WMA
Junior Doctors Network

WORLD MEDICAL ASSOCIATION

JUNIOR DOCTORS NETWORK

2026

SPECIAL EDITION BULLETIN ON NCDs

(Non-Communicable Diseases)

www.wma.net/junior-doctors/

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ISSN (ONLINE) 2312-220X

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About WMA JDN

What is the JDN?

The Junior Doctors Network (JDN) serves as an international platform for junior doctors to facilitate an open dialogue of global events and activities that are relevant to their postgraduate training and the World Medical Association (WMA).

It was created at the 61st WMA General Assembly (October 2010) in Vancouver, Canada and the inaugural JDN meeting was held at the 62nd WMA General Assembly (October 2011) in Montevideo, Uruguay. The network, which started from a few motivated junior doctors, now has a total of over 900 members from more than 90 countries from all regions of the world.

Junior doctors are defined as physicians, within 10 years after their medical graduation.

What is the mission?

The purpose of the JDN is to empower young physicians to work together towards a healthier world through advocacy, education, and international collaboration.

What do we do?

Networking:
During the regular JDN meetings, members get to know each other, discuss global health issues, share challenges, and start collaborations on global health issues. The JDN meets on several occasions during the year, both in-person and via online teleconferences:

- Biannual meetings in conjunction with the Council Meeting and the General Assembly of the WMA (April & October).
- Monthly general membership and management team teleconferences
- Ad-hoc online and webinars organized by the JDN

MANAGEMENT TEAM

Meet the WMA JDN Leadership

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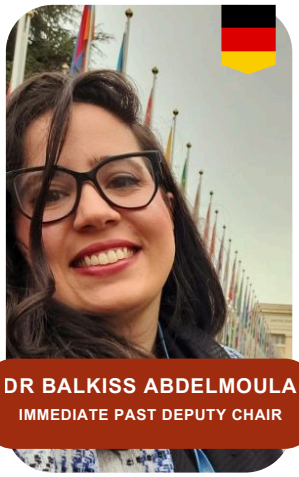

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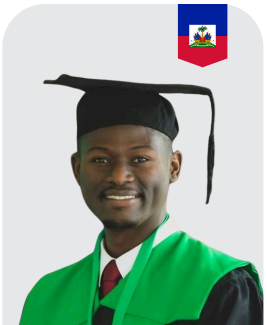

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SPECIAL FOREWORD

DR KRUPAL JOSHI

AIIMS - RAJKOT (INSTITUTE OF NATIONAL IMPORTANCE)
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Dear Junior Doctors worldwide,

It gives me immense delight to welcome you to this special edition bulletin focusing on the critical and growing challenge of non-communicable diseases (NCDs). Non-communicable diseases pose a significant threat to the advancement of the 2030 Agenda for Sustainable Development, including the key target of reducing premature mortality by one third from the four major NCDs—cardiovascular diseases (with hypertension as a leading risk factor), chronic respiratory diseases, cancers, and diabetes.

The rising burden of NCDs is often masked by delayed diagnosis and inadequate health-seeking behavior. The development and progression of these conditions reflect a complex interplay of genetic predisposition, sociocultural influences, occupational exposures, and environmental determinants. Understanding this multifaceted relationship is essential for mitigating major risk factors such as unhealthy lifestyles, substance use, metabolic conditions including hypertension, elevated body mass index (BMI), and diabetes. Effective prevention and management strategies must therefore integrate both time-tested public health approaches and innovative, evidence-based solutions.

As the saying goes, “it takes two to tango”—strengthening health systems alone is not sufficient. There is an equally urgent need to enhance community participation and intersectoral collaboration to effectively address this emerging epidemic and to build a sustainable, people-centered model of care.

In this context, the role of junior doctors and early-career physicians across the globe deserves special emphasis. As frontline healthcare providers, advocates, researchers, and future leaders of health systems, junior doctors are uniquely positioned to drive early detection, patient education, community outreach, and policy advocacy related to NCD prevention and control. Their active engagement in NCD-focused clinical practice, research, public health initiatives, and leadership platforms is essential for translating global commitments into local impact and ensuring continuity of the NCD agenda across generations of the medical workforce.

I sincerely appreciate all contributors whose valuable insights and experiences have enriched this special edition. I hope this bulletin ignites renewed zeal, collaboration, and commitment, especially among young physicians to collectively confront the global NCD burden.

Let us shape a healthier future together.

FOREWORD BY
CHAIR

Dear Junior Doctor colleagues,

It is an honor to introduce this Special Edition of the WMA Junior Doctors Network Bulletin dedicated to Non-Communicable Diseases (NCDs). This edition arrives in a landmark year for global health, marked by the United Nations High-Level Meeting on NCDs and a renewed worldwide commitment to prevention, treatment, and long-term care.

For the JDN, this is also a historic moment. The launch of our first dedicated Working Group on NCDs reflects the growing recognition among our members that these conditions define much of today's clinical and public health landscape. The enthusiasm, engagement, and leadership shown across our network demonstrate how deeply junior doctors care about advancing equity, quality of care, and strong health systems capable of addressing the rising burden of NCDs.

I extend my sincere appreciation to all contributors and to the Publications Team for making this special edition possible. Your work strengthens our collective voice and reinforces the essential role junior doctors play in shaping the future of global health.

Warm regards,

Dr Pablo Estrella Porter,
Chair,
Junior Doctors Network,
World Medical Association.

FOREWORD BY
SECRETARY

Dear Readers,

Non-communicable diseases define not only the epidemiological reality of this century, but also the professional identity of a generation of junior doctors who are learning, leading, and labouring in their shadow. This special edition of the WMA Junior Doctors Network Bulletin on NCDs is both a witness to that reality and a manifesto for how young physicians intend to change it. Through these pages, junior doctors from every region articulate a shared conviction: that prevention is a duty, equity is non-negotiable, and no community should be left behind in the global response to NCDs.

Across this edition, authors move deliberately from analysis to action. They interrogate the ethics that guide research and clinical practice, reflect on youth-led advocacy in global and regional NCD initiatives, and present practical roadmaps for domestic resource mobilization, digital health, and stronger primary care. Collectively, these contributions demonstrate that junior doctors are not passive implementers of policy, but architects of new solutions, collaborating with civil society, multilateral agencies, and communities affected by NCDs. These narratives remind readers that any serious NCD strategy must protect and empower the healthcare workforce, especially those at the frontlines.

The launch of the JDN Working Group on NCDs marks a turning point for our network. Its mandate to unite junior doctors worldwide for advocacy, education, research, and policy engagement on NCDs aligns closely with existing WMA policy and with the commitments being shaped in global fora. In doing so, it positions the JDN as a credible partner in advancing an ambitious and equitable global NCD agenda.

As Secretary of the WMA Junior Doctors Network, it is a privilege to introduce this special edition and to acknowledge the extraordinary work of our contributors, the NCD Working Group Co-Chairs, and the Publications Team who have curated a truly global conversation. Their efforts affirm what this Bulletin ultimately stands for: a community of junior doctors who refuse to accept preventable suffering as inevitable, who insist that each budget, each policy, and each clinical encounter can bend the curve of NCDs toward justice. May this edition not only inform and inspire, but also mobilize its readers to act within clinics and communities, in ministries and multilateral halls so that the next decade of NCD discourse is defined less by gaps and more by gains for the people and places that need them most.

Best Wishes,
Dr Shiv Joshi,
Secretary - Junior Doctors Network,
World Medical Association.

FOREWORD BY DEPUTY CHAIR (2024-2025)

Dear Colleagues,

I am honored to address you in this special edition of our JDN Bulletin, dedicated to the growing public health burden that is Non-Communicable Diseases (NCDs). This publication wouldn't have been possible without the invaluable contributions of all our authors, whose dedication to advancing our understanding of NCDs and their implications for healthcare shines through in each article.

In this edition, we explore the complex issues surrounding NCDs, a significant global health challenge that continues to affect millions worldwide. We examine the scientific, clinical, and policy challenges that we, as junior doctors, encounter in our day-to-day practice while managing patients with chronic conditions. We also discuss the importance of prevention strategies, early detection, and the role of healthcare systems in managing and reducing the burden of NCDs at both local and global levels.

As healthcare providers, we are entrusted with the responsibility and privilege of providing the best care possible to our patients while also addressing the underlying risk factors of NCDs. Tackling NCDs is not only a professional duty but also an ethical imperative. Staying informed about emerging trends in prevention, treatment alternatives, and the latest public health strategies is essential to ensure we are equipped to combat this growing issue.

With the UN High-Level Meeting (HLM) on NCDs in September 2025, this is a crucial time for us, as junior doctors, to advocate for stronger action and to contribute our voices to the global discourse. By approaching our practice with awareness, responsibility, and ethical commitment, we not only honor the profession we have chosen but also play a vital role in shaping the future of healthcare and improving the lives of those affected by NCDs.

Once again, I would like to express my sincere gratitude to the authors of this edition for their exceptional contributions, and to the JDN Publications Director for coordinating this important project. I am confident that our JDN members will continue to show unwavering commitment to addressing NCDs and advancing our advocacy efforts leading up to the 2025 HLM.

Best regards,
Dr. Balkiss Abdelmoula, MD. MPH.
Deputy Chairperson 2024-2025
Junior Doctors Network
World Medical Association

FOREWORD BY

PUBLICATIONS DIRECTOR

Dear Junior Doctors Worldwide!

It gives me great privilege to present this Special Edition of the WMA JDN Bulletin, dedicated entirely to the pressing global challenge of Non-Communicable Diseases.

As Publications Director, I have witnessed the remarkable dedication of junior doctors across continents who contributed to this volume. Their work reflects not only clinical expertise but a profound commitment to addressing health inequities, advocating for systemic reform, and amplifying the voices of communities most affected by NCDs.

The articles within these pages span continents and disciplines—from civil society-led advocacy for domestic resource mobilization, to youth engagement in European NCD prevention, to the transformative potential of telemedicine in bridging healthcare gaps. Our authors examine breast cancer management in Pakistan, cardiovascular equity in Latin America and the health paradoxes facing Generation Z. Each contribution is grounded in evidence, driven by passion, and oriented toward solutions.

This publication would not have been possible without the collaborative spirit of our authors and the unwavering support of the JDN leadership. Together, we are building a movement—one that recognizes prevention as imperative, equity as non-negotiable, and youth leadership as essential.
I hope this edition inspires reflection, dialogue, and most importantly, action!

Dr. Venkatesh Karthikeyan
Publications Director
Junior Doctors Network
World Medical Association

WELCOME MESSAGE BY

NCDs Working Group Chairs

Dear Colleagues,

We are delighted to announce the creation of the JDN NCDs Working Group, which brings together junior doctors from across the globe to lead collaborative action on one of the greatest health challenges of our time.

Our Mission

The mission of the NCDs-WG is to unite and empower junior doctors worldwide to address NCDs through advocacy, education, research and policy engagement. By sharing best practices, fostering international partnerships and addressing health inequities, we aim to enhance clinical and public health competencies and contribute to the global goal of reducing the burden of NCDs.

Why Now?

NCDs are responsible for 75% of global deaths, with more than 43 million lives lost each year. Every two seconds, someone under 70 dies prematurely from an NCD and the vast majority of these deaths occur in low-and middle-income countries. Seven of the ten leading causes of death are linked to NCDs, yet progress towards Sustainable Development Goal target 3.4 remains off track.

Our Objectives:

In its first phase, the working group will:

- Coordinate global campaigns for at least two major NCD health days annually
- Organise educational webinars with international experts on priority NCD topics
- Submit official policy inputs to global forums
- Launch a multi-country research project on NCD training needs among junior doctors

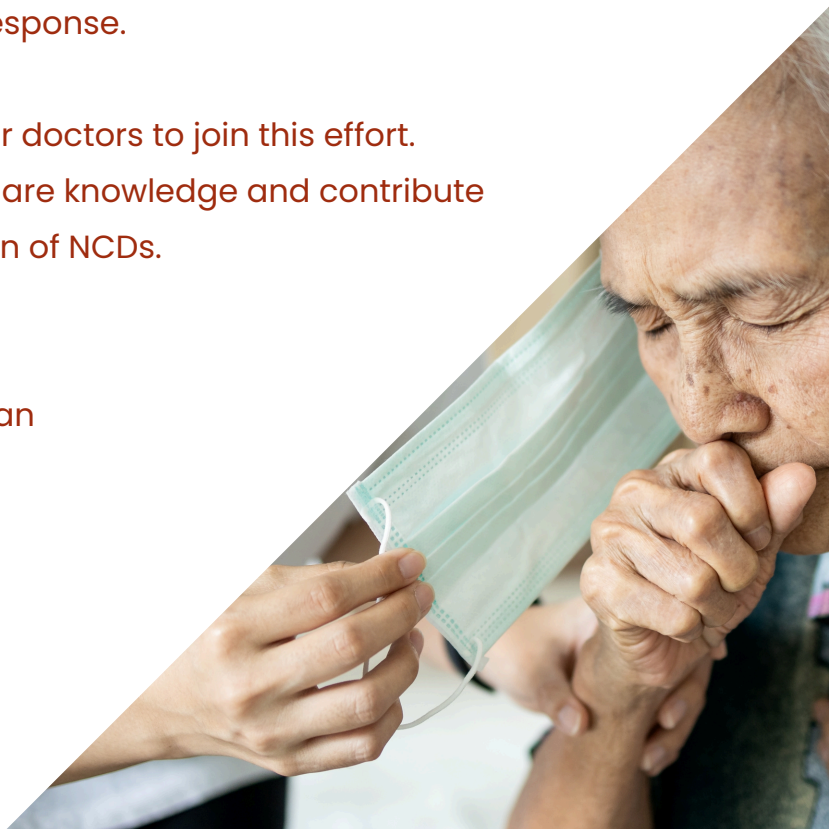
Our work will draw on WMA's existing policy frameworks, including the WMA Statement on the Global Burden of Chronic NCDs (2011, revised 2022) and the WMA Statement on Free Sugar Consumption and Sugar-Sweetened Beverages (2019). These frameworks reaffirm the responsibility of the medical profession to advocate for stronger action on NCD prevention and control and provide a strong foundation for our capacity building activities. By building on these commitments, the JDN can play a constructive role in advancing a global agenda that is indeed ambitious, equitable and firmly rooted in evidence.

Looking Ahead

Our activities will include campaigns for breast cancer awareness month, World Diabetes Day and No Tobacco Day, as well as research and publications to elevate junior doctors' voices in the global NCDs response.

As co-chairs, we warmly welcome all junior doctors to join this effort.
Together, we can strengthen advocacy, share knowledge and contribute meaningfully to reducing the global burden of NCDs.

Sincerely,
Dr Venkatesh Karthikeyan & Dr Muha Hassan



WORLD MEDICAL ASSOCIATION,
L'ASSOCIATION MEDICALE MONDIALE,
ASOCIACION MEDICA MUNDIAL,

78th WORLD HEALTH ASSEMBLY
May 2025

Pillar 1: One billion more people benefiting from universal health coverage
The role of the global coordination mechanism on the prevention and control of noncommunicable diseases in WHO's work on multi stakeholder engagement for the prevention and control of noncommunicable diseases: report on independent evaluation (Item 12)

Honourable Chair, Distinguished Delegates,

The World Medical Association welcomes the zero draft Political Declaration on NCDs and Mental Health. We commend its clarity, actionable targets, and its consistent emphasis on integrated, person-centred primary health care and universal health coverage. However, we are concerned by the continued focus on vertical, disease-specific interventions, which risks reinforcing siloed approaches. To achieve lasting progress, stronger commitments on holistic health system strengthening and investment in the health workforce are needed. This includes commitments and one target on national workforce strategies, with fair remuneration, occupational safety, and lifelong learning. A resilient, well-supported workforce is essential not only for delivering care but for reducing inequalities and enhancing socio-economic resilience.

WMA is pleased to provide you with our comments and proposed amendments.

Thank you.

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WORLD MEDICAL ASSOCIATION,
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78th WORLD HEALTH ASSEMBLY
May 2025

Pillar 1: One billion more people benefiting from universal health coverage
Mental health and social connection (item 13.2)

Honourable Chair, Distinguished Delegates,

In the wake of growing social isolation, the World Medical Association reaffirms that mental health, and the social connections that underpin it, are foundational to universal health coverage and resilient systems. We stress the urgency of integrating accessible, high-quality mental health services into primary healthcare, as part of a multi-sectoral collaboration. The expansion of community mental health services must be a priority, with a focus on access for marginalised populations and reducing stigma.

As affirmed in the WMA Declaration of Lisbon, *"every patient has the right to continuity of health care,"* encompassing mental, social, and physical health. We stand ready to partner with WHO Commission on Social Connection to make mental health central to global health programmes.

Thank you

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Statement submitted to the WHO EB 158th session - regarding Non-Communicable Diseases

WORLD MEDICAL ASSOCIATION,
L'ASSOCIATION MEDICALE MONDIALE,
ASOCIACION MEDICA MUNDIAL,

WHO Executive Board 158th session
February 2026

Follow-up to the political declaration of the high-level meeting of the General Assembly on the prevention and control of non-communicable diseases (item 6)

Honourable Chair, Distinguished Delegates,

The WMA urges decisive action to fully implement the Political Declaration on non-communicable diseases in a holistic approach. This requires strong, resilient health systems that deliver health education and prevention through integrated, person-centred primary health care, supported by robust secondary and tertiary services, and capable of responding to pandemics, climate-related health emergencies, ageing populations and other crisis.

Governments must also urgently strengthen the health workforce by ensuring safe and decent working conditions, protecting physical and mental well-being, guaranteeing continuing professional development, and addressing the drivers of brain drain from low- and middle-income countries.

Finally, non-communicable diseases and mental health care must be systematically included in universal health coverage essential benefit packages.

Thank you.

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Statement submitted to the WHO EB 158th session - regarding Mental Health

WORLD MEDICAL ASSOCIATION,
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ASOCIACION MEDICA MUNDIAL,

WHO Executive Board 158th session
February 2026

Mental Health (item 7)

Honourable Chair, Distinguished Delegates,

The World Medical Association welcomes the Director-General's report and supports the transition to person-centred, community-based mental health care within the framework of universal health coverage that is grounded in human rights. People living with mental health condition must have access to healthcare as any other patient, free from stigma and discrimination, and with respect for their dignity, autonomy, right to confidentiality and informed consent. The WMA supports integrating evidence-based interventions into primary care as an entry point, including mhGAP[1] informed care, alongside adequately resourced secondary and tertiary services, with clear referral and back-referral pathways.

We urge sustained financing and investment in the mental health workforce, as well as the provision of safe working conditions and meaningful engagement of people with lived experience, including in emergency preparedness and response.

Thank you.

[1] WHO's Mental Health Gap Action Programme

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Empowering Youth in the Prevention of Non-Communicable Diseases: The Role of the Joint Action PreventNCD Youth Advisory Group

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[4] Inês Costa Louro, Medical Doctor, EVID-ACTION Youth Alcohol Network Member at WHO/Europe

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[6] Alina Garofil, Start-up Med Hub Impact

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[8] Lyvio Lin, Junior Professional Associate, World Bank (IRBD)

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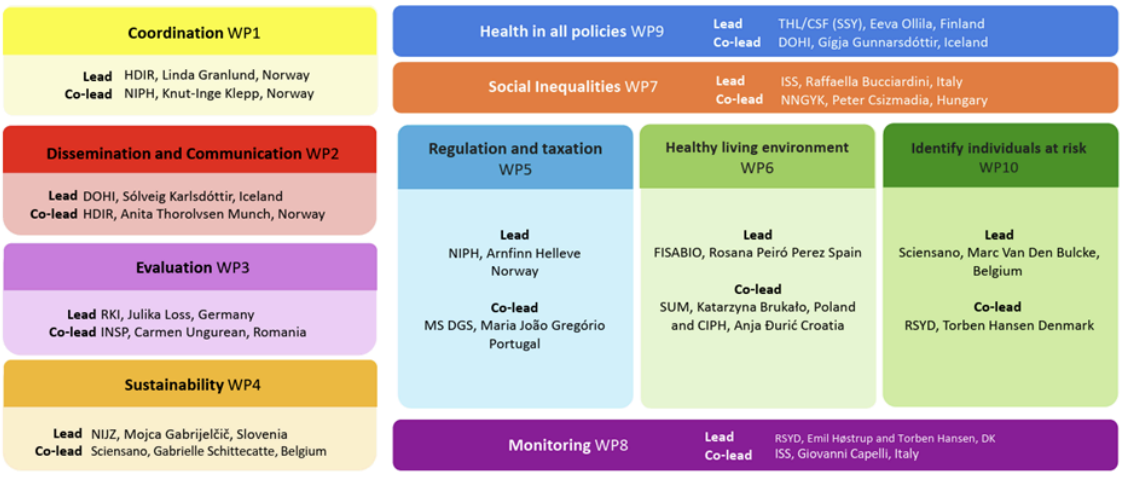
A European Effort to Tackle Non-Communicable Diseases

The Joint Action Prevent Non-Communicable Diseases (JA Prevent NCD) is a European Commission-funded initiative aimed at reducing the burden of preventable non-communicable diseases (NCDs) across EU Member States. It equips countries with tools, strategies, and support to develop and implement effective, evidence-based prevention policies addressing both individual and societal risk factors.

JA PreventNCD fosters coordination among national authorities and stakeholders, reducing fragmentation and promoting integration. Central to its mission is the use of robust assessments to evaluate and prioritize prevention strategies that maximize population health benefits. Equity is also a core principle—addressing the root causes of health inequalities through a life-course approach that ensures inclusivity.



The initiative builds infrastructure for monitoring risk factors, disease burden, and policy outcomes while aligning with broader strategies such as Europe's Beating Cancer Plan or the EU NCD Initiative among other projects. Its work is divided in work packages that cover multiple topics of NCDs such as health-related taxation, healthy environments, and other areas that reflect the multisectoral nature of health determinants.

Youth Involvement as a Pillar of Sustainable Prevention

Youth participation is increasingly recognized as essential to shaping effective, forward-looking health policy. Young people bring valuable lived experience and fresh perspectives to policymaking, fostering innovation and ensuring long-term sustainability [1].

JA PreventNCD embraces this potential through its Youth Advisory Group (YAG), a structured initiative that integrates youth perspectives into the heart of NCD prevention. The YAG supports awareness-raising, policy co-creation, and capacity-building, offering participants early exposure to European health policy

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11 Naida Salković, Public Health of Tuzla Canton, Bosnia and Herzegovina

12 Evangelia Savvidou, MD, Academic Associate at Medical School, Aristotle University of Thessaloniki, Greece; EVID-ACTION Youth Alcohol Network Member at WHO/Europe.

processes and developing leadership skills among youth.

This work reflects a broader international movement involving initiatives such as the WHO Youth Council, OECD Youthwise, the EVID-ACTION Youth Alcohol Network, and UNESCO's Youth Climate Action Network [2–6]. These structures affirm youth as critical stakeholders in global governance [7,8].

However, best practices for youth engagement remain uneven across sectors. The YAG contributes to building more inclusive structures by modeling youth participation specifically focused on NCD prevention within the EU context [9]. To further support this mission, the Youth Chapter was established as an informal network for young people interested in NCD prevention. This chapter serves as a platform for sharing experiences, research, and opportunities, and for connecting professionally. People under 35 can join as individuals, and representatives from youth organizations are also encouraged to participate [10].

Who Are the Youth Advisory Group Members?

The YAG consists of 32 representatives aged 18–35 from over 25 European countries. Their backgrounds are very diverse: medicine, public health, social sciences, nutrition, psychology, sports, and economics, reflecting Europe's youth diversity when it comes to tackling NCDs. Despite this variety, all members are united by a commitment to embedding youth voices into health strategies and sharing knowledge across their communities.

Motivated by personal, academic, or professional experiences, YAG members aim to address the communication gap in NCD discourse, which often overlooks youth. They advocate for systemic, interdisciplinary approaches and emphasize the importance of equity in healthcare. Their vision is to establish youth representation at every stage of public health governance, from policy and research to advocacy and outreach.

Participation also provides a formative professional experience, linking research, policy, and community action. YAG members engage with EU-level public health processes and develop skills and networks essential for careers in health equity and policy leadership.

Building Partnerships for Collective Impact

The YAG operates under the Sustainability Work Package, which ensures that youth contributions are embedded into long-term policy frameworks. Its efforts are not symbolic; they influence how youth perspectives shape the future of European health systems.

In line with this goal, the YAG welcomes collaboration with youth-led and youth-centred initiatives aligned with its mission. Areas of cooperation include co-developing interventions, beta-testing digital tools, and contributing to capacity-building resources. Each member serves as a liaison between the YAG and national organizations or networks, helping connect local efforts to European policy.

Additionally, the YAG is eager to learn about the approaches of National Institutes of Public Health and related semi-governmental or academic institutions involved in JA work, as well as the geopolitical trends within the EU that shape health policy development and implementation. This deepened understanding helps inform strategic priorities and align youth efforts with broader institutional frameworks.

Organizations interested in partnership are encouraged to reach out to be connected with YAG members offering localized insight and youth-led expertise. These collaborations tap into a motivated, diverse, and future-facing community dedicated to preventing NCDs and building a healthier, more equitable Europe.

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Civil Society-led Advocacy for Prioritizing Domestic Resource Mobilization for Non-Communicable Diseases

Dr Omprakash Bera[1], Dr Venkatesh Karthikeyan[2]

[1] Dr Omprakash Bera, Regional Advisor for NCDs, Global Health Advocacy Incubator.

[2] Dr Venkatesh Karthikeyan, Co-Chair, NCD Working Group, Junior Doctors Network, World Medical Association.

Introduction

Noncommunicable diseases are responsible for 75% of deaths globally, with 82% of premature deaths occurring in low- and middle-income countries(1). Despite this staggering burden, NCDs continue to receive disproportionately low funding, creating a financing gap that threatens the sustainability of health systems worldwide. The demand for NCD care and services far exceeds public spending, leading to catastrophic out-of-pocket expenditures and deepening health inequities(2). In this landscape, civil society organizations emerge as critical change agents, uniquely positioned to advocate for domestic resource mobilization and hold governments accountable for their health financing commitments.

The Imperative for Domestic Resource Mobilization

The COVID-19 pandemic further compounded the already insufficient global and domestic funding for NCDs in low- and middle-income countries. However, the investment required to prevent and manage NCDs is far less than the cost of inaction, with the cost of action being affordable and offering massive returns.

Global events have made it more important than ever for countries to drive their own NCD financing agendas through domestic resource mobilization rather than relying solely on external funding.

Civil society organizations serve as integral advocates for resource mobilization by drawing attention to key issues, rallying public, political, and financial support, and holding policymakers and decision-makers accountable. Their close connections with communities, especially people living with NCDs and youth, enable CSOs to provide governments with a broader understanding of community needs and opportunities. This unique positioning makes them effective advocates who can use their capacities, experience, and connections to make the case for investment.

Figure 1: Session on "Civil Society-led Advocacy for Prioritizing Domestic Resource Mobilization for NCDs" during the 4th Global NCD Alliance Forum, Rwanda

Global NCD Alliance Forum

The 4th Global NCD Alliance Forum, held in Kigali, Rwanda from February 13-15, 2025, brought together diverse voices under the theme "Leadership on NCDs towards 2025 & beyond"(3). A pivotal session on "Civil Society-led Advocacy for Prioritizing Domestic Resource Mobilization for NCDs," was organized by the Global Health Advocacy Incubator and Resolve to Save Lives (Figure 1).

A Strategic Framework: The Budget Advocacy Cycle

The session discussed a comprehensive budget advocacy framework that civil society can employ. The Budget Advocacy Framework for NCDs (Figure 2) presents a comprehensive cycle for budget advocacy and funding sustainability that encompasses four interconnected phases: Campaign Planning, which involves conducting a political and legal landscape analysis and impact assessment to build a case for increased investments in NCDs and plan the political strategy; Campaign Implementation, which focuses on building civil society and academic sector coalitions, engaging policymakers, and generating media coverage and support for increased funding; Budget Accountability, which tracks budget allocations and spending of increased resources, identifies bottlenecks to spending, assesses and builds capacity to increase accountability, and promotes transparent disbursement and effective spending; and Budget Sustainability, which conducts program impact evaluation, assesses budget needs for the next budget cycle, promotes different sources of funding, and builds demand to sustain and increase the investment to improve health indicators in the medium and long term.

Real-World Success: Nigeria and India Case Studies

The Kano State, Nigeria case study demonstrated the practical application of budget advocacy across the budget cycle. Civil society organizations developed knowledge and understanding of the budget cycle, acquired the ability to analyze and interpret budgets, ran data analyses to produce fact sheets for stakeholder engagement, and engaged policymakers through advocacy meetings. During the budget phase, they monitored due process and identified opportunities for CSO input, while post-budget follow-up visits addressed delays in fund release and utilization.

The India case study highlighted the crucial role of youth advocacy in NCD financing, presenting a new reality where NCDs are no longer just an issue affecting older populations. Youth are now at higher risk of hypertension, diabetes, obesity, and other NCDs due to risk factors like smoking, alcohol consumption, poor diet, and stress(4). Young doctors have proven to be key stakeholders who provide fresh perspectives, expand the scope and innovation for budget advocacy, serve as catalysts for multi-sectoral collaboration, and help hold governments accountable to NCD budget commitments. Notable example included the Young Doctors' Health Parliament, a policy-oriented youth movement(5). Key success factors emphasized that youth advocacy must be policy-driven with a keen focus on evidence and lived experiences, alongside multi-stakeholder engagement.

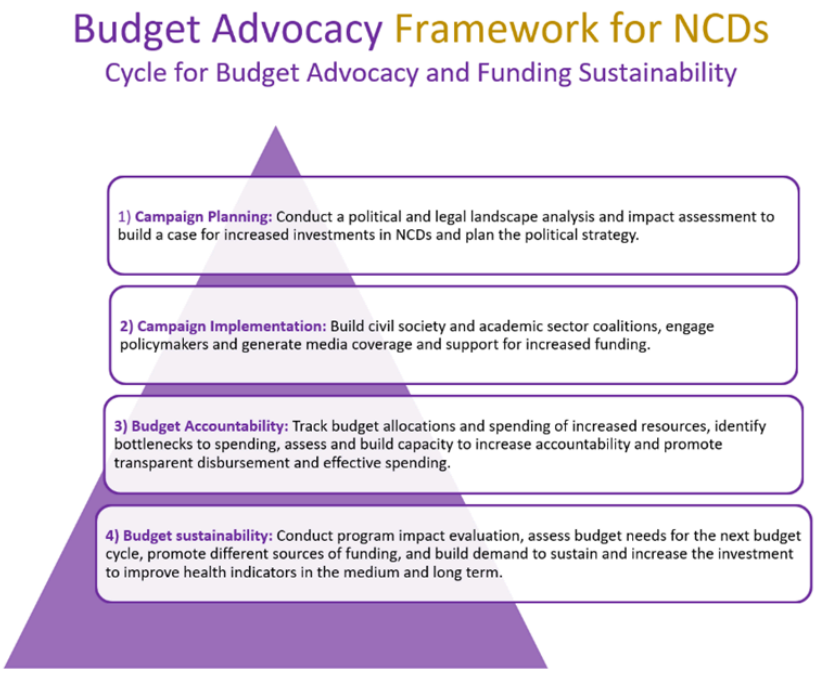

Figure 2 : Budget Advocacy Framework for NCDs

Interactive Learning and Practical Application

The Forum session included interactive breakout groups that allowed participants to engage deeply with critical advocacy components. Groups explored mapping the budget process to understand entry points for advocacy, setting policy objectives with evidence-based approaches, and mapping key stakeholders while building effective coalitions. This World Café format enabled participants to gain hands-on experience in developing advocacy strategies that can be adapted to their own contexts (Figure 3).

Figure 3: Break out rooms in the World Café format

The Way Forward for Young Doctors

For young doctors globally, the takeaways from this civil society-led advocacy framework are profound and actionable. First, understanding that budget advocacy is not optional but essential for ensuring sustainable, equitable, and effective health systems that address NCDs. Second, recognizing that youth voices carry unique power in NCD advocacy because rising NCD prevalence among younger populations makes this generation both advocates and beneficiaries.

Conclusion

The global NCD movement needs young doctors who can serve as bridge-builders between clinical practice, community needs, and policy formulation. By engaging in budget advocacy, young physicians fulfill their professional responsibility to advocate for health system strengthening beyond individual patient care. The frameworks, case studies, and practical strategies emerging from civil society-led initiatives demonstrate that domestic resource mobilization for NCDs is achievable when advocates are equipped with the right tools, networks, and political will to drive change. For the next generation of physicians, the question is not whether to engage in this advocacy, but how quickly and effectively they can mobilize to secure the resources our communities desperately need to prevent and control the growing NCD burden.

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The Gen Z Health Paradox: Trading one Risk for Another in the Context of Noncommunicable Diseases

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As Gen Z moves away from traditional alcohol consumption, public health celebrates a major behavioral victory. Alcohol use, long recognized as a major risk factor for noncommunicable diseases (NCDs), including liver cirrhosis, cardiovascular disease and certain cancers —is declining among young people (1). However, beneath this apparent progress lies a paradox: the rise in vaping and cannabis use. Often perceived as safer alternatives, these substances carry health risks that remain unclear but potentially serious. This shift raises urgent questions about the future of NCDs and highlights the need for public health strategies to adapt to evolving substance use patterns.

Over the past decades, alcohol consumption among younger people has steadily declined; a behavioral shift initiated by Millennials now firmly embraced by Gen Z. This trend is consistent across nations and cultures. Compared to previous generations, young adults today are less likely to engage in drinking and more likely to associate heavy alcohol use with negative outcomes. Health consciousness, increased awareness of alcohol's effects and shifting social norms are contributing factors (2). From a public health perspective, this change could reduce the burden of alcohol-related diseases, major contributors to global NCD mortality.

However, as alcohol consumption decreases, vaping and cannabis use are on the rise. Both have gained popularity among adolescents and young adults, reaching record levels (3). Perceived as less harmful, emerging evidence suggests that they may introduce their own NCD risks. Both substances are also considered "gateway" substances, potentially leading to the use of alcohol, tobacco or illicit drugs (3).

Vaping is a relatively new practice, and its long-term health consequences are still being uncovered. Nonetheless, inhalation of vaporized chemicals shares some similarities with cigarette smoke. Vaping can damage the respiratory tract and lead to chronic respiratory disease (4). Its impact extends beyond the lungs, being associated with neurological symptoms, cardiovascular conditions and oral health problems. E-cigarettes also contain carcinogens and toxicants that may affect multiple organ systems (5). Particularly concerning is the adolescent premature exposure to nicotine, which can interfere with brain development with long-lasting detrimental effects(6).

Similarly, cannabis use has been linked to brain development impairment, mental health disorders, respiratory dysfunction and cardiovascular risk. The adolescent brain is more vulnerable to cannabis, and early exposure disrupts brain development and maturation, leading to cognitive deficits and behavioral issues. Cannabis use has established associations with schizophrenia, psychotic disorders, anxiety, depressive disorders and suicidal behavior. Some components may suppress normal immune function, compromising lung health. Its vasoactive effects increase cardiovascular risk and its smoke, rich in carcinogens, has been associated with several cancers. It is concerning that harmful use and cannabis dependence are becoming common drug-use disorders, especially in adolescents (7).

Thus, while Gen Z's reduced alcohol consumption may seem like a triumph, the rising popularity of vaping and cannabis introduces new health threats. Public health frameworks must recognize and address these evolving risks to prevent a generation from exchanging one set of NCD threats for another.

Traditionally, public health has focused on the "big four" behavioral risk factors for NCDs: tobacco use, harmful alcohol use, unhealthy diets and physical inactivity (8). But the current Gen Z trends suggest these frameworks are becoming outdated. Vaping and cannabis, though different from traditional tobacco and alcohol, now pose significant health threats. Yet, regulation, education and prevention efforts around these substances lag those targeting traditional risk factors.

A key challenge is how vaping and cannabis are marketed. E-cigarettes are often promoted as smoking cessation tools, despite limited long-term safety evidence. While they might help smokers quit, most adolescents who vape never smoked traditional cigarettes. For them, vaping introduces a new risk rather than mitigating old ones. Flavored products, sleek designs and social media campaigns make vaping attractive to non-smoker youth (9). Similarly, cannabis legalization often downplays the potential risk of regular use, particularly among adolescents whose brains are still developing (10).

Many NCDs risk factors emerge during adolescence. Substance use is among the largest contributors to adult NCDs, significantly impacting health later in life. If vaping and cannabis becomes normalized, the burden of related NCDs may rise in the coming decades. This underscores the need for early intervention, targeted education campaigns and tighter regulation, to prevent initiation during adolescence.

One factor driving Gen Z's shift away from alcohol is growing health consciousness. Sometimes referred as "healthism", this trend encourages individuals to take responsibility for achieving and maintaining good health through informed choices and self-control (10). This can be a powerful force for public health efforts to emphasize that vaping and cannabis are not harmless, Gen Z may apply the same health-minded logic they have used to reduce alcohol consumption. Recognizing these substances as strong NCD risk factors is critic to curbing their consumption.

Gen Z's changing relationship with substances presents both an opportunity and a warning. The decline in alcohol consumption is encouraging, with potential to reduce major NCD burdens. But the rise of vaping and cannabis use introduces new risks that must not be ignored. To genuinely reduce the future NCD burden, public health strategies must adapt to these evolving behaviors, challenge misconceptions around "safe" substance use and implement preventive efforts that reflect today's reality. Only then can we ensure that the progress made is not undone by new and avoidable risks.

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Breast Cancer: Current Approaches to Prevention and Management

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Introduction

Breast cancer is the most common malignancy among women globally, with an estimated 2.3 million new cases and over 685,000 deaths reported in 2020 alone (1). While survival rates have improved substantially due to advances in screening and treatment, the burden remains significant, particularly in low-resource settings. This article explores risk factors, prevention strategies, and evolving management options based on the latest evidence.

Risk Factors

Breast cancer arises from a complex interplay of genetic, hormonal, and environmental factors. Key non-modifiable risk factors include:

- Age - Risk increases significantly after age 50.
- Genetic predisposition: BRCA1/2 mutations account for 5–10% of cases.
- Family history and personal history of breast lesions or cancer.

Modifiable risk factors include:

- Obesity, particularly post-menopause
- Alcohol consumption
- Physical inactivity
- Hormone replacement therapy
- Nulliparity or late first childbirth
- Recent genome-wide association studies have also identified several low-penetrance alleles linked to increased susceptibility (2).

Prevention

1. Primary Prevention

The primary goal is to reduce the incidence of disease through lifestyle and medical interventions:

- Lifestyle modification: Regular physical activity, healthy diet, weight control, and limiting alcohol intake have demonstrated protective effects (3).
- Chemoprevention: Selective Estrogen Receptor Modulators like tamoxifen and raloxifene reduce breast cancer incidence in high-risk women by up to 40% (4).
- Prophylactic surgery: For BRCA mutation carriers, bilateral mastectomy and/or salpingo-oophorectomy can reduce lifetime risk significantly.

2. Secondary Prevention

Focused on early detection, secondary prevention includes:

- Mammography screening: Proven to reduce breast cancer mortality by 20–30% in women aged 50–69 (5).
- Magnetic Resonance Imaging (MRI): Used in high-risk groups for enhanced sensitivity.
- Clinical breast exams and self-awareness: Useful adjuncts, though evidence for mortality reduction is limited.

Clinical Presentation and Diagnosis

Breast cancer typically presents as a painless lump, skin dimpling, nipple retraction, or discharge. Diagnosis follows a triple assessment:

1. Clinical examination
2. Imaging: Mammogram, ultrasound, or MRI
3. Tissue biopsy: Core needle biopsy is standard.

Immunohistochemistry determines receptor status: Estrogen receptor (ER), progesterone receptor (PR), and HER2 expression crucial for guiding treatment.

Management

Surgical Intervention

Surgery remains the cornerstone of curative treatment:

- Breast-conserving surgery (BCS) followed by radiation therapy is standard for early-stage disease.

- Mastectomy may be required for extensive or multifocal disease.
- Sentinel lymph node biopsy or axillary dissection assesses regional spread.

Systemic Therapy

Treatment is stratified based on tumour subtype:

- Hormone receptor-positive: Treated with tamoxifen or aromatase inhibitors.
- HER2-positive: Targeted therapy with trastuzumab ± pertuzumab has improved survival rates dramatically (5).
- Triple-negative: More aggressive; managed with chemotherapy and emerging immunotherapy options.

Neoadjuvant therapy is increasingly used for locally advanced disease or to downstage tumours for BCS. Adjuvant chemotherapy is guided by genomic assays like Oncotype DX in early-stage hormone-positive cancers.

Radiotherapy

Used post-lumpectomy to reduce local recurrence or post-mastectomy in node-positive or high-risk cases. Hypo fractionated regimens have become standard, improving convenience and compliance.

Survivorship and Follow-up

Long-term follow-up is essential for early detection of recurrence and managing late effects such as lymphedema, cardiotoxicity, and menopausal symptoms. Annual mammography is recommended post-treatment. Survivorship care also includes psychosocial support, fertility preservation counselling, and lifestyle optimization.

Conclusion

Breast cancer prevention and management have evolved significantly, with a shift toward personalized, evidence-based approaches. While screening and systemic therapies have improved outcomes, addressing disparities in access to care remains critical. Preventive strategies, especially in genetically predisposed populations, offer significant promise in reducing incidence and mortality.

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Bridging the Digital Divide: Leveraging Telemedicine and Digital Health to Transform NCD Prevention and Care

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Non-Communicable Diseases (NCDs) have emerged as the dominant cause of mortality and disability globally, accounting for nearly 74% of all deaths worldwide, according to the World Health Organization (WHO). Among these, diabetes has seen a particularly alarming rise, with disability-adjusted life years (DALYs) increasing by over 80% between 2000 and 2019 (1-3). This shift is not occurring in isolation—it reflects broader socio-economic transformations, rapid urbanization, demographic transitions, and widespread changes in lifestyle and environment (2).

However, a critical dimension often overlooked in the national and global discourse on NCDs is the growing disparity in NCD risk profiles between rural and urban populations. Urban populations, while more likely to access healthcare and diagnostics, are increasingly exposed to sedentary lifestyles, processed foods, and environmental pollution. On the other hand, rural communities face delayed diagnoses, fragmented follow-up, and a shortage of specialized care. These inequities threaten to widen health gaps and undermine the broader goal of universal health coverage.

In this context, digital health and telemedicine have emerged as transformative tools to bridge healthcare access and quality gaps. These technologies offer scalable, patient-centered solutions that can address prevention, diagnosis, and continuity of care—especially in resource-constrained settings where traditional health infrastructure is limited. As the global health community seeks sustainable strategies to combat NCDs, equitable integration of digital health innovations into mainstream healthcare systems is no longer optional—it is essential!

Digital Health: A Disruptive Opportunity

Digital health technologies—including mobile health (mHealth) apps, wearable devices, electronic health records, and artificial intelligence (AI)—are transforming healthcare delivery and surveillance globally. These tools support early identification of risk factors, longitudinal tracking of patient behaviors, and personalized interventions. AI-powered decision-support systems, for instance, are increasingly being piloted in primary care to flag patients at high risk for hypertension or diabetes and prompt proactive care.

One of the most promising digital health modalities for NCD management, especially in LMICs, is telemedicine. Defined as the use of telecommunications to deliver clinical services remotely, telemedicine bridges the divide between health systems and underserved populations. It has proven utility in managing chronic diseases, enabling real-time consultations, remote diagnostics, and continuity of care across geographies.

The Telemedicine Advantage in NCD Care

Telemedicine offers substantial benefits across the full spectrum of NCD care:

- Primary prevention: Virtual consultations can be used to deliver health education, promote tobacco cessation, offer nutritional counseling, and monitor physical activity—thereby reaching populations who might otherwise never engage with preventive services.

- Secondary prevention: Patients can use smartphone-enabled glucometers and blood pressure monitors to track their conditions, with data transmitted directly to healthcare providers. This facilitates remote monitoring, timely medication adjustments, and reduction in unnecessary hospital visits.

- Tertiary prevention: Telemedicine ensures continuity of care for those with complications or comorbidities. It also enables virtual collaboration between primary care doctors and specialists, enhancing the management of complex cases. Additionally, tele-rehabilitation services support post-stroke or cardiac patients through structured, supervised care plans delivered remotely.

To enhance coordination, continuity, and quality of care, there is an urgent need for a unified, national digital portal for NCD management. This platform should capture and update individual-level risk factors —such as blood pressure, blood glucose, tobacco and alcohol use, BMI, and physical activity—during community or facility-level visits.

A designated NCD Teleconsultation Officer should be appointed at each district or health block, tasked with monitoring this dashboard and coordinating care. Based on patient data, the officer can triage cases to the appropriate level—primary, secondary, or tertiary care—and schedule teleconsultations accordingly. All patient records, diagnostic reports, and prescriptions should be accessible via this portal, ensuring seamless continuity of care and data-informed decision-making. Such a system would also support real-time surveillance, highlight regional disparities, and enable proactive public health interventions.

Addressing Equity in Telemedicine Access

Despite its promise, telemedicine's effectiveness is often undermined by the digital divide. Nearly 2.6 billion people globally remain offline, and those most in need of care—such as the elderly, women, the poor, and rural residents—are the least likely to access digital tools due to connectivity issues, lack of devices, or digital illiteracy (4).

To build inclusive systems, equity must be a central design principle. This includes:

- Developing low-bandwidth, multilingual platforms accessible via basic phones
- Providing subsidized data plans and devices for low-income households
- Training community health workers and junior doctors as digital intermediaries
- Ensuring data privacy, interoperability, and ethical AI frameworks

Successful integration also depends on embedding digital platforms into existing health systems. Initiatives like the WHO Global Strategy on Digital Health (2020–2025) and India's Ayushman Bharat Digital Mission offer blueprints for national-level action.

Role of Junior Doctors in Driving Innovation

Junior doctors are uniquely positioned at the intersection of frontline service delivery and emerging technology. Their clinical knowledge, adaptability, and technological fluency make them ideal champions for digital health adoption. They can contribute to app development, operational research, policy framing, and real-world implementation.

To prepare the next generation of digital-ready health professionals, medical curricula must include telemedicine training, digital health ethics, and data management principles. Interdisciplinary collaboration —with engineers, data scientists, and designers—will further empower junior doctors to create solutions that are contextually relevant and user-centric.

Conclusion

The global burden of NCDs demands urgent, innovative, and equitable solutions. Telemedicine and digital health tools have immense potential to transform NCD care—if deployed inclusively and strategically. Building a unified digital portal, appointing dedicated care coordinators, and enabling cross-level access to patient data can strengthen care pathways and reduce system fragmentation.
Bridging the digital divide is not a luxury—it is a public health imperative. By harnessing the potential of technology while safeguarding inclusivity and ethical principles, we can move closer to achieving universal health coverage and resilient health systems that meet the needs of all, especially the most vulnerable.

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The Need for a Unified Regional Response to Non-Communicable Diseases in Latin America and the Caribbean

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Non-Communicable Diseases (NCDs) are among the greatest public health challenges in Latin America and the Caribbean (LAC). Before the COVID-19 pandemic, these diseases accounted for 81% of deaths in the region, with cardiovascular diseases, chronic respiratory diseases, diabetes mellitus, and cancer being the leading causes (1). The high prevalence of NCDs in the Caribbean exacerbated the impact of the COVID-19 pandemic, exposing the vulnerabilities of local health systems (2).

The fragmentation of public policies and inequalities in access to healthcare services across countries further aggravate the situation. While some nations have implemented effective prevention and control programs, others struggle due to limited resources and inadequate infrastructure. This disparity hinders a cohesive and effective response to NCDs, resulting in significant economic impacts and the persistence of social inequalities.

Regional initiatives have shown potential to mitigate this scenario. Nine countries in Latin America and the Caribbean have intensified efforts to reduce the consumption of ultra-processed foods, implementing measures such as front-of-package warning labels and restrictions on unhealthy food advertising (3). Additionally, the South American Institute of Government in Health (ISAGS), a body of UNASUR, has promoted technical cooperation and the strengthening of health policies in the region (4).

However, isolated actions are not enough. A unified regional strategy must be established, encompassing:

- Harmonization of Public Policies: Developing common guidelines for NCD prevention, diagnosis, and treatment, ensuring that all countries adopt evidence-based practices.
- Strengthening Health Systems: Investing in infrastructure and professional training, ensuring that healthcare services are accessible and of high quality throughout the region.
- Promotion of Healthy Lifestyles: Implementing regional educational campaigns that encourage healthy eating habits and regular physical activity.
- Joint Monitoring and Evaluation: Establishing integrated epidemiological surveillance systems to monitor NCD incidence and prevalence, enabling rapid and effective responses.

The Pan American Health Organization (PAHO) and other regional entities must take the lead in this movement, facilitating cooperation among countries and mobilizing technical and financial resources. Only through a coordinated and united response can LAC effectively tackle the NCD crisis, ensuring health and well-being for all populations.

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Promoting Public Health in the Philippines: Addressing Non-Communicable Diseases through the "Move More, Eat Right" Initiative of Healthy Pilipinas

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Introduction: A Strategic Imperative for Health Promotion in the Philippines

The Philippine Department of Health (DOH) has crafted a comprehensive health promotion strategy that centers on seven priorities: Diet and Exercise, Environmental Health, Immunization, Substance Use, Mental Health, Sexual & Reproductive Health, and Violence & Injury Prevention. Central to this strategy is the "Healthy Pilipinas" campaign, encouraging behaviors such as "Move More, Eat Right," and fostering health-supportive environments across communities and institutions. Within this framework, "Diet and Exercise" plays a pivotal role in addressing physical inactivity and poor nutrition—key drivers of the country's non-communicable disease (NCD) crisis.

Let us champion the "Healthy Pilipinas" advocacy by actively cascading health promotion strategies—such as "Move More, Eat Right"—to fellow health professionals, institutions, and communities. Together, we can shift the focus toward prevention, reshape health behaviors, and strengthen systems to combat non-communicable diseases across the Philippines. This awareness lecture was conducted on April 24, 2025, at Basilan Medical Center, a tertiary hospital in Isabela, Basilan.

Non-Communicable Diseases and Physical Inactivity: A Mounting Crisis

NCDs—including heart disease, stroke, cancer, and diabetes—are now the leading causes of death in the Philippines, accounting for 70% of all mortalities and over 600,000 deaths annually. This trend contrasts sharply with global improvements, revealing an urgent need to pivot from curative healthcare to prevention-focused strategies aligned with SDG 3.4: reducing premature NCD deaths by one-third by 2030.

Physical inactivity is a significant contributor to the NCD burden. Nearly 41% of Filipino adults were physically inactive as of 2019, with inactivity more prevalent among women (53%) than men (30%). Alarmingly, 93.4% of Filipino adolescents are also inactive, making the Philippines the second-worst globally for adolescent physical inactivity. This widespread sedentary behavior—fueled by urbanization, pandemic restrictions, and lack of infrastructure—directly correlates with increased risk for NCDs. The economic toll is equally staggering, costing the Philippine economy PHP 756.5 billion annually (4.8% of GDP).

Active Transport: A Strategic Health, Environmental, and Economic Solution

Active transport, particularly cycling and walking, is a strategic solution promoted by the Department of Health (DOH) to address physical inactivity and its related health, environmental, and economic challenges. Regular cycling—such as an 11-kilometer commute five times a week—meets WHO physical activity recommendations and offers substantial benefits. However, cyclists and pedestrians remain highly vulnerable on the roads, accounting for 70% of transport-related injuries and deaths, highlighting the urgent need for safe infrastructure like bike lanes and pedestrian paths. Environmentally, shifting to cycling significantly reduces carbon emissions and fuel consumption; in Metro Manila alone, replacing one daily car trip with biking can save fuel and cut emissions equivalent to planting millions of trees. Economically, active transport boosts local businesses, increases customer traffic, and helps individuals save on vehicle-related expenses—up to PHP 281,000 annually—while reducing overall traffic congestion, leading to greater productivity and efficiency. Altogether, active transport not only supports healthier lifestyles but also fosters environmental sustainability and economic resilience.

Addressing the Nutrition Crisis and Food Insecurity

Poor nutrition and food insecurity present a major public health crisis in the Philippines, compounding the effects of physical inactivity. As of August 2023, 44.7% of Filipinos experienced moderate to severe food and nutrition insecurity, with over 84 million unable to afford a healthy diet. The country now grapples with a triple burden of malnutrition: undernutrition among children under five (with high rates of stunting, wasting, and underweight), rising overnutrition among school-aged children, adolescents, and adults—especially women and urban populations—and widespread food insecurity affecting a third of households. This complex challenge calls for a shift away from calorie-focused policies toward a holistic, multi-sectoral approach involving agriculture, education, social services, and economic reform to ensure sustained access to nutritious food and promote dietary literacy.

The Karinderya Para sa Healthy Pilipinas project exemplifies this comprehensive strategy by transforming local eateries into community-based nutrition hubs. Targeting vulnerable groups such as young children and pregnant or lactating mothers, the program delivers nutritious meals during the critical first 1,000 days of life while allowing Barangay Nutrition Scholars to focus on education and counseling. Through training and partnerships, it also empowers karinderya owners, enhancing both nutritional outcomes and local livelihoods. Supported by partners like the Jollibee Group Foundation, the initiative has provided meals and vouchers to thousands of families and serves as a scalable model for improving food security. Local ordinances to formalize karinderyas as community kitchens further institutionalize their role in public health and emergency response systems.

Conclusion: Toward a Healthier, More Sustainable Philippines

The Philippines faces a dual challenge: the rising tide of non-communicable diseases (NCDs) driven by physical inactivity, and the complex, overlapping issues of malnutrition and food insecurity. The government's health promotion framework, grounded in the four-pillar strategy, offers a comprehensive and promising path forward. By reshaping infrastructure, fostering behavior change, improving access to nutritious food, and aligning policies across sectors, the country can build a healthier, more sustainable, and economically resilient future. Initiatives like Karinderya Para sa Healthy Pilipinas show how community-driven, multi-sectoral models can effectively address nutritional gaps while strengthening local economies. These strategic investments are not just public health imperatives—they are foundational to building an equitable and climate-resilient society.

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Enhancing Primary Healthcare Policies for Breast Cancer Management in Pakistan

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Breast cancer is the most frequently diagnosed cancer among women worldwide, with developing countries like Pakistan experiencing a rising burden. Pakistan, with an estimated 240 million residents, has one of the highest breast cancer incidence rates in Asia, with approximately 83,000 new cases and 40,000 deaths annually (1). Late-stage presentation is common due to limited awareness, socio-cultural barriers, and inadequate healthcare infrastructure. Integrating breast cancer management strategies into the primary healthcare system is crucial for improving early detection and reducing mortality rates.

Current Landscape of Breast Cancer in Pakistan

Pakistan's healthcare system is structured into primary, secondary, and tertiary care levels. However, primary healthcare services remain underdeveloped, particularly concerning cancer screening and management (2). The absence of systematic breast cancer screening programs exacerbates late-stage diagnoses, leading to poor prognosis and high mortality rates (3,4). Additionally, Pakistan lacks a comprehensive national cancer registry, resulting in gaps in epidemiological data, which hinders effective policy-making and resource allocation (5).

Breast cancer is the most common cancer among Pakistani women, accounting for 38.8% of all female cancer cases (6). Pakistan has the highest rate of breast cancer in Asia, with approximately one in nine women developing the disease during their lifetime (7). The National Cancer Registry of Pakistan reported that, between 2015 and 2019, breast cancer constituted 21.4% of all cancer cases across both genders, highlighting its significant burden on public health (5). While regional initiatives such as the Punjab Cancer Registry and the Karachi Cancer Registry have made progress in data collection, their coverage remains geographically limited (8). Establishing a national cancer registry is crucial to accurately assess cancer incidence, develop targeted interventions, and enhance early detection efforts (9).

Barriers to Effective Breast Cancer Management

Several barriers hinder effective breast cancer management in Pakistan. Cultural taboos and misconceptions discourage open discussions about breast health, leading to reluctance in seeking medical attention (7). Limited knowledge about breast cancer symptoms and screening methods further contributes to delayed healthcare-seeking behavior (10). Additionally, primary healthcare centers lack trained personnel and essential diagnostic facilities, restricting access to timely interventions (2). Finally, the high costs of diagnostics and treatments limit access to care for low-income populations (6).

Policy Recommendations

1. Integrate breast cancer services into primary healthcare: Implement nationwide breast cancer screening programs within primary healthcare settings using clinical breast examinations (CBE) and mammography where feasible (3). Develop standardized guidelines for breast cancer screening, diagnosis, and referral to ensure uniformity and quality of care across healthcare facilities (4).

2. Encourage capacity building of healthcare professionals: Organize training programs for primary healthcare providers on breast cancer risk factors, early detection methods, and patient counseling (2). Designate continuing medical education (CME) in oncology and breast health for general practitioners as mandatory.

3. Launch culturally sensitive awareness campaigns: Utilize mass media and community health workers to educate women on self-breast examination techniques and the importance of early detection (7). Develop educational materials in local languages to improve accessibility.

4.Increase the recruitment and deployment of female healthcare providers: This will improve patient comfort and engagement. Establishing support groups and counseling services can provide psychosocial support to breast cancer patients and survivors (10).

5.Improve access to diagnostic and treatment services: Deploy mobile health units equipped with diagnostic tools to reach underserved populations. Implement financial support mechanisms such as subsidized treatment options and health insurance schemes (6).

6.Establish a national cancer registry: This will help collect data on breast cancer incidence, treatment outcomes, and survival rates. Allocating funding for research on breast cancer prevention strategies and culturally appropriate interventions is essential (5).

Conclusion

Addressing the breast cancer burden in Pakistan requires a comprehensive policy framework that integrates breast health services into primary healthcare, enhances the capacity of healthcare professionals, and addresses socio-cultural barriers. By implementing these policy recommendations, Pakistan can improve early detection rates, provide timely and effective treatment, and ultimately reduce breast cancer-related morbidity and mortality.

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The Road to Cardiovascular Equity

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Acute myocardial infarction (MI) remains the leading cause of mortality worldwide. In the early 19th century, MI was considered a rare disease. In 1768, William Heberden coined the term “angina” to describe chest pain, but risk factors and underlying physiology were unknown. It was not until the 1880s that pathologists Carl Weigert and William Osler proposed coronary artery occlusion as the cause of acute MI [1].

Epidemic of the 20th Century

In 1900, acute MI was the fourth leading cause of death in the United States. By 1961, it had become the leading cause of death. Since then, the search for effective treatments became a top priority. In 1933, William S. Tillett synthesized a "miracle drug" initially called fibrolysin, now known as streptokinase—an enzyme that converts plasminogen into plasmin [2]. However, it was not until 1986 that the Gruppo Italiano per lo Studio della Streptochinasi nell'Infarto Miocardico (GISSI) demonstrated that streptokinase significantly reduced mortality. It also showed that the earlier the thrombolysis, the better the outcomes [3].
Further research confirmed mortality reduction not only with streptokinase but also with newer thrombolytic agents like alteplase [4]. Between 1980 and 2008, mortality decreased by 64%, from 345 to 123 per 10,000 cases [5].

Percutaneous coronary Intervention (PCI)

In 1976, Dr. Andreas Grüntzig performed the first coronary catheterization using a balloon for dilation. By 1977, he had successfully conducted the first coronary angioplasty, revolutionizing the treatment of MI [6]. It became evident that the response time for reperfusion was crucial for success. Current guidelines recommend thrombolysis when PCI-capable centers are more than 120 minutes away [7].

Cardiovascular Equity

The primary goal in the treatment of acute MI is early reperfusion of the infarct-related artery. Despite significant medical advances, access to treatment remains unequal across the globe. Surviving an acute MI should not be a privilege. With the evidence available today, coronary reperfusion should be a universally established standard. However, economic and political barriers continue to leave many regions without access to life-saving therapies [8].

Junior Doctors can make a Change

In underserved regions, nonprofit organizations are working to bring treatment to rural areas. One such example is Heart Attack Ethiopia, founded by two Ethiopian American physicians. The organization is dedicated to reducing premature cardiovascular deaths in Ethiopia and other African countries. It ensures access to reperfusion therapy even for patients living far from hospitals. In January 2025, the first radial pharmacoinvasive PCI for anterior STEMI was performed in Ethiopia, setting a precedent for other developing countries. Early thrombolysis saves lives. Advocacy for cardiovascular equity and global health efforts must begin within our own borders [9].

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Beyond the Bedside: The Syndemic of NCDs and Physician Burnout in LMICs

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As the global burden of non-communicable diseases (NCDs) continues to surge—accounting for over 70% of worldwide deaths—low- and middle-income countries (LMICs) remain disproportionately affected. While clinical strategies and national frameworks often focus on screening, risk factor control, and pharmaceutical access, a crucial yet overlooked dimension is the state of the healthcare workforce, especially junior doctors. In countries like Pakistan, where junior physicians are first responders in high-volume settings, the intersecting crises of burnout, workplace violence, and professional migration are silently undermining efforts to control NCDs (1).

This is not merely a workforce issue—it is a syndemic. A syndemic refers to the interaction of multiple interrelated health issues within a population, exacerbated by social and systemic conditions. In LMICs, NCDs coexist with chronic health system underfunding, brain drain, and physician demoralization. The World Health Organization has recognized that "health worker safety is patient safety" (1), yet this principle has not translated into concrete protections for doctors in fragile health systems. The burden of diabetes, hypertension, cancer, and cardiovascular disease is surging in regions that simultaneously lack enough trained clinicians and often punish those who stay behind.

Burnout among junior doctors is not new, but its impact on NCD care delivery is poorly understood. Managing chronic conditions in low-resource settings is emotionally taxing. Doctors are often forced to triage insulin among multiple patients, delay chemotherapy due to cost, or discharge stroke patients with no rehabilitation plan. This constant compromise leads to what experts call moral injury—the psychological distress of being unable to provide standard care due to external constraints (3).

In Pakistan, where an average public sector doctor may see over 100 patients a day, junior physicians bear the brunt of NCD care. In my experience, it is common for a single resident to manage all diabetic emergencies in a shift with no nutritionist, educator, or social worker in sight. Meanwhile, system-wide burnout remains underreported and untreated.

Every year, thousands of highly skilled junior doctors from LMICs migrate abroad seeking safer working conditions, better pay, and professional respect. This exodus directly impacts NCD care delivery, where patient outcomes hinge on long-term continuity, relationship-based care, and specialist follow-up. The departure of internal medicine trainees and primary care providers results in a "brain-drain feedback loop": patients lose access to stable providers, outcomes worsen, and remaining clinicians are overburdened further (4).

Data from Pakistan Medical Commission and the UK's General Medical Council indicate that over 17,000 Pakistani-trained doctors have migrated to the UK alone in the past decade. A significant portion of these professionals had experience managing NCDs in underserved areas.

Perhaps the most dangerous barrier to effective NCD management is violence against doctors, especially those dealing with complications like hypertensive crises, stroke, or diabetic ketoacidosis. In 2022, a junior doctor was physically assaulted after a patient died from a late-presenting myocardial infarction in a Karachi emergency room. Such cases are not anomalies—they are frequent, normalized, and deeply demoralizing.

The WHO estimates that up to 38% of healthcare workers in some LMICs have experienced physical violence (5). The figure is even higher for verbal abuse. In this climate, many doctors opt out of public sector work or refuse to serve in rural districts where security is minimal.

The result: patients with NCDs are left with delayed or no care at all.

Addressing NCDs in LMICs requires more than medication and metrics—it requires a protected and empowered healthcare workforce. I propose three actionable interventions that governments, hospitals, and advocacy networks should consider:

1. Integrate workforce protection into national NCD strategies. Every NCD policy document must include health worker mental health, safety, and retention as core pillars—not footnotes.

2. Create "Safe Hospital" legislation. Enact and enforce laws protecting medical staff from violence, especially in emergency and chronic care settings. Include anonymous reporting systems and emergency response protocols.

3. Invest in psychosocial support and professional dignity. Regular debriefing sessions, mental health check-ins, and recognition of ethical challenges faced by doctors should be institutionalized. Include these themes in medical education.

Finally, advocacy at international forums—such as the WMA JDN and WHO Youth Delegation—should push for the inclusion of physician well-being as a measurable NCD outcome indicator.

The battle against NCDs in LMICs cannot be fought with overworked, unsafe, and emotionally depleted doctors. Junior physicians are not just foot soldiers—they are architects of primary care, chronic disease management, and community trust. Without urgent attention to the syndemic of burnout, violence, and brain drain, the gains made in NCD policy will collapse under the weight of a neglected workforce. It is time we look beyond the bedside and begin healing the healers.

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The Role of Junior Doctors in the Era of Childhood Obesity and Anti-obesity Drugs

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Overweight and obesity are the pandemic of the 21st century, affecting a quarter of the world's population. They are characterized by an accumulation of body fat that increases the risk of metabolic and cardiovascular diseases. Their onset at younger ages is increasingly common, with an estimated 35 million children under 5 years of age and 390 million children and adolescents between 5 and 19 years of age being overweight between 2022 and 2024 (1).

In most cases, obesity is a multifactorial disease with a genetic/epigenetic basis, occurring in obesogenic environments with psychosocial and iatrogenic triggers and a sedentary lifestyle. A healthy lifestyle, including a normal-calorie diet and regular physical exercise, remains the cornerstone of treatment for overweight and obesity. However, the structural difficulties of society, which result in a lack of access to healthy and affordable food, a lack of spaces for physical exercise, few public policies aimed at promoting a healthy lifestyle, and the healthcare system's difficulty in detecting individuals in the early stages of the disease, limit the effectiveness of these interventions (1).

In recent years, several anti-obesity pharmacological options have garnered worldwide attention, focusing on body weight loss (symptomatic treatment of obesity). A race has been launched to develop the drug that provides the greatest weight loss. To date, no drug treats the pathophysiology of obesity; that is, none is capable of modifying the hypothalamic neuronal regulator that establishes positive energy balance (neuroplasticity). This fact means that users of these drugs regain the lost weight shortly after discontinuing them and requires chronic treatment to maintain the benefits.

While most therapeutic options are approved by drug regulatory agencies for use in adults, obese adolescents constitute a new target audience. Some drugs are already approved for use in adolescents 12 years of age and older, and clinical trials are currently underway in children between 6 and 11 years of age(2,3).

These new users maintain the same perceptions seen in adults (the need for chronic treatment to maintain benefits), and also report the same adverse events. At these ages, other risks must be added, such as damage to self-esteem, the risk of developing eating disorders, and other mental health problems.

The truth is that we are facing an era in which the medicalization of obesity is a given, mainly because the health system tends to recruit adolescents when excess weight is already present and obesogenic lifestyle habits are already established, rendering non-pharmacological interventions ineffective.

As Junior Doctors, we must keep in mind that any contact with children and adolescents is a good time to reinforce healthy lifestyle habits. We must promote physical exercise and a balanced diet. We must encourage family approaches, given that the entire family benefits from these interventions and can support each other. Dependence on anti-obesity drugs should be discouraged, because we have positioned them as the only solution to the problem, when they should be a last resort, when a genuine effort has been made to try non-pharmacological options. And if pharmacological options are the ones requested, we must support the adolescent and monitor not only weight changes but also known adverse events and their mental health.

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