdam UMC global health strategy: Advise on strategic and implementation activities that are relevant to the GH research program activities (e.g. ethics, equity and fairness in research).

## Aging & Later Life

### Background and research themes

The APH Aging & Later Life (A&LL) research program focuses on improving our knowledge on the complex process



of aging, being old, and experiencing the last years of life, and use this increased understanding to design and evaluate preventative treatment and care strategies. The research program explores four themes:

- Aging and well-being in urban environments: This theme examines how urban living affects the physical, mental, and social well-being of older adults. It investigates how the built environment, public policies, and social structures impact aging. It aims to, on the one hand, create age-friendly cities that promote independence, active participation and access to essential services, and, on the other hand, to increase resilience of older adults to urban stressors.
- End-of-life care and the last phase of life: Focused on the final stages of life, this theme explores person-centered, compassionate approaches to end-of-life care, both at home and in long-term care facilities. We aim to better understand the needs, preferences, and experiences of older adults during this phase, as well as the role of caregivers, healthcare professionals, and community systems in ensuring equitable access to quality care.
- Aging and social inclusion: This theme addresses social isolation and exclusion among older adults, exploring the role of community engagement, social networks, and intergenerational relationships in promoting inclusion. We aim to identify strategies to reduce age-based disparities and ensure equal access to services for community-dwelling older adults. Social factors impact the ability to age in place, often driven by health inequalities, disparities in healthcare access, and varying preferences for aging in

place. Our research can guide policies and programs to more equitably support aging in places across diverse populations.

- Collaboration and policy innovation in aging: We prioritize fostering partnerships with municipal authorities, community organizations, and healthcare providers to create innovative policies and interventions for aging populations. This theme emphasizes collaboration to improve service delivery, accessibility, and overall quality of life for older adults through multidisciplinary teams.

The mission of our research program is to advance knowledge and create actionable solutions for the aging population, with a special focus on the later stages of life. We aim to improve public health and well-being by addressing aging-related challenges through evidence-based research, policy development, and community engagement.

Reflection on APH's core values:

- Green Scientific Excellence: We ensure ethical, transparent research that promotes sustainability and respects environmental boundaries, particularly in healthcare and urban planning.
- Diversity, Equity, and Inclusiveness: We engage diverse populations, addressing health disparities and ensuring equitable access to services for all older adults.
- Engaging Partnerships: We foster collaborations with municipalities, healthcare providers, and community stakeholders to develop solutions that are relevant and impactful.
- Impactful Responsiveness: By adapting to emerging needs by an aging society, we ensure our research delivers meaningful outcomes that improve aging and end-of-life care for older adults.

#### **Internal and external collaborations**

To foster stronger connections and collaborations within the Aging & Later Life research program, we will implement several initiatives:

- Inclusive events: All events will be open to researchers at all career stages, ensuring that junior, intermediate-stage, and senior researchers can interact and collaborate.
- Junior Program Council integration: The Junior Program Council will be invited to join the Senior program Council, providing them with a platform to voice their ideas and contribute to decision-making processes.
- Funding for activities: Increased funding will be allocated to the Junior Program Council to organize activities, including those involving older adults and skill-building courses for members.
- Work visit grants: We will continue to offer work visit grants to juniors and now also including intermediate stage researchers, enabling them to attend conferences and workshops, thereby expanding their networks and knowledge.
- Coffee and Research: A monthly webinar to give the floor to Aging & Later Life researchers to present their work, receive input from colleagues and initiate collaborations.

Expanding external collaborations:

- Joint events: Organize joint events such as seminars, conferences, and workshops with other research programs to promote knowledge exchange and collaborative opportunities (i.e. medical ethical conference with Oxford university in 2026 and setting up a collaboration for 2027 with SWEAH, the Swedish national graduate school on ageing and health).

- Invite national and international speakers who are editors or senior researchers to foster academic collaborations and knowledge disseminations in addition to providing critical feedback on our networks own research.
- Regional partnerships: Strengthen ties with local stakeholders, such as the panel of older adults, to facilitate applied research and community engagement.
- Municipal collaborations: Setting up a network with partners from the municipality. For example, municipalities are trying to monitor elderly abuse from their own datasets. This is an opportunity for our network to collaborate with them to help address a knowledge gap.

### **Innovative and futureproof research**

The field of aging and later life faces several significant public health challenges:

- Aging population: The increasing number of older adults presents challenges in healthcare, social support, and economic sustainability. Research projects can focus on developing innovative care models, preventive health strategies, and policies that support healthy aging.
- Diversity in aging: Older adults have diverse needs based on cultural, socioeconomic, and health backgrounds. Research should aim to understand these diverse needs and develop tailored interventions that promote equity and inclusivity in aging.
- Aging in place: There is a growing emphasis on enabling older adults to live independently in their own homes, in part due to budget cuts by the government and staff shortages in long-term care facilities. Research can investigate technologies, community-based services, and policy frameworks that support aging in place.
- End of life care: Providing compassionate and effective end-of-life care is crucial, both at home and at long-term care facilities. Research can explore best practices in palliative care, advance care planning, and support for caregivers to ensure dignity and quality of life in the final stages.

In addition to these challenges, several opportunities can be mentioned that strengthen our research program and make the research sustainable and relevant:

- Stakeholder involvement: Engaging older adults and other stakeholders in the research process ensures that the research remains relevant and impactful. Projects should incorporate participatory methods to involve older adults in the design, implementation, and evaluation of research.
- Cohorts: Aging and Later Life has access to multiple longstanding cohort studies. This data can be used in answering a multitude of research questions to expand our knowledge.

## **Quality of Care**

### **Background and research themes**

With a multidisciplinary approach, our research contributes to improving quality of care in hospitals and other inpatient and outpatient settings. Our focus is to 1) optimize the quality of care for patients throughout the entire life cycle, from preconception to the end of life, 2) make healthcare more patient-centered, sustainable and accessible, with special attention to the most vulnerable populations, and 3) support the physical and mental health of healthcare professionals so that they can deliver high quality of care. Through these themes, we also prioritize ethical and legal aspects into account in all our activities, while actively working to reduce research waste and ensure efficient use of resources.



In the APH Quality of Care (QoC) research program, we conduct rigorous and appropriate research to make healthcare more patient-centered, sustainable, and accessible, optimizing the quality and impact of care for individuals and groups of patients. We do this by: 1) improving quality of care across disciplines by actively seeking the patient's perspective and involving patients throughout the research process, 2) improving management of care via more effective implementation,

better communication, appropriate use of tools and technology, and better functioning of multidisciplinary teams, 3) monitoring general and patient-specific health outcomes, 4) reducing health disparities, and (5) addressing ethical and legal considerations.

Reflection of APH's core values in the QoC research program:

- **Green scientific excellence:** The Amsterdam UMC Centre for Sustainable Healthcare is embedded in the QoC research program. The Centre supports our Green Teams and focuses on bridging research and implementation to drive sustainable change within healthcare. Moreover, our researchers are inspired to consider the environmental impact of their research.
- **Diversity, Equity, and Inclusiveness:** There are various research groups within our QoC research program with expertise in health literacy, equity and inclusiveness, shared decision making and general accessibility of care for the most vulnerable populations, e.g. those with low health literacy, sensory loss or other disabilities, and socioeconomically deprived conditions.
- **Engaging partnerships:** In the QoC research program we foster collaborations across sectors, disciplines, and regions to improve the quality of care and public health. We engage with regional research and care agendas in order to make more tangible improvements in quality of care within our own region.
- **Impactful responsiveness:** Researchers in the QoC research program respond to emerging public health, prevention and healthcare challenges and societal needs by engaging communities and stakeholders in collaborative research, ensuring meaningful outcomes that improve population health, shared decision making and well-being. Examples are:
  - Improving access to cancer screening for the most vulnerable populations by collaborating with public health institutions (GGD, RIVM) and primary care.
  - Improving shared decision-making regarding paramedic and lifestyle treatment options and aligning clinical care with the principles of the Integral Care Agreement (IZA) and Appropriate Care.
  - Examining healthcare services and systems on the boundary of prevention/public health and clinical care, such as care provided in midwifery practices and home healthcare settings.

#### **Internal and external collaborations**

- Our Program Council, composed of PhD candidates, mid-career and established researchers, represents some of the major Amsterdam UMC departments, ensuring a diverse perspective on research priorities.
- The QoC research program is strongly embedded in the line organization, particularly in the hospital, as many medical specialties are represented in our research program.
- There is a strong connection with prevention and public health (e.g. primary care, RIVM and GGD Amsterdam), enabling collaborative efforts to promote preventive care.

- Our annual innovation and work visit grants, along with the newly introduced secondary data analysis grant, foster collaboration, promote internationalization, and help minimize research waste.
- We facilitate connections between researchers to collaborate and inspire each other:
  - By promoting and maintaining our four Special Interest Groups on 1) Patient Reported Outcome Measures (PROMs) implementation, 2) Research waste, 3) Educational research, and 4) Vulnerable populations, we increase knowledge and stimulate collaborations across research groups within and outside the QoC research program.
  - ‘Eat-while-meet’ lunch sessions are organized by our QoC members four times a year on various topics that attract researchers from within our research program on both locations. This allows members from different departments to engage in a specific topic, creating opportunities for new collaborations.
- In our junior QoC events, PhD candidates are trained and informed about general research topics, e.g. utilizing graphic design in research.
- In January 2025, we will organize two writing days which include a workshop on writing routines. If successful, we will continue this initiative in the upcoming years. This allows people to get to know and learn from each other.

### **Innovative and futureproof research**

As a research program mainly embedded within the hospital, our main challenge is to not only focus on the quality of hospital care and healthcare systems but to address broader public health and prevention issues. One central focus is chronic disease management and care for diverse populations – many of whom live with multiple morbidity or represent other vulnerable populations. We are committed to addressing the complex needs of these populations, ensuring healthcare is accessible and equitable. One way we do this is by working together with (researchers from) other APH programs to create solutions to improve healthcare.

Moreover, we closely align with new challenges and opportunities in research, such as empowering people with a new generation of digital technologies, and close collaboration with industrial partners to facilitate the implementation of new technologies, tools, and services in clinical or daily practice. Moreover, we prioritize sustainability by diminishing utilization of polluting materials in healthcare. This is an initiative that has proven to be increasingly important. We also need to recognize the limited resources that are available for research and how to focus research on the most important challenges in healthcare and prevention and avoid research waste with our new Special Interest Group. By stimulating these topics, our QoC research program addresses current and emerging challenges and delivers impact for healthcare and society.

## **Personalized Medicine**

### **Background and research themes**

In the APH Personalized Medicine (PM) research program the healthcare responsiveness to the cultural, ethnic, socio-economic, and psychological, metabolic and genomic diversity in the population is studied to optimize prevention and treatment, including reduction of side-effects, by ‘tailoring’ to the diversity in individual characteristics. The research in Personalized Medicine aims to continuously develop, improve and tailor care, responding to evolving needs and emerging health (care) challenges from multiple perspectives (patient, health care system & society). We encourage multi-disciplinary collaborations and engage with stakeholders during the entire research cycle.





We study how innovations in prevention and care can be developed and implemented responsibly, taking technological, ethical, legal and social aspects into account. Furthermore, we focus on how health disparities can be addressed. Vulnerable groups, individuals with rare diseases or complex health care needs are specifically attended to in this research program.

### **Internal and external collaborations**

- Connection and collaboration within research program: Organization of events (e.g. expert meetings, debate), presentations from researchers at meeting of program council, writing retreats for junior and mid-career researchers, stimulating collaboration between researchers with similar interests (in our calls for grants and SIGs).
- With other research programs: Via SIGs and shared sessions at annual meetings, via members that are also affiliated with other research programs.
- External: Connections with patient organizations and community groups by involving them in all stages of the research, close contact with policy makers and advisors, disseminating findings to other health institutions, researchers and health care providers; making impact on health and (public) healthcare, informing policies via our research; engaging actively with other partners in consortia.
- With line organization: Embedded in many departments within Amsterdam UMC and strong connections with dept. of biological psychology of the VU.

### **Innovative and futureproof research**

Challenges we aim to address are the increase in individuals with complex health care needs and rising health disparities. Furthermore, technological developments, digitalization and AI require studies on responsible innovation. Society demands more personalized and person-centered care approaches, catering to the needs of our population. Vulnerable populations require specific attention. We tailor to these needs by supporting researchers to collaborate in our Special Interest Groups with focus on 1) Innovation and impact in personalized medicine, 2) Patient-centered care, and 3) Social determinants and inclusiveness.

## **Methodology**

### **Background and research themes**

The central theme of the APH Methodology (Me) research program is to develop, evaluate, implement, and apply methods for qualitative and quantitative research in public health, healthcare, and biomedicine. We have a specific focus on methods innovation and on current hot topics in methods research, such as responsible AI, method and methodological guideline development, Open Science, and inclusive and participatory action methodology. Our research includes elements of epidemiology, biostatistics, (bio)informatics, clinimetrics, psychometrics and qualitative research.



Our mission is to support, connect and inspire researchers, facilitate methods innovation and uptake and improve the quality of methodological research in order to contribute to health for all/the ever-growing health potential of individuals and communities. This is also further elaborated on our website (<https://aphmethodology.org/>). We embrace the APH Core values Green scientific excellence, Diversity, Equity, Inclusiveness, Engaging partnerships, Impactful responsiveness. This is reflected by the diverse

membership of our Program Councils, by our proactive collaboration with other APH research programs and groups/networks outside APH, by the types of grants (work visit, dissemination and booster grants) we offer, and by organizing activities such as writing days and network sessions at the APH Annual meetings.

### **Internal and external collaborations**

Our research program is based on the idea of collaborating and networking, as this is a prerequisite for generating new ideas, thinking outside the box, innovate and implement the developed methods. We will strengthen the connection and collaborations between researchers within our research program by organizing in-person tutorials, writing days and sessions at the APH Annual meetings. The content of these activities will also enable attendee to improve the quality of research done.

Collaboration with other research programs in organizing Annual meeting sessions will improve the connection and collaboration between the researchers of our research program and researchers of other research programs. We will explore possibilities of offering grant opportunities in a joint call, e.g. with Digital Health, around a theme that jointly serves the organizing programs. Another idea to link with other programs is via the Special Interest Groups (SIGs).

In the coming years we will focus more on collaborating with external groups, including but not limited to:

- Amsterdam Cohort Hub.
- Amsterdam Center Implementation Science.
- Genetics Network (GENE) Amsterdam.
- The VU Campus Center for Artificial Intelligence & Health.

We connect with the line organization in how we recruit our research program council members, by making sure that the departments where most of members work are represented. Our events are advertised in department newsletters and mailings. We plan to further connect by co-organizing events with Epidemiology and Data Science, Medical informatics and other departments.

### **Innovative and futureproof research**

We identified the following main public health challenges:

- Implementation of the developed methodology in clinical and public health practice and de-implementation of poor methodology.
- Responsible use of AI.
- Transdisciplinary collaboration in research (also citizens).

We will respond to these challenges by organizing events that focus specifically on them, to foster awareness, sharing of knowledge and ideas within the research program and with external parties. We will also take these challenges into account when offering grant opportunities to foster further research on these topics.

To ensure our research program is future-proof, sustainable, innovative, relevant and impactful we planned the following actions:

- We will survey our members to ask about their needs and expertise. This will give us a better picture of the research program members, their needs, expertise and research interests.
- We will continue all actions that proved successful in previous years. This means that 1) we will continue organizing events for our research program members to enable them to share knowledge and to network, 2) we will continue to collaborate with other programs and seek further collaborations with the departments and other parties, such as the SIGs, e.g. organizing joint events, 3) we will continue to offer grant opportunities.
- We will strengthen our communication about our research program. We have produced a video to introduce and generate more awareness of what we do (available at Amsterdam Public Health – Tutorials ([aphmethodology.org](http://aphmethodology.org))).
- We will also increase our visibility by continuously updating and improving our website by adding more tutorials which help to promote appropriate use of methods.

## Digital Health

### Background and research themes

The APH Digital Health (DH) research program aims to advance health and wellbeing by driving innovation and research in health, prevention and care (including mental health), supported by digital technologies. In response to evolving needs, it promotes public and clinical healthcare through innovative technologies, aiming for improved health equity across macro, meso, and micro levels. To further address health equity, the program incorporates a focus on diversity, inclusion, and accessibility of digital health, including digital health literacy. Researchers work on engaging underserved individuals and employ co-creation methods to ensure solutions are inclusive and equitable. The DH research program's core mission is to enhance prevention, care, and cure for citizens, patients, and caregivers, fostering autonomy and self-efficacy through digital solutions.



Our research themes include various research areas within or linked to digital health, such as e-health, data science (aligned with FAIR principles), artificial intelligence (AI), virtual and augmented reality (VR/AR), simulation, and mobile health. These areas cover the full spectrum of digital tools—from personalized, preventive care to AI-based prediction models and VR-supported clinical and educational applications. Through the development, testing, implementation and scale-up of these innovations, DH

aims to optimize health and longevity for all. The DH research program actively supports disease prevention and efficient care delivery as well as to support healthcare workers by advancing research on digital innovations. It focuses on building a strong, connected healthcare community that upholds ethical, fair, and equitable use of technology and data, reflecting APH's core values of collaboration, sustainability, integrity and multi-disciplinary collaboration. This commitment is also supported in national and EU-health policies like the Integral Care

Agreement (IZA) and the Amsterdam UMC strategy, situating Digital Health as a vital pillar in future healthcare.

Our mission is to position Digital Health as a key APH initiative, raising both public and scientific awareness while building a community dedicated to deployment of digital technologies including Artificial Intelligence, Virtual- augmented and mixed reality, and digital phenotyping, respecting ethical data use and digital health literacy. We support a wide array of research initiatives, from foundational research to implementation science and participatory action research across preventive and clinical medicine, including psychiatry.

APH Digital Health research themes include:

- Digital Health: Enhancing and researching e-health and digital tools for both healthcare and preventive medicine and psychology.
- Data Science: Researching FAIR data applications (including AI), with legal, ethical, and societal considerations.
- Artificial Intelligence (AI): Advancing AI tools for patient and professional use, focusing on trust and explainability.
- Virtual and Augmented Reality (VR/AR): Exploring VR and AR applications for clinical and educational support.
- Simulation: Improving healthcare delivery, effectiveness, and training.
- Mobile Health: Using mobile and wireless devices to enhance care delivery.

By fostering smart, ethical digital solutions, DH is dedicated to advancing healthcare, ensuring both individual and societal health improvements.

#### **Internal and external collaborations**

The APH Digital Health research program is dedicated to strengthening collaborations within and beyond its network to advance impactful research on digital health innovations. In 2024, we held our first writing retreat to foster collective research efforts and organize a worksite visit with our Senior Program Council to the Department of Strategy and Innovation of Amsterdam UMC. This visit enhanced mutual learning and strengthened collaboration. Internally, we are building a cohesive network among researchers across Amsterdam UMC, VU, and UvA, facilitated by two Program Leaders and Senior and Junior Program Councils. We aim to develop a supportive framework through thematic workshops, project grants, and structured events to facilitate collaboration. To foster cross-program connections, we will establish joint project grants, collaborate in APH-wide network events like the Annual Meeting, and engage in Junified events for junior and mid-career researchers. This approach enables interdisciplinary work that connects expertise from various APH research programs. We are actively searching and supporting programs such as *'Samen Digitaal'* (Amsterdam UMC), *'Expertisegroep Gezondheidsvaardigheden'*, VU Campus Center AI and other digital initiatives in our and associated organizations. Externally, we will further strengthen partnerships with key regional stakeholders, including HLTH Europe, Smarthealth Amsterdam, *'Alliantie Digitaal Samenleven'*, *'Alliantie Gezondheidsvaardigheden'*, National Institute for Public Health and the Environment (RIVM) and others. We also participate in the NFU Citrien 3.0 Program *'Digitaal mee in de zorg'* where we improve the accessibility of existing digital tools within Amsterdam UMC, preventive health care and the social domain. We see further opportunities with community groups and initiatives like Hacking Health Amsterdam and Amsterdam AI. Expanding these partnerships will help us address regional healthcare needs while contributing to national and international digital health initiatives, further catalyzing the impact of our research. By fostering collaborations across sectors

and disciplines, the DH research program is positioned to deliver on APH's mission to advance health for all, now and in the future.

### **Innovative and futureproof research**

The APH Digital Health research program addresses urgent public health challenges, such as providing accessible, person-centered digital healthcare solutions in an increasingly digitalized society. With a strong focus on research, routine care innovation, implementation, and policy, the research program aims to translate digital health advancements into practical and scalable solutions. Key areas include improving access to digital health tools, safeguarding data privacy, and adapting to advances in AI, mobile health, and virtual care platforms. Our projects focus on prevention, care, and cure, aiming to enhance health equity and inclusivity through scalable, person-centered digital solutions. By studying the application of technologies in a health context through for example virtual reality, digital phenotyping and digital therapeutics, AI, and mobile health, our research program addresses both somatic and mental health needs, in line with public health goals to improve community health outcomes. Our strategy emphasizes sustainability, inclusivity, and adaptability. We are committed to environmental sustainability by promoting digital tools that reduce healthcare's ecological footprint, such as telehealth services and efficient data usage in AI models. The research program underlines the use of FAIR data principles, ensuring that data is accessible and reusable for long-term benefit.

Our focus on digitalization and AI supports preventive and personalized care, supporting technology to improve health outcomes across various populations. However, digitalization also brings challenges, especially with rapid regulatory changes and industry developments that could outpace research. To meet these demands, we actively seek partnerships with industry, policymakers, and public health initiatives to align with emerging needs and contribute to sustainable implementation with impact.

### **Special interest groups**

At the intersections of the APH research programs Special Interest Group (SIG) can be created. The APH research programs concentrate their efforts around a defined public health area, however since research is often interdisciplinary and broader than a specific topic, interactions is required. For research topics that are interwoven between multiple research programs or are innovative and across research programs, Special Interest Groups can be installed. A SIG is defined as a community within a larger organization with a shared interest in advancing a specific area of knowledge, learning or technology where members cooperate to affect or to produce solutions within their particular field, and may communicate, meet, and organize meetings. These SIGs can exist for the short-term or long-term, depending on the needs, progress and developments. Within the APH research institute there are already some SIGs on different research program overarching topics, for example, around the topics of patient-reported outcome measures, vulnerable target groups in research, participatory research, system thinking, patient-centered care, Responsible implementation of new technologies, and intersectionality. In the upcoming years, APH and the research programs will further develop the SIGs according to the preferences and needs of APH researchers