



WMA
Junior Doctors Network

ISSUE 30TH
JANUARY 2025

JUNIOR DOCTORS NETWORK

THE VIEWS AND OPINIONS EXPRESSED IN THIS NEWSLETTER ARE SOLELY THOSE OF THE AUTHORS AND DO NOT NECESSARILY REFLECT THE OFFICIAL POSITIONS OR POLICIES OF THE JUNIOR DOCTORS NETWORK (JDN) OR THE WORLD MEDICAL ASSOCIATION (WMA).

SPECIAL FOCUS:

"Health in a Changing Climate: JDN's Response to Global Challenges"

TABLE OF CONTENTS

ABOUT US.	1
JUNIOR DOCTORS LEADERSHIP JUNIO 2023-2024	2
EDITORIAL TEAM 2023 - 2024	3
WORDS OF CHAIR 2024/2025, JUNIOR DOCTORS NETWORK- WMA	4
WORDS OF IMMEDIATE PAST CHAIR	5
WORDS FROM THE INCOMING PUBLICATIONS DIRECTOR	6
MTRO..JOSE LUIS FUNES: ONE HEALTH	9
DR. ANKUSH K. BANSAL: CLIMATE CHANGE AND ITS IMPACT	17
SATHI INITIATIVE: ADDRESSING UNMET SURGICAL NEEDS IN	27
TRANSGENDER MENTAL HEALTHCARE IN PAKISTAN	31
JUNIOR DOCTORS NETWORK MEMBERSHIP CENSUS 2024	35
LIKE TOBACCO, FOSSIL FUELS ARE A HEALTH HAZARD WE	39
BRIDGING GAPS IN PATIENT SAFETY: INSIGHTS FROM ALGERIA	45
THE EVOLUTION OF TELEHEALTH AND THE ROLE OF JUNIOR	51
WHO CAN BECOME A JDN MEMBER?	56





About Us.



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 500 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 or who are still in an ongoing postgraduate medical education program.

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:

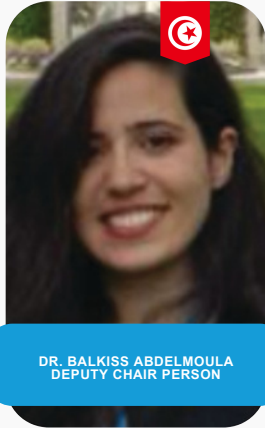
During the regular JDN meetings, members get to know each other, discuss global health issues, share challenges, and start collaborations on global health issues. The JDN meets on several occasions during the year, both in-person and via online teleconferences:

- 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

JUNIOR DOCTORS LEADERSHIP 2023-2024



DR. MARIE-CLAIRE WANGARI
CHAIR PERSON



DR. BALKISS ABDELMOULA
DEPUTY CHAIR PERSON



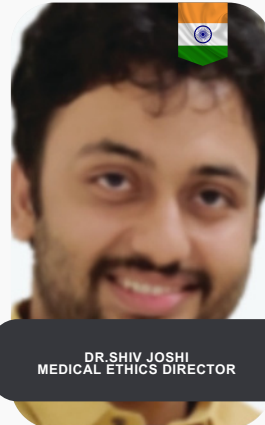
DR. DEENA MARIYAM
SECRETARY



DR. FRANCISCO FRANCO PÉGO
SOCIO-MEDICAL AFFAIRS OFFICER



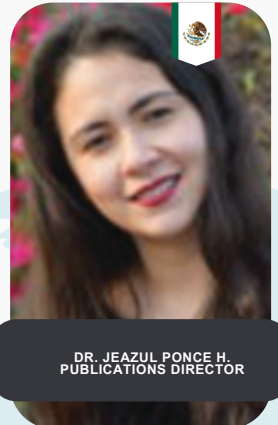
DR. MERLINDA SHAZELLENE
MEDICAL EDUCATION DIRECTOR



DR. SHIV JOSHI
MEDICAL ETHICS DIRECTOR



DR. PABLO ESTRELLA
MEMBERSHIP DIRECTOR



DR. JEAZUL PONCE H.
PUBLICATIONS DIRECTOR



DR. SAZI NZAMA
COMMUNICATIONS DIRECTOR



DR. UCHECHUKWU ARUM
IMMEDIATE PAST CHAIR

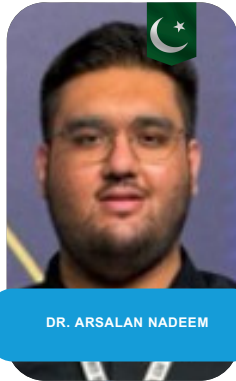


DR. LWANDO MAKI
IMMEDIATE PAST DEPUTY CHAIR

EDITORIAL TEAM 2023-2024



DR. DOUAA ROUFIA ATTABI



DR. ARSALAN NADEEM



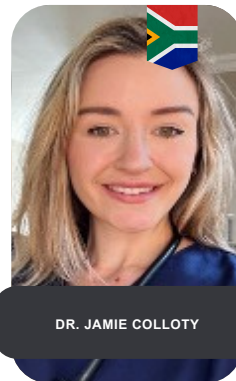
DR. CAROL KANGETHE



DR. SHRAVAN R. DAVE



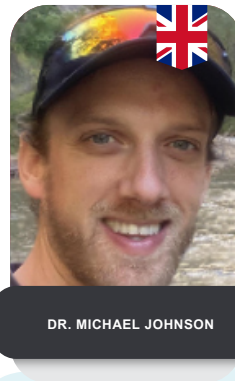
DR. AMANUEL Y. NEGASH



DR. JAMIE COLLOTY



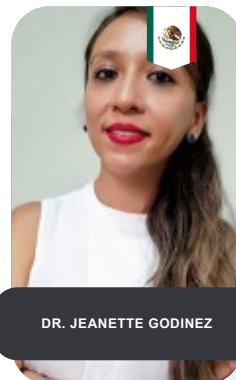
DR. MAYMONA CHOUDRY



DR. MICHAEL JOHNSON



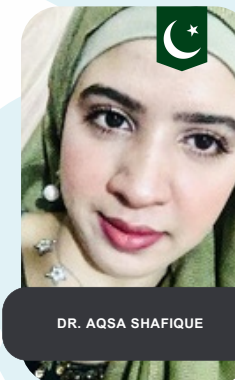
MAHA AWAN



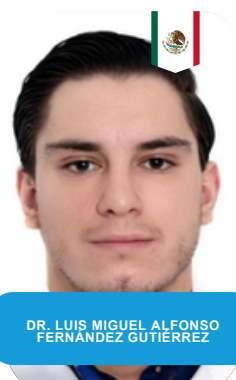
DR. JEANETTE GODINEZ



YAHAYA

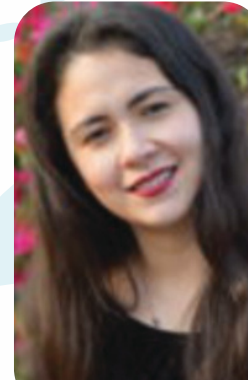


DR. AQSA SHAFIQUE



DR. LUIS MIGUEL ALFONSO
FERNANDEZ GUTIERREZ

EDITOR-IN-CHIEF AND
RESPONSIBLE FOR THIS EDITION:
DR. JEAZUL PONCE HERNÁNDEZ
EMAIL: JEAZULPONCE@GMAIL.COM
COMMUNICATIONS.JDN@WMA.NET
LOCATION: SALAMANCA, SPAIN
POSTAL CODE: 37006



**PABLO ESTRELLA PORTER (MD, MPH),
CHAIR 2024/2025
JUNIOR DOCTORS NETWORK
ECUATOR/SPAIN.
WORLD MEDICAL ASSOCIATION**



WORDS OF CHAIR 2024/2025, JUNIOR DOCTORS NETWORK- WMA

Dear JDN colleagues,

As the newly elected Chair of the Junior Doctors Network (JDN), I am honored to share a few words of gratitude and encouragement in this milestone 30th edition of our newsletter, which focuses on the impact of climate change on global health.

This edition is particularly special, not only because it highlights one of the most pressing issues of our time, how climate change is directly influencing global health, but also because it marks the culmination of the past term's extraordinary efforts. It serves as a document to the dedication and commitment of our publications team and our members, whose hard work has brought to life insightful discussions that shape and inspire our profession.

As we celebrate this 30th edition, let us recognize the importance of fostering spaces for dialogue and collaboration. These exchanges are vital as we grow into ethical, compassionate, and skilled health professionals, ready to address the global challenges of our generation.

Thank you for your ongoing dedication to the principles of the JDN community. Together, let us continue to make an impact, building on the foundation laid by this edition and driving forward our mission to strengthen global health.

Warm regards,

Dr. Pablo Estrella Porter

Chair 2024-25, Junior Doctors Network World Medical Association



WORDS OF IMMEDIATE PAST CHAIR

Dear JDN alumni and members,

As we come to the final edition of our Junior Doctors Network (JDN) newsletter, I find myself reflecting on the incredible journey we have taken together. Serving as the Chair of this dynamic network has been one of the most fulfilling experiences of my career. It has been a journey filled with learning, growth, collaboration, and an unwavering commitment to the betterment of junior doctors worldwide.

Throughout my time as Chair, I have had the privilege of working alongside a dedicated team of passionate doctors from diverse corners of the world. Together, we have championed the voices of junior doctors, ensuring that our concerns are heard on global platforms such as the World Medical Association (WMA), and advocating for better working conditions, professional development opportunities, and equitable access to health resources for our patients.

This final edition symbolizes both a conclusion and a beginning. As we close this chapter, we celebrate the remarkable milestones we have achieved—successful advocacy efforts, impactful meetings, and the creation of an inclusive space where junior doctors can engage with one another. We have tackled complex global health challenges, from mental health to climate change, and I am proud of how we have risen to these challenges with determination and resilience.

But beyond the accomplishments, what stands out most to me is the sense of community we have built. The JDN has become more than just a network; it is a family of professionals bound by a shared purpose to improve healthcare systems, uphold medical ethics, and foster collaboration across borders. I am grateful for the friendships forged, the mentorship exchanged, and the encouragement we have provided one another through the highs and lows of this noble profession.

As we wrap up the 2023/24 mandate, I do so with immense gratitude and optimism for the future. The junior doctors of today are the leaders of tomorrow, and I have full confidence that our network will continue to thrive and grow.

To those who will carry the torch forward, remember that our collective strength lies in our unity, our empathy, and our relentless pursuit of excellence.

Thank you all for your dedication, your contributions, and your trust. Let us continue to support one another, advocate for meaningful change, and most importantly, take care of ourselves as we care for others.

In solidarity and with warm regards,

Dr. Marie-Claire Wangari

2024/25 Immediate past chair, Junior Doctors Network World Medical Association

**DR. JEAZUL PONCE
FORMER PUBLICATIONS DIRECTOR
2023/2024,
COMMUNICATIONS DIRECTOR 2024/2025
JUNIOR DOCTORS NETWORK
MEXICO/SPAIN
WORLD MEDICAL ASSOCIATION**



**WORDS FROM THE FORMER PUBLICATIONS DIRECTOR (2023/2024) AND
EDITOR-IN-CHIEF OF THE JDN NEWSLETTER 30TH ISSUE**

Dear JDN and WMA community,

As part of the 30th edition of the Junior Doctors Network (JDN) newsletter, I want to close this cycle as Publications Director by reflecting on one of the greatest challenges to global health: air pollution. As healthcare professionals, our duty is not only to treat diseases but also to advocate for a healthier environment that prevents the causes of those diseases.

The WMA Declaration on the Prevention and Reduction of Air Pollution to Improve Air Quality emphasizes that air pollution is one of the main threats to global health, directly linked to respiratory and cardiovascular diseases, cancer, and increased premature mortality. According to the WHO, nine out of ten people breathe polluted air every day. This fact serves as a stark reminder of how the environment impacts the health of our communities, especially the most vulnerable.

As healthcare professionals, we have the responsibility to lead change from our trenches: educating our patients about the risks associated with air pollution, supporting mitigation policies, and, most importantly, engaging in local and global initiatives that promote environmental sustainability. Collaboration across disciplines and sectors is key to addressing this issue. We must recognize that health and the environment are inseparable.

As I bid farewell to this role, I want to express my deepest gratitude to the publications team and editors of the 2023-2024 period. Your dedication and efforts have been fundamental to the success of our initiatives. I encourage you to continue submitting articles and actively engaging in the policies of the World Medical Association (WMA). Do not limit yourselves to understanding them; work on their development and adapt these guidelines into strategies applicable to your own environments.

Furthermore, I am pleased to announce that I will take on the responsibility of managing our social media as communications director 2024/2025. I invite you to follow us and stay updated with the latest developments. also I encourage you to continue addressing topics like air pollution from a comprehensive and proactive perspective. Together, we can turn words into actions and make a tangible difference in the health of our communities and the planet.

Let us keep moving forward with passion and commitment toward a future where air quality is not a privilege but a fundamental human right.

**Dr. Jeazul Ponce, MPH, MSc, PhD.
Former Publications Director of JDN 2023/2024,
Editor-in-Chief of the JDN Newsletter 30th Issue
Communications Director 2024/2025
Junior Doctors Network**

**DR VENKATESH KARTHIKEYAN MD,
SENIOR RESIDENT,
COMMUNITY AND FAMILY MEDICINE,
PUBLICATIONS DIRECTOR 2024/2025
JUNIOR DOCTORS NETWORK
INDIA
WORLD MEDICAL ASSOCIATION**



WORDS FROM THE INCOMING PUBLICATIONS DIRECTOR 2024/2025

Dear Colleagues,

As the newly elected Publications Director for the WMA Junior Doctors Network (JDN), it is my great pleasure to address the future contributors and readers of our esteemed newsletter. The WMA JDN newsletter serves as a unique platform connecting young doctors worldwide, disseminating knowledge and fostering dialogue on public health issues.

Writing and publishing are indispensable tools for young doctors. They not only enhance our professional growth but also elevate our voice in the global medical community. Our newsletter, read across the globe, offers a unique opportunity to share insights, research findings, and perspectives. This is not just publication; it's a declaration of our commitment to advancing healthcare on an international scale.

This upcoming year, I am thrilled to announce that we are planning two special editions—one focusing on Antimicrobial Resistance and the other on Non-Communicable Diseases. These editions aim to highlight the pressing challenges and innovative solutions in these critical areas of health. Apart from our special editions, we will continue to bring you regular newsletters that capture a wide range of topics pertinent to medical science and public health.

I strongly encourage each one of you to seize this opportunity. Submit your research, insightful opinions, and thought-provoking viewpoints. Let your voices be heard on a platform that celebrates the diversity and expertise of junior doctors around the world.

Together, we can contribute to a body of knowledge that not only addresses the challenges of today but also paves the way for healthier futures worldwide.

Warm regards,

Dr. Venkatesh Karthikeyan
Publications Director (2024-25),
World Medical Association - Junior Doctors Network,
4852012@gmail.com



WORLD
MEDICAL
ASSOCIATION

ARTICLES BASED ON INTERVIEWS

ONE HEALTH
LA INTERSECCIÓN ENTRE LA SALUD
PÚBLICA, ZONOSIS Y LA
CONSERVACIÓN DE LOS ECOSISTEMAS

METRO. JOSE LUIS FUNES

PRESIDENTE Y DIRECTOR EJECUTIVO
SENIOR DE LA "FUNDACIÓN SAVING
OUR SHARKS"



PRESIDENTE Y DIRECTOR EJECUTIVO
SENIOR DE LA "FUNDACIÓN SAVING
OUR SHARKS"

ONE HEALTH: LA INTERSECCIÓN ENTRE LA SALUD PÚBLICA, ZONOSIS Y LA CONSERVACIÓN DE LOS ECOSISTEMAS

El concepto de One Health ha cobrado relevancia en las últimas décadas debido a la creciente conciencia sobre cómo la salud humana, la salud animal y la salud de los ecosistemas están intrínsecamente interconectadas. José Luis Funes, abogado ambientalista y presidente de la Fundación Saving Our Sharks, ha dedicado más de 30 años a abordar temas ambientales y de vida silvestre, trabajó en la Comisión de Cooperación Ambiental (CCA) de América del Norte como consultor del Comité Consultivo Público Conjunto; subrayando que la ruptura del equilibrio ecológico tiene implicaciones directas y graves en la salud global.

Zoonosis: Una amenaza cada vez más presente

La zoonosis, o enfermedades que se transmiten de animales a humanos, no es un fenómeno nuevo. Sin embargo, lo que ha cambiado en las últimas décadas es la escala y la velocidad con la que estas enfermedades han emergido. Según datos del Programa de las Naciones Unidas para el Medio Ambiente (PNUMA), el 75% de las enfermedades emergentes provienen de la fauna silvestre. Este dato alarmante refleja el impacto de la actividad humana sobre el entorno natural (1).

Los patógenos han existido en la naturaleza durante millones de años, coexistiendo en un equilibrio casi perfecto en ecosistemas intactos. No obstante, la intervención humana, especialmente a través de la deforestación y la comercialización de animales silvestres, rompe ese equilibrio y propicia que virus, bacterias y otros agentes infecciosos, que antes no suponían una amenaza para los humanos, crucen la barrera entre especies. Los mercados húmedos en Asia, por ejemplo, han sido señalados como el origen probable de la pandemia de COVID-19. Según Funes, la teoría más aceptada es que el virus surgió a raíz de la destrucción de ecosistemas en el sudeste asiático, donde ciertos animales fueron extraídos de sus hábitats naturales para ser comercializados en mercados, como los de Wuhan, China (2,3).

Estos mercados, denominados “wet markets”, presentan un riesgo significativo, ya que agrupan especies silvestres en condiciones insalubres, debilitando sus sistemas inmunológicos y facilitando la propagación de patógenos entre los animales y hacia los humanos. A través de estos mecanismos, el ser humano queda expuesto a una gama de enfermedades infecciosas con potencial pandémico. Es así como el COVID-19, el SARS y otras enfermedades emergentes han encontrado su camino hacia la población humana, desatando crisis de salud pública a nivel global (3).

Destrucción de ecosistemas y la expansión de las zoonosis

La intervención humana en los ecosistemas no se limita solo a la vida terrestre. Funes subraya que la vida marina también está siendo gravemente afectada, en particular los tiburones, que son especies clave para mantener el equilibrio en los ecosistemas marinos. Los tiburones, al igual que los lobos en los ecosistemas terrestres, controlan la población de especies herbívoras y carnívoras, ayudando a preservar la biodiversidad. Su desaparición, impulsada por la sobrepesca y la demanda de aletas en mercados asiáticos, ha provocado que los ecosistemas marinos estén cada vez más desequilibrados (4).

ONE HEALTH: LA INTERSECCIÓN ENTRE LA SALUD PÚBLICA, ZONOSIS Y LA CONSERVACIÓN DE LOS ECOSISTEMAS

Un ecosistema desequilibrado es un caldo de cultivo para la propagación de patógenos. El principio de dilución, que Funes describe, es clave para entender este fenómeno: en un ecosistema saludable y diverso, los patógenos se mantienen bajo control gracias a la variedad de especies que interactúan y regulan su entorno. Cuando el ser humano destruye esos ecosistemas, las especies que quedan —tanto silvestres como domésticas— están más expuestas y vulnerables, aumentando el riesgo de que los patógenos crucen la barrera de especies y afecten a los humanos(5).

One Health: Una solución integral

El concepto de One Health busca ofrecer una solución a este desafío interconectado. Según Funes, la idea central es que la salud del ser humano está directamente vinculada con la salud animal y la de los ecosistemas. No podemos abordar problemas de salud global de manera aislada, pues la emergencia de pandemias, el cambio climático y la pérdida de biodiversidad están entrelazados en una red compleja que exige una respuesta coordinada (2).

Desde el punto de vista de One Health, es imperativo proteger los pocos ecosistemas intactos que quedan y restaurar aquellos que han sido degradados. La creación de áreas naturales protegidas, tanto marinas como terrestres, es una de las estrategias más efectivas para lograrlo. Funes señala que México ha tomado importantes pasos en esta dirección, como la creación del Parque Nacional Revillagigedo en el Pacífico, una de las áreas marinas protegidas más grandes del mundo. Sin embargo, como advierte, declarar un área protegida no es suficiente; es necesario aplicar la ley de manera efectiva para garantizar la conservación de estas áreas y prevenir la explotación ilegal de los recursos naturales (2,5).

El impacto del cambio climático

El cambio climático agrava estos problemas de conservación. En los ecosistemas marinos, los arrecifes de coral, que son fundamentales para la biodiversidad, han sufrido un blanqueamiento masivo debido al aumento de las temperaturas del océano. Este fenómeno no solo afecta a los corales, sino a todas las especies que dependen de ellos para su supervivencia. Además, Funes menciona la presencia de un patógeno conocido como “síndrome blanco” que ha devastado colonias de corales en el Caribe, matando más del 90% de algunas especies formadoras de arrecifes (4).

El vínculo entre cambio climático y biodiversidad es innegable. En las últimas conferencias de las partes (COP), los países han comenzado a reconocer la necesidad de abordar el cambio climático y la pérdida de biodiversidad de manera conjunta. Sin embargo, aún queda mucho por hacer. La sobreexplotación de especies marinas, como los tiburones, se ve exacerbada por el cambio climático, que desplaza a muchas especies de sus hábitats naturales. Esto ha generado fenómenos como la sustitución de especies en productos alimenticios, donde tiburones son vendidos como “bacalao” o “marlin”, afectando tanto la biodiversidad como la salud humana (5).

ONE HEALTH: LA INTERSECCIÓN ENTRE LA SALUD PÚBLICA, ZONOSIS Y LA CONSERVACIÓN DE LOS ECOSISTEMAS

La necesidad de políticas públicas integrales

José Luis Funes concluye que la implementación de One Health debe ser transversal a todas las políticas públicas. El enfoque debe centrarse en la prevención de futuras pandemias mediante la protección de los ecosistemas, la regulación de la vida silvestre y la promoción de prácticas sostenibles en la agricultura y la pesca. Funes es claro al afirmar que la soberbia del ser humano, al creer que puede controlar todos los aspectos de la naturaleza, ha sido una de las causas principales de la crisis ambiental y de salud que enfrentamos.

No se trata solo de un imperativo ético hacia la naturaleza, sino de una cuestión de supervivencia humana. Como lo demuestra la pandemia de COVID-19, la destrucción de los ecosistemas puede desencadenar crisis globales que afectan no solo a la salud, sino también a las economías y a las estructuras sociales. Si no se toman medidas inmediatas para restaurar y proteger los ecosistemas, la humanidad seguirá enfrentando estos desafíos una y otra vez.

Conclusión

El enfoque de One Health subraya que la salud pública no puede desligarse de la conservación ambiental y el bienestar animal. Las zoonosis, como el COVID-19, son solo un ejemplo de lo que puede suceder cuando ignoramos esta conexión. A medida que enfrentamos los desafíos del cambio climático, la pérdida de biodiversidad y la sobreexplotación de recursos naturales, es más urgente que nunca adoptar un enfoque integral para garantizar un futuro saludable tanto para los humanos como para el planeta.

Entrevista realizada y redactada en conjunto con la Dra. Delta Jeazul Ponce Hernandez.

References

1. United Nations Environment Programme (UNEP). Preventing the Next Pandemic: Zoonotic Diseases and How to Break the Chain of Transmission. Nairobi, Kenya: UNEP; 2020. Available at: <https://www.unep.org>
2. World Health Organization (WHO). One Health: Joint Plan of Action (2022–2026). Geneva: WHO; 2022. Available at: <https://www.who.int>
3. Daszak P, Olival KJ, Li H. A strategy to prevent future epidemics similar to the 2019-nCoV outbreak. Biosaf Health. 2020 Mar;2(1):6-8. doi: 10.1016/j.bsheat.2020.01.003. Epub 2020 Feb 5. PMID: 32562482; PMCID: PMC7144510.
4. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). Pandemics: Escaping the Era of Pandemics. Bonn: IPBES Secretariat; 2020. Available at: <https://ipbes.net>
5. Keesing F, Holt RD, Ostfeld RS. Effects of species diversity on disease risk. Ecol Lett. 2006 Apr;9(4):485-98. doi: 10.1111/j.1461-0248.2006.00885.x. PMID: 16623733.



ONE HEALTH: THE INTERSECTION OF
PUBLIC HEALTH, ZOOSES, AND
ECOSYSTEM CONSERVATION

PROF. JOSE LUIS FUNES

PRESIDENT AND SENIOR CEO OF
"SAVING OUR SHARKS FOUNDATION"



PRESIDENT AND SENIOR CEO OF
"SAVING OUR SHARKS FOUNDATION"

ONE HEALTH: THE INTERSECTION OF PUBLIC HEALTH, ZOOSES, AND ECOSYSTEM CONSERVATION

The concept of One Health has gained significant relevance in recent decades due to the growing awareness of the intrinsic connections between human health, animal health, and ecosystem health. José Luis Funes, an environmental lawyer and president of the Saving Our Sharks Foundation, has dedicated over 30 years to addressing environmental and wildlife issues. He worked as a consultant for the Joint Public Advisory Committee of the North American Commission for Environmental Cooperation (CEC), emphasizing that the disruption of ecological balance has direct and severe implications for global health.

Zoonoses: An Increasingly Present Threat

Zoonoses, or diseases transmitted from animals to humans, are not a new phenomenon. However, what has changed in recent decades is the scale and speed at which these diseases emerge. According to data from the United Nations Environment Programme (UNEP), 75% of emerging diseases originate from wildlife. This alarming figure highlights the impact of human activity on the natural environment(1).

Pathogens have existed in nature for millions of years, coexisting in near-perfect balance within intact ecosystems. However, human intervention, especially through deforestation and wildlife trade, disrupts that balance, allowing viruses, bacteria, and other infectious agents that were previously harmless to humans to cross the species barrier. Wet markets in Asia, for example, have been identified as the likely origin of the COVID-19 pandemic. According to Funes, the most accepted theory is that the virus emerged due to ecosystem destruction in Southeast Asia, where certain animals were removed from their natural habitats for trade in markets like those in Wuhan, China(2,3).

These markets, commonly referred to as “wet markets,” pose a significant risk as they bring together wild species in unsanitary conditions, weakening their immune systems and facilitating the spread of pathogens among animals and to humans. Through such mechanisms, humans become exposed to a range of infectious diseases with pandemic potential. This is how COVID-19, SARS, and other emerging diseases have made their way into human populations, triggering global public health crises (3).

Ecosystem Destruction and the Spread of Zoonoses

Human intervention in ecosystems is not limited to terrestrial life. Funes emphasizes that marine life is also gravely affected, particularly sharks, which are key species in maintaining balance in marine ecosystems. Sharks, much like wolves in terrestrial ecosystems, control populations of herbivorous and carnivorous species, helping to preserve biodiversity. Their disappearance, driven by overfishing and the demand for shark fins in Asian markets, has increasingly destabilized marine ecosystems (4).

An unbalanced ecosystem becomes a breeding ground for pathogen proliferation. The dilution principle, described by Funes, is key to understanding this phenomenon: in a healthy and diverse ecosystem, pathogens are kept in check by the variety of species interacting and regulating their environment. When humans destroy these ecosystems, the remaining species—both wild and domestic—are more exposed and vulnerable, increasing the risk of pathogens crossing the species barrier and affecting humans (5).

ONE HEALTH: THE INTERSECTION OF PUBLIC HEALTH, ZOOSES, AND ECOSYSTEM CONSERVATION

One Health: A Holistic Solution

The One Health concept seeks to provide a solution to this interconnected challenge. According to Funes, the central idea is that human health is directly linked to animal health and ecosystem health. Global health issues cannot be addressed in isolation, as the emergence of pandemics, climate change, and biodiversity loss are intertwined in a complex web requiring a coordinated response(2).

From a One Health perspective, it is imperative to protect the few remaining intact ecosystems and restore those that have been degraded. Establishing protected natural areas, both marine and terrestrial, is one of the most effective strategies to achieve this. Funes notes that Mexico has taken significant steps in this direction, such as creating the Revillagigedo National Park in the Pacific, one of the world’s largest marine protected areas. However, as he warns, declaring a protected area is not enough; effective law enforcement is necessary to ensure the conservation of these areas and prevent the illegal exploitation of natural resources (2,5).

The Impact of Climate Change

Climate change exacerbates these conservation challenges. In marine ecosystems, coral reefs, which are essential for biodiversity, have suffered massive bleaching due to rising ocean temperatures. This phenomenon affects not only corals but all species that rely on them for survival. Additionally, Funes highlights the presence of a pathogen known as “white syndrome,” which has devastated coral colonies in the Caribbean, killing over 90% of some reef-building species (4).

The link between climate change and biodiversity is undeniable. At recent Conferences of the Parties (COP), countries have begun to recognize the need to address climate change and biodiversity loss together. However, much work remains. The overexploitation of marine species, such as sharks, is exacerbated by climate change, which displaces many species from their natural habitats. This has led to phenomena like species substitution in food products, where sharks are sold as “cod” or “marlin,” impacting both biodiversity and human health (5).

The Need for Comprehensive Public Policies

José Luis Funes concludes that implementing One Health must be integrated across all public policies. The focus should be on preventing future pandemics by protecting ecosystems, regulating wildlife, and promoting sustainable practices in agriculture and fishing. Funes is clear in stating that human arrogance, in believing we can control all aspects of nature, has been a primary cause of the environmental and health crises we face.

ONE HEALTH: THE INTERSECTION OF PUBLIC HEALTH, ZOOSES, AND ECOSYSTEM CONSERVATION

This is not merely an ethical imperative toward nature but a matter of human survival. As the COVID-19 pandemic has demonstrated, ecosystem destruction can trigger global crises that affect not only health but also economies and social structures. Without immediate action to restore and protect ecosystems, humanity will continue to face these challenges repeatedly.

Conclusion

The One Health approach underscores that public health cannot be separated from environmental conservation and animal welfare. Zoonoses, such as COVID-19, are just one example of what can happen when this connection is ignored. As we confront the challenges of climate change, biodiversity loss, and the overexploitation of natural resources, adopting a holistic approach is more urgent than ever to ensure a healthy future for both humans and the planet.

Interview Conducted and Co-Written with Dr. Delta Jeazul Ponce Hernandez

References

1. United Nations Environment Programme (UNEP). Preventing the Next Pandemic: Zoonotic Diseases and How to Break the Chain of Transmission. Nairobi, Kenya: UNEP; 2020. Available at: <https://www.unep.org>
2. World Health Organization (WHO). One Health: Joint Plan of Action (2022–2026). Geneva: WHO; 2022. Available at: <https://www.who.int>
3. Daszak P, Olival KJ, Li H. A strategy to prevent future epidemics similar to the 2019-nCoV outbreak. *Biosaf Health*. 2020 Mar;2(1):6-8. doi: 10.1016/j.bsheal.2020.01.003. Epub 2020 Feb 5. PMID: 32562482; PMCID: PMC7144510.
4. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). *Pandemics: Escaping the Era of Pandemics*. Bonn: IPBES Secretariat; 2020. Available at: <https://ipbes.net>
5. Keesing F, Holt RD, Ostfeld RS. Effects of species diversity on disease risk. *Ecol Lett*. 2006 Apr;9(4):485-98. doi: 10.1111/j.1461-0248.2006.00885.x. PMID: 16623733.



CLIMATE CHANGE AND ITS IMPACT ON
HEALTH: REFLECTIONS AND LESSONS
FROM COP29 IN BAKU

**DR. ANKUSH K.
BANSAL, MD, FACP,
FACPM, SFHM**

"CHAIR - WORKGROUP ON
ENVIRONMENT OF WMA



"CHAIR - WORKGROUP ON
ENVIRONMENT OF WMA

CLIMATE CHANGE AND ITS IMPACT ON HEALTH: REFLECTIONS AND LESSONS FROM COP29 IN BAKU

Climate change has firmly established itself as one of the most pressing threats to global health in the 21st century. The recent United Nations Climate Change Conference (COP29) held in Baku, Azerbaijan, not only highlighted environmental challenges but also emphasized the profound impact of this crisis on public health. During this event, global leaders and experts explored the intersection of health and climate change, with Dr. Ankush K. Bansal, head of the World Medical Association (WMA) delegation, providing key insights into the critical role of healthcare professionals in tackling this issue.

COP29: Progress and Agreements

COP29 concluded with a historic commitment: nearly 200 countries agreed to triple climate financing for developing nations, reaching \$300 billion annually by 2035. This increase aims to support vulnerable nations in mitigating climate change effects and adapting to phenomena such as droughts, storms, and floods. Despite this progress, critics argue that the funding remains insufficient to address the global scale of the crisis.

From a health perspective, Dr. Bansal highlighted how climate change directly affects patients through heatwaves, air pollution, and extreme weather events that exacerbate respiratory, cardiovascular, and chronic diseases. "The health case for climate action is growing stronger with every COP," he remarked (1).

Air Pollution and Respiratory Health

One of the most significant health risks associated with climate change is air pollution, particularly fine particulate matter (PM_{2.5}), which can penetrate deep into the lungs and bloodstream. These particles are linked to conditions such as asthma, chronic obstructive pulmonary disease (COPD), and lung cancer. They also contribute to higher mortality rates from cardiovascular and respiratory diseases. According to the World Health Organization (WHO), approximately 4.2 million premature deaths in 2016 were attributed to air pollution (2,3).

Dr. Bansal underscored the crucial role of healthcare professionals in addressing these challenges. "We can collect data, conduct research, and provide scientific evidence showing how extreme climate events worsen health outcomes. This evidence is vital for educating patients, communities, and policymakers," he explained.

The Role of Healthcare Professionals in Climate Action

Healthcare professionals are not only on the frontlines of treatment but also at the forefront of advocacy and climate action. According to Dr. Bansal, their responsibilities include educating patients about the health impacts of climate change, advocating for evidence-based policies, and collaborating with communities to implement sustainable solutions.

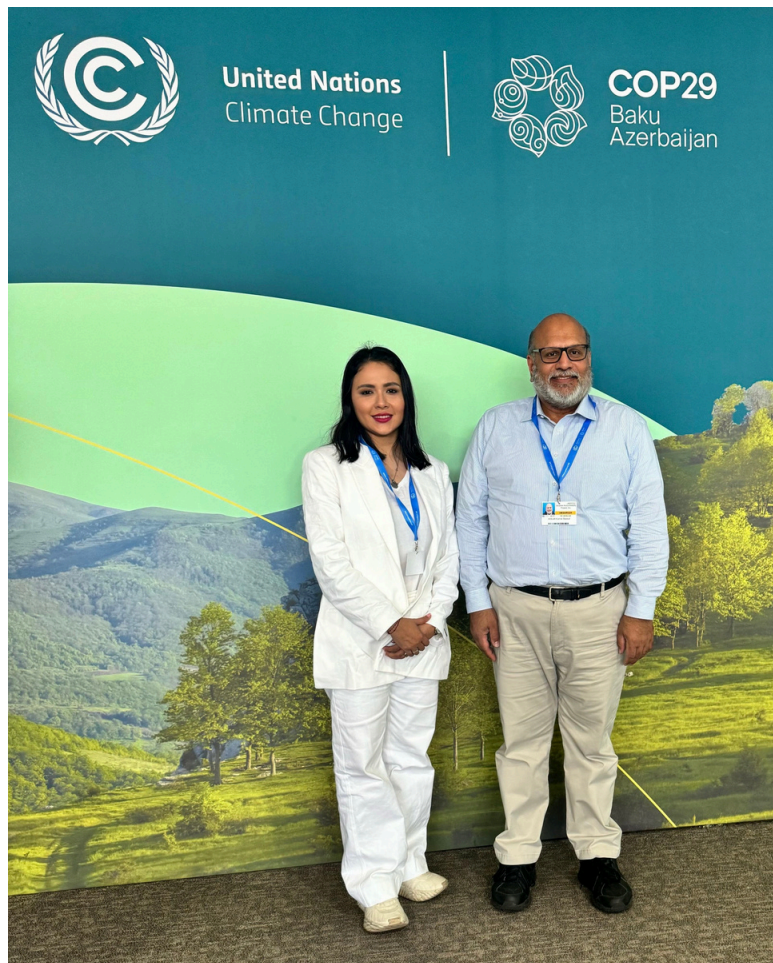
CLIMATE CHANGE AND ITS IMPACT ON HEALTH: REFLECTIONS AND LESSONS FROM COP29 IN BAKU

Dr. Bansal also stressed the importance of integrating climate change into medical education. "It's not a standalone course. Climate change is a cross-cutting issue that affects every healthcare system and should be part of the core medical curriculum worldwide," he stated.

Key Lessons from Baku

One of the major takeaways from COP29 is the transformative power of youth in driving climate action. "Young people, including junior doctors, are the most powerful force for change globally. They are more affected by climate change and, therefore, more motivated to act," Dr. Bansal affirmed.

Another critical lesson is the need to build resilient and sustainable healthcare systems. This means not only reducing the sector's carbon footprint but also ensuring operational capacity during climate disasters such as hurricanes, floods, or wildfires (4).



Photo

Dr. Ankush K. Bansal (right) alongside Dr. Jeazul Ponce Hernández (left) at the Baku Stadium during COP29. November, 2024

CLIMATE CHANGE AND ITS IMPACT ON HEALTH: REFLECTIONS AND LESSONS FROM COP29 IN BAKU

JDN at the COP29

During the COP29, the participation of the only representative in person from the Junior Doctors Network (JDN), Dr. Delta Jeazul Ponce Hernández, stood out as she attended the conferences organized by the WHO Pavilion. These sessions showcased the active role of Youth Council members as speakers and organizers, providing a clear example of how youth can engage in high-impact events. Dr. Ponce Hernández emphasized the importance of not only attending such spaces in the future, also actively participating in the organization of activities, such as side events or even creating a pavilion led by the World Medical Association (WMA). Initiatives like these would strengthen political inclusion and the leadership of younger generations, ensuring their contributions to shaping key strategies to address climate change and its effects on global health.

Conclusion

COP29 marked significant progress toward climate action, but challenges remain. The financial commitments, while encouraging, must translate into concrete actions that prioritize both climate mitigation and public health protection.

As Dr. Bansal aptly stated: “If not us, then who? It is our responsibility as doctors, leaders, and citizens to ensure a healthy and sustainable future for the next generations.”

Interview Conducted and Co-Written with Dr. Delta Jeazul Ponce Hernandez

References

1. United Nations Framework Convention on Climate Change. Outcomes of COP29: Climate finance commitment tripled for developing nations [Internet]. UNFCCC; 2024 [cited 2024 Dec 10]. Available from <https://unfccc.int/>
2. World Health Organization. Air pollution and its health effects [Internet]. WHO; 2016 [cited 2024 Dec 10]. Available from: [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)
3. Schraufnagel DE, Balmes JR, De Matteis S, Hoffman B, Kim WJ, Pérez-Padilla R, et al. Health benefits of air pollution reduction. *Ann Am Thorac Soc*. 2019;16(12):1478-87. DOI: 10.1513/AnnalsATS.201907-538CME
4. Watts N, Amann M, Arnell N, Ayeb-Karlsson S, Beagley J, Belesova K, et al. The 2020 report of The Lancet Countdown on health and climate change: Responding to converging crises. *Lancet*. 2021;397(10269):129-70. DOI: 10.1016/S0140-6736(20)32290-X



EL CAMBIO CLIMÁTICO Y SU IMPACTO
EN LA SALUD: REFLEXIONES Y
LECCIONES DE LA COP29 EN BAKÚ

**DR. ANKUSH K.
BANSAL, MD, FACP,
FACPM, SFHM**

PRESIDENTE DEL GRUPO DE TRABAJO
SOBRE MEDIO AMBIENTE DE LA AMM



PRESIDENTE DEL GRUPO DE TRABAJO
SOBRE MEDIO AMBIENTE DE LA AMM

EL CAMBIO CLIMÁTICO Y SU IMPACTO EN LA SALUD: REFLEXIONES Y LECCIONES DE LA COP29 EN BAKU

El cambio climático se ha consolidado como una de las amenazas más urgentes para la salud global en el siglo XXI. La reciente Conferencia de las Naciones Unidas sobre el Cambio Climático (COP29), celebrada en Bakú, Azerbaiyán, no solo destacó los desafíos ambientales, sino también el profundo impacto de esta crisis en la salud pública. Durante este evento, líderes y expertos globales exploraron la intersección entre la salud y el cambio climático, con el Dr. Ankush K. Bansal, jefe de la delegación de la Asociación Médica Mundial (WMA), proporcionando perspectivas clave sobre el papel crucial de los profesionales de la salud en abordar este problema.

COP29: Progresos y acuerdos

La COP29 concluyó con un compromiso histórico: cerca de 200 países acordaron triplicar la financiación climática para las naciones en desarrollo, alcanzando los 300 mil millones de dólares anuales para 2035. Este aumento tiene como objetivo apoyar a los países vulnerables en la mitigación de los efectos del cambio climático y la adaptación a fenómenos como sequías, tormentas e inundaciones. A pesar de este progreso, los críticos argumentan que la financiación sigue siendo insuficiente para abordar la magnitud global de la crisis.

Desde una perspectiva de salud, el Dr. Bansal destacó cómo el cambio climático afecta directamente a los pacientes a través de olas de calor, contaminación del aire y eventos climáticos extremos que agravan enfermedades respiratorias, cardiovasculares y crónicas. “El argumento de la salud a favor de la acción climática se fortalece con cada COP”, comentó (1).

Contaminación del aire y salud respiratoria

Uno de los mayores riesgos para la salud asociados con el cambio climático es la contaminación del aire, particularmente las partículas finas (PM2.5), que pueden penetrar profundamente en los pulmones y el torrente sanguíneo. Estas partículas están vinculadas a afecciones como el asma, la enfermedad pulmonar obstructiva crónica (EPOC) y el cáncer de pulmón, además de contribuir a mayores tasas de mortalidad por enfermedades cardiovasculares y respiratorias. Según la Organización Mundial de la Salud (OMS), aproximadamente 4.2 millones de muertes prematuras en 2016 se atribuyeron a la contaminación del aire (2,3).

El Dr. Bansal subrayó el papel crucial de los profesionales de la salud en la atención de estos desafíos. “Podemos recopilar datos, realizar investigaciones y proporcionar evidencia científica que muestre cómo los eventos climáticos extremos empeoran los resultados de salud. Esta evidencia es vital para educar a los pacientes, las comunidades y los responsables de políticas”, explicó.

El rol de los profesionales de la salud en la acción climática

Los profesionales de la salud no solo están en la primera línea del tratamiento, sino también a la vanguardia de la defensa y la acción climática. Según el Dr. Bansal, sus responsabilidades incluyen educar a los pacientes sobre los impactos del cambio climático en la salud, abogar por políticas basadas en evidencia y colaborar con las comunidades para implementar soluciones sostenibles.

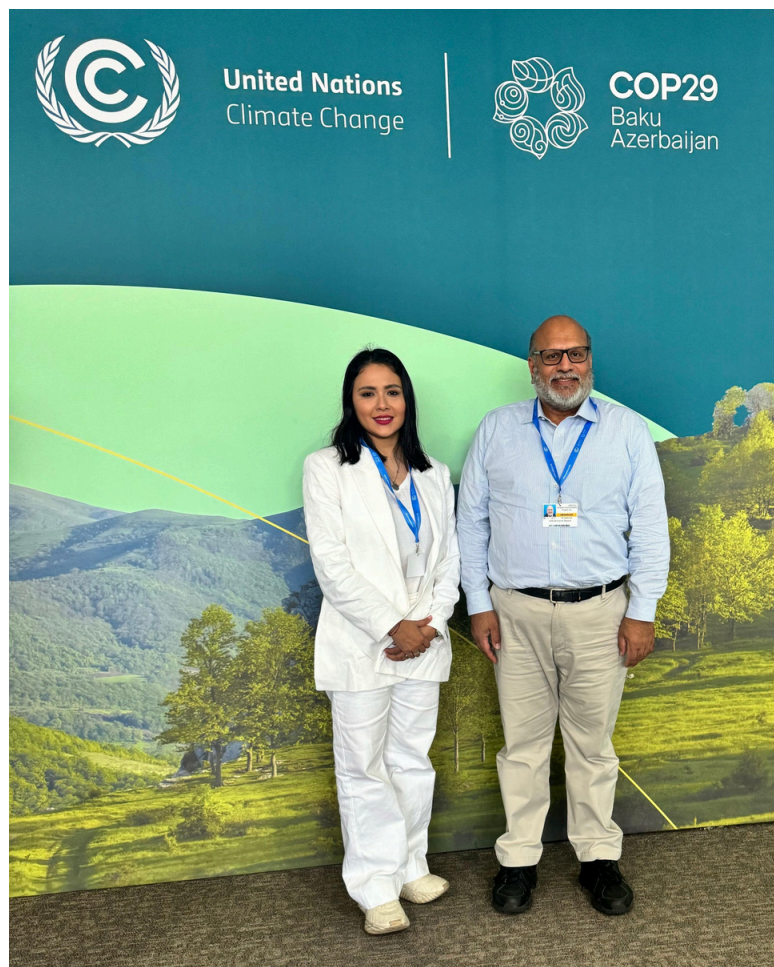
EL CAMBIO CLIMÁTICO Y SU IMPACTO EN LA SALUD: REFLEXIONES Y LECCIONES DE LA COP29 EN BAKÚ

El Dr. Bansal también destacó la importancia de integrar el cambio climático en la educación médica. "No es un curso independiente. El cambio climático es un tema transversal que afecta a todos los sistemas de salud y debe formar parte del currículo médico básico a nivel mundial", afirmó.

Lecciones clave desde Bakú

Uno de los aprendizajes más importantes de la COP29 es el poder transformador de la juventud para impulsar la acción climática. "Los jóvenes, incluidos los médicos en formación, son la fuerza más poderosa para el cambio a nivel global. Son los más afectados por el cambio climático y, por ende, los más motivados para actuar", aseguró el Dr. Bansal.

Otra lección crucial es la necesidad de construir sistemas de salud resilientes y sostenibles. Esto implica no solo reducir la huella de carbono del sector, sino también garantizar la capacidad operativa durante desastres climáticos como huracanes, inundaciones o incendios forestales (4).



Foto

Dr. Ankush K. Bansal (derecha) junto con la Dr. Jeazul Ponce Hernández (izquierda) en el estadio de Baku durante la COP29. Noviembre, 2024

EL CAMBIO CLIMÁTICO Y SU IMPACTO EN LA SALUD: REFLEXIONES Y LECCIONES DE LA COP29 EN BAKÚ

JDN en la COP29

Durante la COP29, destacó la participación presencial de la única representante de la Junior Doctors Network (JDN), la Dra. Delta Jeazul Ponce Hernández, quien asistió a las conferencias organizadas por el WHO Pavilion. En estas conferencias, se evidenció el papel activo de los miembros del Youth Council como ponentes y organizadores, mostrando un claro ejemplo de cómo la juventud puede involucrarse en eventos de alto impacto. La Dra. Ponce Hernández subrayó la importancia de que, en el futuro, los jóvenes médicos no solo asistan a estos espacios, sino que también participen activamente en la organización de actividades como "side events" o incluso la creación de un pavilion liderado por la Asociación Médica Mundial (WMA). Este tipo de iniciativas fortalecerían la inclusión política y el liderazgo de las nuevas generaciones, asegurando su contribución en la definición de estrategias clave para abordar el cambio climático y sus efectos en la salud global.

Conclusión

La COP29 marcó un progreso significativo hacia la acción climática, pero los desafíos persisten. Los compromisos financieros, aunque alentadores, deben traducirse en acciones concretas que prioricen tanto la mitigación del cambio climático como la protección de la salud pública.

Como afirmó el Dr. Bansal: "Si no somos nosotros, ¿entonces quién? Es nuestra responsabilidad como médicos, líderes y ciudadanos garantizar un futuro saludable y sostenible para las próximas generaciones."

Entrevista realizada y redactada en conjunto con la Dra. Delta Jeazul Ponce Hernández

Referencias

1. United Nations Framework Convention on Climate Change. Outcomes of COP29: Climate finance commitment tripled for developing nations [Internet]. UNFCCC; 2024 [cited 2024 Dec 10]. Available from <https://unfccc.int/>
2. World Health Organization. Air pollution and its health effects [Internet]. WHO; 2016 [cited 2024 Dec 10]. Available from: [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)
3. Schraufnagel DE, Balmes JR, De Matteis S, Hoffman B, Kim WJ, Pérez-Padilla R, et al. Health benefits of air pollution reduction. *Ann Am Thorac Soc*. 2019;16(12):1478-87. DOI: 10.1513/AnnalsATS.201907-538CME
4. Watts N, Amann M, Arnell N, Ayeb-Karlsson S, Beagley J, Belesova K, et al. The 2020 report of The Lancet Countdown on health and climate change: Responding to converging crises. *Lancet*. 2021;397(10269):129-70. DOI: 10.1016/S0140-6736(20)32290-X





WORLD
MEDICAL
ASSOCIATION

JDN'S VOICES: KEY ARTICLE CONTRIBUTIONS

ELEETA SURAFEL

**MEHR MUHAMMAD
ADEEL RIAZ**



**MEHR MUHAMMAD ADEEL RIAZ
PUNJAB MEDICAL COLLEGE,
FAISALABAD, PAKISTAN**

**ELELETA SURAFEL
THE UNIVERSITY OF EDINBURGH**



**SATHI INITIATIVE: ADDRESSING UNMET
SURGICAL NEEDS IN LMICs THROUGH
COMMUNITY ENGAGEMENT AND TASK SHIFTING**

Introduction

On June 20, 2024, Primary Health Care working group arranged a webinar to discuss a pilot project on addressing unmet surgical needs in LMICs through Primary Health Care providers capacity building and investing at prevention. The webinar was presented by Prof. Rahul M. Jindal, MD, PhD, MBA, FRCS, FACS, from Uniformed Services University Bethesda, USA. The webinar focused on addressing the critical unmet surgical needs in low- and middle-income countries (LMICs) through primary health care. The session highlighted the challenges in accessing safe surgical care, the role of task-shifting, and the need for global and local collaborations to enhance surgical volumes and quality of care.

The key topics discussed during the webinar are summarized as follows:

1. Surgical care is an essential component of a functioning health system, yet access is severely limited in LMICs. Many LMICs have surgical volumes significantly below the Lancet Commission's benchmark of 5000 procedures per 100,000 population, averaging only 877 surgeries annually. This highlights a pressing need for scalable solutions to expand surgical capacity.
2. The Lancet Commission on Global Surgery established the importance of integrating surgery within the global health agenda. To meet global surgical demands, the Commission has set a target of performing 5,000 surgical procedures per 100,000 population annually. Achieving this goal is crucial for addressing the vast unmet surgical needs in LMICs [1].
3. Research has revealed significant disparities in surgical needs between urban slums and rural or tribal areas, with unmet needs often higher in urban environments. These issues highlight the complexity of surgical care delivery in different settings . [2].
4. Key barriers preventing patients in LMICs from receiving needed surgical care include financial difficulties, fear of surgery, lack of social support, and a deficit of trust in medical systems. Overcoming these challenges is essential for expanding access to surgical services and improving health outcomes in resource-limited settings [3].

**MEHR MUHAMMAD ADEEL RIAZ
PUNJAB MEDICAL COLLEGE,
FAISALABAD, PAKISTAN**

**ELELETA SURAFEL
THE UNIVERSITY OF EDINBURGH**



**SATHI INITIATIVE: ADDRESSING UNMET
SURGICAL NEEDS IN LMICS THROUGH
COMMUNITY ENGAGEMENT AND TASK SHIFTING**

5. Task shifting, a strategy where certain tasks are transferred from highly specialized health workers to those with more general qualifications, has emerged as a practical approach to mitigate the shortage of healthcare professionals in LMICs. This model has proven particularly effective for addressing common surgical conditions, optimizing the use of available human resources to meet patient needs in underserved areas.

6. The SATHI (Surgical Accredited & Trained Healthcare Initiative) - a pilot project to address the unmet surgical needs of communities in urban slums at primary healthcare level through training of community health workers with the skills to identify and refer patients requiring surgical care. Through task shifting and community engagement, SATHI builds trust between healthcare providers and marginalized communities while improving access to surgical services [4].

Conclusion

The webinar emphasized the critical need to address the gap in surgical care access in LMICs through innovative solutions like task shifting, community health worker programs, and international collaborations. Ensuring surgical care is accessible and affordable is vital for achieving Universal Health Coverage (UHC) and meeting Sustainable Development Goals (SDGs).

Key Takeaways

The SATHI Initiative demonstrates the power of task shifting and community engagement in addressing unmet surgical needs in LMICs at primary healthcare level. By training community members to provide essential surgical care and fostering trust within underserved communities, the initiative has improved access to life-saving procedures. The success of this model underscores the importance of innovative, community-based approaches in enhancing surgical care in resource-limited settings, offering valuable lessons for stakeholders seeking to address similar challenges elsewhere.

**MEHR MUHAMMAD ADEEL RIAZ
PUNJAB MEDICAL COLLEGE,
FAISALABAD, PAKISTAN**

**ELELETA SURAFEL
THE UNIVERSITY OF EDINBURGH**



**SATHI INITIATIVE: ADDRESSING UNMET
SURGICAL NEEDS IN LMICS THROUGH
COMMUNITY ENGAGEMENT AND TASK SHIFTING**

References:

1. The Lancet, 2015; 386:569 ([https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60160-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60160-X/fulltext))
2. Surgical Unmet Need in a Low-Income Area of a Metropolitan City in India: A Cross-Sectional Study (<https://link.springer.com/article/10.1007/s00268-020-05502-5>)
3. Trust Deficit in Surgical Systems in an Urban Slum in India (<https://www.ssph-journal.org/articles/10.3389/ijph.2022.1604924/full>)
4. SATHI: Surgical Accredited and Trained Healthcare Initiative for Task Shifting in India (<https://academic.oup.com/jsprm/article/2022/3/snac018/6672907>)

Further Reading and Recommended Resources:

1. The Lancet Commission on Global Surgery ([https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60160-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60160-X/fulltext))
2. Are LMICs Achieving the Lancet Commission Global Benchmark for Surgical Volumes? A Systematic Review (<https://link.springer.com/article/10.1007/s00268-020-05502-5>)
3. Community Participation in Global Surgery (<https://gh.bmj.com/content/6/4/e005044>)

**INCOME SOCIO-MEDICAL AFFAIRS OFFICER
2024/2025 (FAISALAB, PAKISTAN)**

MEHR MUHAMMAD ADEEL RIAZ



**MEHR MUHAMMAD ADEEL RIAZ
PUNJAB MEDICAL COLLEGE,
INCOME SOCIO-MEDICAL AFFAIRS
OFFICER 2024/2025
JUNIOR DOCTORS NETWORK
WORLD MEDICAL ASSOCIATION
FAISALABAD, PAKISTAN**



**TRANSGENDER MENTAL HEALTHCARE
IN PAKISTAN: THE CRUCIAL ROLE OF
JUNIOR DOCTORS AT THE PRIMARY
LEVEL AMID CLIMATE CHANGE BURDEN**

Transgenders are among one of Pakistan's most marginalized communities, encountering severe mental health issues exacerbated by systemic discrimination, state-led violence, and socio-economic marginalization. (1) Despite the Transgender Persons Act of 2018' (2) being a major advancement in the legal recognition of transgender people's rights, gender recognition s gender "X" instead of gender male (M) or female /F), and existence, it has not resulted in broad societal acceptance or equitable access to necessary medical care, including mental health services. (3)

Transgender communities experience high rates of physical violence, social exclusion and economic marginalization (1) that may lead to trauma, anxiety, and depression. (4) As most transgenders are forced to leave their houses in childhood by their parents, the only available option for them to sustain themselves economically is to work with fellow transgenders as dancers or sex workers. The growing effects of climate change exacerbate these problems even further. Droughts, heatwaves, and flooding are among the increasingly extreme climate disasters that Pakistan has been facing. (5) Gender and Sexual minorities like transgender communities, are disproportionately affected by these occurrences, which exacerbate their mental health issues by displacing them, taking away their means of subsistence, and obstructing their access to mental healthcare. (5)

Often, junior doctors in primary healthcare are the first point of contact for transgender individuals seeking care in the healthcare system hierarchy. However, the current training or thereof lack of transgenders care curriculum and resources available to junior doctors are insufficient to address the complex mental health needs arising from the intersection of gender discrimination and lack of understanding of climate-induced stressors. This inadequacy leaves transgender individuals without the comprehensive, empathetic care they need to navigate their unique challenges.



**TRANSGENDER MENTAL HEALTHCARE
IN PAKISTAN: THE CRUCIAL ROLE OF
JUNIOR DOCTORS AT THE PRIMARY
LEVEL AMID CLIMATE CHANGE BURDEN**

Recommendations:

1. Improved Education for Junior Physicians: Undergraduate and graduate programs for junior doctors should include a comprehensive, inclusive curriculum that addresses the effects of climate change and its impact on transgender healthcare. Understanding gender dysphoria and the particular mental health issues that transgender people confront as a result of sexual assault, in addition to the psychological effects of climate change and basic terminology like eco-anxiety, solastalgia etc, should be covered in this curriculum. Role-playing exercises and case studies of actual patients can support the development of empathy and useful skills for meeting these requirements. Transgender-specific comprehensive care protocols should be developed and implemented by health institutions and the domestic health ministry. These protocols ought to contain instructions for trauma-informed care, mental health assessments, and psychological stress management.

3. Integration of Mental Health Services into Primary Treatment: Providing comprehensive treatment requires the integration of mental health services into primary care settings. As part of this integration, primary care physicians will receive training on how to identify and handle mental health concerns affected by climate change. They will also set up referral processes for more specialized care as necessary. Transgender patients can obtain prompt and efficient interventions if mental health assistance is a regular feature of primary care.

4. Community Involvement and Support Systems: Establishing robust community support systems for transgender people can offer supplementary forms of assistance beyond health care. Health programs should work with neighborhood associations to provide advocacy, peer support, and counseling services. These networks can assist with more general social support difficulties as well as emergency mental health requirements.

5. Advocacy for Policy Change: It's critical to push for legislative reforms that take into account the concerns of transgender people in the context of climate change. This entails advocating for laws that guarantee persons impacted by climate disasters fair access to social services, healthcare, and financial assistance. Bringing up the unique difficulties that the transgender community faces when interacting with legislators can spur systemic improvements that enhance well-being in general.



**TRANSGENDER MENTAL HEALTHCARE
IN PAKISTAN: THE CRUCIAL ROLE OF
JUNIOR DOCTORS AT THE PRIMARY
LEVEL AMID CLIMATE CHANGE BURDEN**

In conclusion, a comprehensive strategy is needed to address the mental health needs of transgender people in Pakistan. As front-line medical professionals, junior doctors play a critical role in providing high-quality treatment. Domestic governments and state medical licensing and curriculum agencies can attempt to lessen the mental health burden experienced by this vulnerable population amid the ongoing challenges of climate change by improving their training, creating comprehensive care protocols, integrating mental health services, cultivating community support, and advocating for policy changes.

References :

- 1- Shah, H. B. U., Rashid, F., Atif, I., Hydrie, M. Z., Fawad, M. W. B., Muzaffar, H. Z., Rehman, A., Anjum, S., Mehroz, M. B., Haider, A., Hassan, A., & Shukar, H. (2018). Challenges faced by marginalized communities such as transgenders in Pakistan. *The Pan African medical journal*, 30, 96. <https://doi.org/10.11604/pamj.2018.30.96.12818>
- 2- Transgender Persons Act 2018 see https://na.gov.pk/uploads/documents/1526547582_234.pdf
- 3- Riaz MMA, Awan MM. Transgender rights in Pakistan: implications of Federal Shariat Court ruling. *Lancet Psychiatry*. 2023 Aug;10(8):e20. doi: 10.1016/S2215-0366(23)00191-8. PMID: 37479343.
- 4- Ridley M, Rao G, Schilbach F, Patel V. Poverty, depression, and anxiety: Causal evidence and mechanisms. *Science*. 2020;370(6522):eaay0214. doi:10.1126/science.aay0214. Available from: <https://economics.mit.edu/sites/default/files/2022-09/poverty-depression-anxiety-science.pdf>
- 5- UNHCR-IOM Pakistan. Flash update #28 on arrest and detention/flow monitoring (15 September 2023 – 7 September 2024). ReliefWeb. Available from: <https://reliefweb.int/country/pak>

WMA FORMER MEMBERSHIP DIRECTOR, JDN
CHAIR 2024/2025 (VALENCIA, SPAIN).

PABLO ESTRELLA PORTER



**PABLO ESTRELLA PORTER (MD, MPH),
PUBLIC HEALTH RESIDENT AND
JUNIOR DOCTORS NETWORK - WMA
CURRENT CHAIR AND FORMER
MEMBERSHIP DIRECTOR (VALENCIA,
SPAIN).**



**JUNIOR DOCTORS NETWORK
MEMBERSHIP CENSUS 2024: A
SNAPSHOT OF GROWTH AND DIVERSITY**

Understanding membership data in a platform like the Junior Doctors Network (JDN) is essential to track its evolution and respond to changes over time. Membership data not only reflects the reach and inclusivity of the network but also provides critical insights for informed decision-making that supports the strategic direction of the JDN.

In the recently conducted Membership Census of September 2024, the JDN recorded an impressive 979 members, marking a significant rise from previous years—515 members in 2022 and 763 members in 2023. This remarkable growth, a 28% increase from 2023, underscores the growing relevance and appeal of our network, as junior doctors worldwide recognize the value of joining and contributing to this vibrant community.

Regional Representation: Diversity Across the Globe

The JDN is a global network, not bound by geographical borders, and this is clearly reflected in the diversity of its membership. As of the 2024 Census, there are members from 113 different countries, representing 63% of the world’s nations. The highest representation was from the South-East Asian Region, which accounted for 32.8% of total membership, followed by the African Region (18.9%), the Region of the Americas (16.8%), and the Eastern Mediterranean Region (14.9%).

Table 1. Junior Doctors Network Census 2024

Region	Countries represented	Total Countries	Countries not represented	% Represented	Total (n)	Percentage (%)
African Region	26	47	21	55%	185	18,90%
Eastern Mediterranean Region	18	22	4	82%	146	14,90%
European Region	31	53	22	58%	123	12,60%
Region of the Americas	21	35	14	60%	164	16,80%
South-East Asian Region	8	12	4	67%	321	32,80%
Western Pacific Region	9	27	18	33%	40	4,10%
Total	113	196	83	63%	979	100,00%

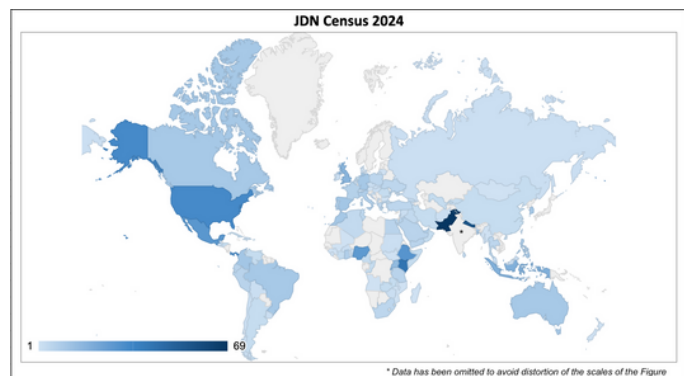
**PABLO ESTRELLA PORTER (MD, MPH),
PUBLIC HEALTH RESIDENT AND
JUNIOR DOCTORS NETWORK - WMA
CURRENT CHAIR AND FORMER
MEMBERSHIP DIRECTOR (VALENCIA,
SPAIN).**



JUNIOR DOCTORS NETWORK MEMBERSHIP CENSUS 2024: A SNAPSHOT OF GROWTH AND DIVERSITY

The strong representation across most regions shows that the JDN continues to attract members from a wide range of countries. However, some regions still show potential for growth, particularly the Western Pacific Region, which currently represents only 4.1% of the total membership, with 33% of its countries represented.

Figure 1. Membership Census 2024



Key Challenges and Responsibilities

As the Membership Director over the past two terms, I have been tasked with managing this growing and diverse membership base. My responsibilities include maintaining an up-to-date membership database, coordinating with the World Medical Association (WMA) Secretariat, and engaging both new and prospective members. In this role, I've faced several challenges, including:

- **Incomplete Applications:** A high rate of incomplete applications has historically been a problem. However, in the 2023-2024 term, we've successfully reduced this issue by providing clearer application instructions.
- **Limited Contact with National JDNs:** Engaging some National JDNs has been difficult, limiting communication and collaboration.
- **Low Post-Joining Engagement:** Despite high membership numbers, keeping members actively engaged after they join remains a challenge.
- **Institutional Memory:** The need for better continuity from previous terms has been evident, as a lack of structured transition processes hinders institutional memory.

**PABLO ESTRELLA PORTER (MD, MPH),
PUBLIC HEALTH RESIDENT AND
JUNIOR DOCTORS NETWORK - WMA
MEMBERSHIP DIRECTOR (VALENCIA,
SPAIN).**



JUNIOR DOCTORS NETWORK MEMBERSHIP CENSUS 2024: A SNAPSHOT OF GROWTH AND DIVERSITY

These challenges highlight the importance of not just growing our membership but ensuring ongoing involvement and engagement within the network.

Looking Ahead: Strengthening Engagement

Our membership data paints a compelling picture of growth and diversity within the JDN. Yet, numbers alone cannot define our success. We invite all members to actively participate in JDN activities, whether through joining working groups, representing the network in international delegations, attending online events, or contributing to member consultations. Your active involvement is essential to sustaining the strength and dynamism of the Junior Doctors Network.

By fostering greater engagement, we can ensure that the JDN continues to be a platform that empowers junior doctors around the world, giving them the tools and support to make a meaningful impact on global health.



SYDNEY, AUSTRALIA

CAROLINE LEE



**CAROLINE LEE, MD MPHTM
INFECTIOUS DISEASES REGISTRAR
DOCTORS FOR THE ENVIRONMENT
AUSTRALIA, SYDNEY, AUSTRALIA**



**LIKE TOBACCO, FOSSIL FUELS ARE A
HEALTH HAZARD WE MUST QUIT**

When doctors sound the alarm on climate change, we are not talking about what will happen in the future, but what is happening right now. Halfway through 2024, we have witnessed alarming climate related events including heat waves and extreme weather events. July 2024 was the warmest July on record in 175 years and the 14th consecutive month of record-highest temperatures [1].

Climate change is a health emergency and fossil fuels, the key driver of climate change, are health hazards. This has been declared in a recent report by Doctors for the Environment Australia, calling on governments, private sector, and individuals to take urgent action to address the harms of fossil fuels on our health and environment (Table 1) [2]. Likened to tobacco, fossil fuels are an addiction that humanity must urgently quit. The impacts of climate change are already occurring globally, and are unequally and unjustly experienced far distal to the places where largest consumptions occur [3].

There are a myriad of ways in which fossil-fuel related climate change harms health (Figure 1) [2]. Extreme heat and heatwaves cause contribute to cardiovascular disease and strokes, mental illness, and increased domestic and community violence. An estimated 5 billion people worldwide experienced extreme heat in June 2024 [4]. Those most vulnerable in our community are particularly susceptible to heat, including elderly people, those with chronic health conditions and disability, pregnant people, young children, and those with limited access to cool environments for housing, work and transport [2]. There is increasing recognition of the impacts of climate change on mental health, including direct impacts such as extreme weather events, and indirect impacts such as eco-anxiety, drought and food and water insecurity [5, 6].

An estimated 5 to 10 million premature deaths are estimated to occur due to fossil fuel air pollution every year [7]. Fossil fuel burning produces pollutants including particulate matters less than 10 micrometres (PM10), carbon monoxide, nitrogen oxides, sulphur dioxides, and heavy metals [2]. These exacerbate respiratory conditions such as asthma and chronic obstructive pulmonary disease, cardiovascular disease, and cancer.

**CAROLINE LEE, MD MPHTM
INFECTIOUS DISEASES REGISTRAR
DOCTORS FOR THE ENVIRONMENT
AUSTRALIA, SYDNEY, AUSTRALIA**



LIKE TOBACCO, FOSSIL FUELS ARE A HEALTH HAZARD WE MUST QUIT

Biodiversity loss is an under-recognised consequence of climate change with serious health harms [2]. Climate change drives biodiversity loss through several pathways including temperature changes, extreme weather events, and subsequent impacts on insect populations, pollination, biodiversity, and threatened ecosystems. The implications for human health range from threatened food security and water quality, to increased risk of zoonotic events, infectious diseases and risk of future pandemics.

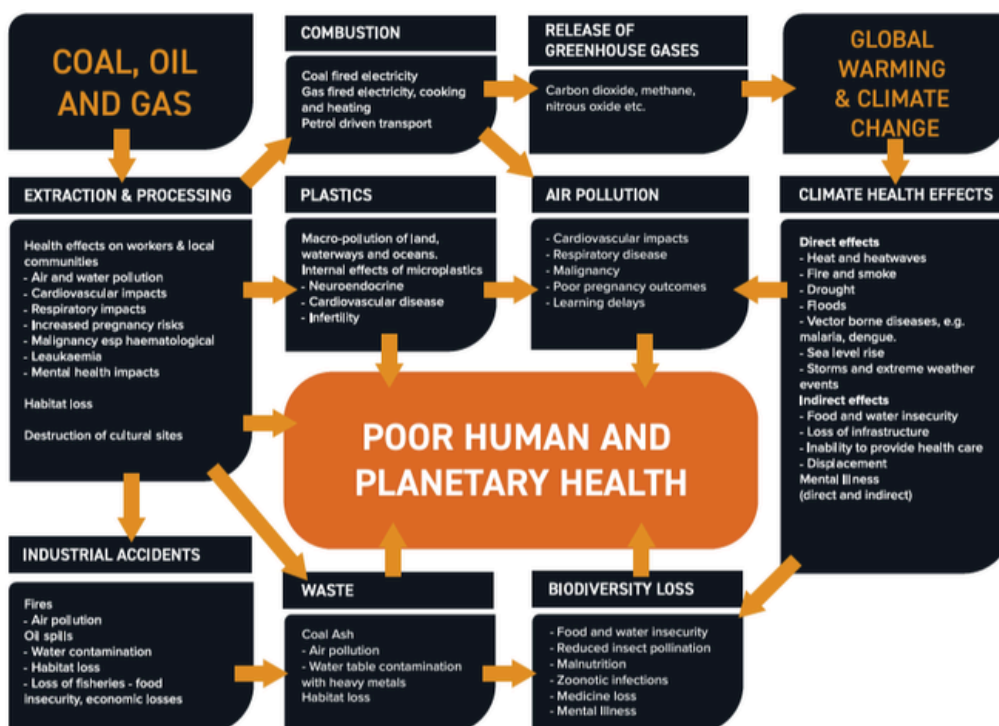


Figure 1: Fossil Fuel life cycle analysis, Doctors for the Environment Australia, 2024 (2)



LIKE TOBACCO, FOSSIL FUELS ARE A HEALTH HAZARD WE MUST QUIT

Table 1: Actions to phase out fossil fuels, adapted from Doctors for the Environment Australia, 2024 [2]

<i>Stakeholder</i>	<i>Recommended actions</i>
Government	<ul style="list-style-type: none"> • Ban all new fossil fuel projects and accelerate investment in renewables • Stop financial subsidies to fossil fuel industries and redirect them to carbon-free initiatives • Ban fossil fuel advertising and industry sponsorship • Ban single use and non-recyclable plastics and switch to reusable and/or compostable products • Protect biodiversity and ban native forest logging • Prepare healthcare and the wider community for what we can no longer avoid
Private sector	<ul style="list-style-type: none"> • Be leaders in the transition to carbon free technologies, including the health sector • Divestment from fossil fuels • Mitigation and adaptation options in buildings, energy, transport, trees, electronics and reduce/reuse/recycle
Individuals	<ul style="list-style-type: none"> • Use active and public transport • Electrify homes and transport with renewable energy • Reduce meat consumption and transition to plant based diets • Divestment from fossil fuels • Advocacy with elected representatives

**CAROLINE LEE, MD MPHTM
INFECTIOUS DISEASES REGISTRAR
DOCTORS FOR THE ENVIRONMENT
AUSTRALIA, SYDNEY, AUSTRALIA**



**LIKE TOBACCO, FOSSIL FUELS ARE A
HEALTH HAZARD WE MUST QUIT**

Actions and conclusions.

Urgent action to phase out fossil fuels is necessary to avert the current and ongoing threats caused by climate change.

Junior doctors are the front line workforce of current and future. We cannot serve and advocate for the health of our patients and communities yet ignore the intrinsic interconnectedness between climate change and health.

Junior doctors can contribute to progress on climate change and health in several ways [2, 8]. These include education of students and health professionals about climate change and health – whether through formal or informal avenues [9]. We can contribute to advocacy globally through networks such as the World Medical Association working groups and attendance at relevant meetings, and locally through community and not for profit organisations. Junior doctors can contribute to growing research on climate change and health including healthcare sustainability (e.g. low carbon healthcare, carbon foot printing healthcare) [10]. We can also advocate for changes within our place of work and study, including climate change and disaster preparedness and response, advocating for leadership to transition away from fossil fuels (e.g. electrification of hospitals, divestment), and local sustainability actions. Other examples of individual actions that junior doctors can take to contribute on an individual level include preventing over-investigation and its associated carbon costs, promoting strong preventative health measures (including immunisation), and antibiotic stewardship. Regardless of the actions taken, collaboration is important to establish community and maximise influence.

Though the task is daunting, there is no other alternative so long as we wish to realise a liveable future in this world. Rather than being weighed down by pessimism or despair, I argue there are multiple actions we can all take. If we have historically failed to imagine a healthier, sustainable future, then that is something we can change.

**CAROLINE LEE, MD MPHTM
INFECTIOUS DISEASES REGISTRAR
DOCTORS FOR THE ENVIRONMENT
AUSTRALIA, SYDNEY, AUSTRALIA**



**LIKE TOBACCO, FOSSIL FUELS ARE A
HEALTH HAZARD WE MUST QUIT**

References

1. National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information [Internet]. [place unknown]: NOAA; 2024. National Monthly Global Climate Report for July 2024, published online August 2024 [cited 2024 Sep 6]; Available from: <https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202407>.
2. Doctors for the Environment Australia (DEA). Fossil fuels are a health hazard. Australia. DEA, 2024 [August 2024, cited 2024 Sep 6]. Available from: <https://www.dea.org.au/fossil-fuels-are-a-health-hazard-report>
3. Taconet N, Méjean A, Guivarch C. Influence of climate change impacts and mitigation costs on inequality between countries. *Climatic Change*. 2020 May;160(1):15-34.
4. Climate Central. [Place unknown]: Climate Central, 2024. Analysis: Global extreme heat in June 2024 strongly linked to climate change, published online June 19, 2024 [cited 2024 Sep 6]; available from <https://www.climatecentral.org/report/global-heat-review-june-2024>
5. Thompson R, Lawrence EL, Roberts LF, et al. Ambient temperature and mental health: a systematic review and meta-analysis. *The Lancet Planetary Health*. 2023;7(7):e580-e589. [https://doi.org/10.1016/S2542-5196\(23\)00104-3](https://doi.org/10.1016/S2542-5196(23)00104-3)
6. Hayes K, Blashki G, Wiseman J, Burke S, Reifels L. Climate change and mental health: risks, impacts and priority actions. *International Journal of Mental Health Systems*. 2018;12(1). <https://doi.org/10.1186/s13033-018-0210-6>
7. Lelieveld J, Haines A, Burnett R, Tonne C, Klingmüller K, Münzel T, Pozzer A. Air pollution deaths attributable to fossil fuels: observational and modelling study. *bmj*. 2023 Nov 29;383.
8. Ho T. The drive for sustainable healthcare must be led by students and junior doctors *BMJ* 2022; 377 :o896 doi:10.1136/bmj.o896
9. Maxwell J, Blashki G. Teaching about climate change in medical education: an opportunity. *Journal of public health research*. 2016 Apr 26;5(1):jphr-2016.
10. McGain F, Kayak E. [Place unknown]:MJA Insight. Hospital environmental sustainability: End of the beginning, published 2021 May [cited 2024 Sep 6]; available from <https://insightplus.mja.com.au/2021/19/hospital-environmental-sustainability-end-of-the-beginning/>

MD. ALGERIA

DOUAA ROUFIA ATTABI



**DR. DOUAA ROUFIA ATABI, MD. ALGERIA
WORLD MEDICAL ASSOCIATION
COMPLETION, SAN JOSÉ STATE UNIVERSITY
STUDENT IN THE PUBLIC HEALTH PROGRAM
AT SAN JOSÉ STATE UNIVERSITY SAS, SJSU**



BRIDGING GAPS IN PATIENT SAFETY: INSIGHTS FROM ALGERIA AND THE U.S

World Patient Safety Day is particularly significant for Algerian physicians as it highlights both the progress and ongoing challenges in ensuring patient safety within the country.

Patient Safety Day holds a special significance for me as a primary care physician from Algeria, currently furthering my education and experience in the United States. This day is a reminder of our commitment to ensuring the highest standards of care and safety for patients worldwide.

Significance in My Country

In Algeria, patient safety is a critical issue that we continually strive to address. My involvement in scientific associations in Algeria highlighted the importance of public health education and patient awareness. These organizations focus on various health issues, including metabolic syndrome, blood pressure, diabetes, and infectious diseases like AIDS and sexually transmitted infections (STIs) [1]. We worked closely with teachers and professors to provide free patient visits on special days, educating the community about symptoms, prevention, and the importance of proper medical practices.

For instance, we emphasized the risks associated with unclean hairstyling tools and the necessity of sterilizing equipment to prevent infections. Additionally, educating patients about drug interactions and the dangers of self-medication, particularly the risk of antibiotic-resistant bacteria was a key part of our outreach.

Experience in the United States

After moving to the United States, I continued my commitment to patient safety as a volunteer in the Emergency Department at Good Samaritan Hospital in San Jose, California. Here, I gained hands-on experience in providing patient support, comfort, and comprehensive services crucial for patient safety. My role included assisting with administrative tasks, facilitating patient admissions, and ensuring effective communication between patients and healthcare providers.

**DR. DOUAA ROUFIA ATTAHI, MD. ALGERIA
WORLD MEDICAL ASSOCIATION
COMPLETION, SAN JOSÉ STATE UNIVERSITY
STUDENT IN THE PUBLIC HEALTH PROGRAM
AT SAN JOSÉ STATE UNIVERSITY SAS, SJSU**



BRIDGING GAPS IN PATIENT SAFETY: INSIGHTS FROM ALGERIA AND THE U.S

This experience has been invaluable in understanding and contributing to patient care quality and satisfaction.

“Safety is a promise we make every day to our patients, and this award stands as a testament that we keep our promise,” said Tomi Ryba, CEO of Good Samaritan Hospital (as cited in Good Samaritan Hospital, n.d.). [2]

Patient Safety Statistics and Gaps in Algeria:

The biggest gaps in Algeria are healthcare associated infection and maternal and child health issues.

Healthcare-Associated Infections: Studies indicate that a significant percentage of infections in Algerian hospitals are healthcare-associated, with these infections contributing to increased mortality and morbidity rates. The need for better infection control practices is crucial to improving patient outcomes. “ This first molecular epidemiology study of VRE in Algeria was useful in delimiting an outbreak involving three of the four HAI cases and revealed rarely encountered genotypes. Considering the threat and burden of VRE infections worldwide, particularly in the USA, and the late emergence in Algeria, our study supports the urgent need for improved and early adequate infection control measures to avoid VRE spread in North African hospitals.” (Benammar S et al.2018) [3] . Nevertheless, the prevalence of urinary infection demonstrates an upward trend from 2001 to 2005. “ The prevalence of urinary tract infection was 0.7% and 4.5% in two studies from Algeria and Senegal, respectively,11,15 while

A retrospective study from Nigeria reported a frequency of 12.3%.¹⁸ The study from Algeria reported that the prevalence of UTI decreased from 3% to 0.7% in 2001 and 2005, respectively, following an infection control intervention.”(Bagheri et al.2011). [4]

**DR. DOUAA ROUFIA ATTAHI, MD. ALGERIA
WORLD MEDICAL ASSOCIATION
COMPLETION, SAN JOSÉ STATE UNIVERSITY
STUDENT IN THE PUBLIC HEALTH PROGRAM
AT SAN JOSÉ STATE UNIVERSITY SAS, SJSU**



BRIDGING GAPS IN PATIENT SAFETY: INSIGHTS FROM ALGERIA AND THE U.S

2. Maternal and Child Health: Although Algeria has made strides in reducing maternal and child mortality rates, inconsistencies in care quality, especially in rural areas, pose ongoing challenges. The maternal mortality rate, although improved, still points to gaps in ensuring consistent, high-quality care across the country. Nevertheless, the mortality rate experienced a downward trend from 1998 to 2017 “According to recent updates on the maternal mortality ratio in Algeria — it has gradually dropped from 179 deaths per 100,000 live births in 1998 to 112 deaths per 100,000 live births in 2017” .[5]

In Algeria, several initiatives have been implemented to promote patient safety across the population. One of the key initiatives is the Carte Shifa program, which provides citizens with a health insurance card that ensures timely access to healthcare services, accurate record-keeping, and financial protection, all of which are crucial for patient safety. Additionally, the government has introduced a National Patient Safety Policy that establishes guidelines for healthcare providers on best practices, helping to reduce the risk of medical errors. Furthermore, various public awareness campaigns have been launched to educate the population on health and safety practices, empowering patients to take an active role in their healthcare and improve overall safety outcomes.

According to an announcement by the Minister of Labor, Employment, and Social Security, Mr. Fayçal Bentaleb, the second version of the Carte Chifa has been launched in Algeria. This new version increases the reimbursement per prescription from 3,000 DA to 5,000 DA (Algerie Eco, 2023) .[6]

Our Call to Action as Physicians to Improve Patient Safety

In my country, the healthcare system is often stretched thin, with nurses and healthcare staff facing heavy workloads and limited resources. As physicians, one of our critical roles in improving patient safety is to alleviate this pressure by promoting and participating in auxiliary missions, such as volunteer services and patient support initiatives.

**DR. DOUAA ROUFIA ATTABI, MD. ALGERIA
WORLD MEDICAL ASSOCIATION
COMPLETION, SAN JOSÉ STATE UNIVERSITY
STUDENT IN THE PUBLIC HEALTH PROGRAM
AT SAN JOSÉ STATE UNIVERSITY SAS, SJSU**



BRIDGING GAPS IN PATIENT SAFETY: INSIGHTS FROM ALGERIA AND THE U.S

By encouraging volunteer services, we can mobilize medical students, community members, and even ourselves to provide additional hands-on support within hospitals and clinics. This can involve tasks like patient education, administrative assistance, and direct patient comfort services, which free up nurses and other medical professionals to focus on critical care tasks. Additionally, engaging in patient services initiatives allows us to bridge communication gaps between patients and healthcare providers, ensuring that patients are well-informed about their care plans and are more likely to adhere to safety protocols. In a broader context, by setting this example and advocating for these supportive roles, we can create a culture where the community becomes more involved in healthcare, ultimately leading to a safer and more resilient healthcare system. This approach is not only vital in our country but can also serve as a model for other regions facing similar challenges.

As a physician, I am actively working to implement telehealth solutions in our healthcare system. This initiative will help facilitate remote consultations, reduce the burden on urban healthcare facilities, and ensure continuous care for patients in isolated regions. My experience as a primary care physician in Biskra, known as “The Door of the Desert,” highlighted the challenges faced by patients who live far from the hospital. I noticed that many could benefit from having their initial consultations via telemedicine, allowing them to receive timely advice and care without the need for immediate travel. In urgent cases, they can be advised to visit the hospital, and after discharge, telehealth can ensure continuous follow-up, especially for vulnerable groups like mothers and newborns.

Furthermore, integrating artificial intelligence (AI) into telehealth can enhance diagnostic accuracy and streamline workflows, making it easier for doctors to provide high-quality care efficiently. By championing telemedicine and AI, we can revolutionize healthcare delivery in Algeria, making it more accessible, efficient, and safe for all patients, regardless of their geographic location. This effort aligns with our broader goals of improving patient outcomes and promoting a culture of safety and innovation in healthcare.

**DR. DOUAA ROUFIA ATTAHI, MD. ALGERIA
WORLD MEDICAL ASSOCIATION
COMPLETION, SAN JOSÉ STATE UNIVERSITY
STUDENT IN THE PUBLIC HEALTH PROGRAM
AT SAN JOSÉ STATE UNIVERSITY SAS, SJSU**



**BRIDGING GAPS IN PATIENT SAFETY:
INSIGHTS FROM ALGERIA AND THE U.S**

References:

1/ IFMSA-Algeria. HIV and AIDS advocacy [Internet]. IFMSA; 2024 [cited 2024 Aug 1]. Available from: <https://ifmsa.org/hiv-and-aidsvocacy-ifmsa-algeria/>

2/ Good Samaritan Hospital. Good Samaritan Hospital recognized for excellence in patient safety [Internet]. San Jose: Good Samaritan Hospital; [cited 2024 Jul 29]. Available from: <https://goodsamsanjose.com/about/newsroom/good-samaritan-hospital-recognized-for-excellence-in-patient-safety>

3/ Benammar S, Pantel A, Aujoulat F, Benmehidi M, Courcol R, Lavigne JP, Romano-Bertrand S, Marchandin H. First molecular characterization of related cases of healthcare-associated infections involving multidrug-resistant *Enterococcus faecium* vanA in Algeria. *Infect Drug Resist*. 2018 Sep 17;11:1483-1490. doi: 10.2147/IDR.S164487. PMID: 30271181; PMCID: PMC6149901

4/ Bagheri Nejad S, Allegranzi B, Syed SB, Ellis B, Pittet D. Health-care-associated infection in Africa: a systematic review. *Bull World Health Organ*. 2011 Oct 1;89(10):757-65. doi: 10.2471/BLT.11.088179. Epub 2011 Jul 20. PMID: 22084514; PMCID: PMC3209981. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3209981/#:~:text=The%20study%20from%20Algeria%20reported%20that%20the,c>

5/ Shreeya Sharma, MATERNAL HEALTHCARE IN ALGERIA: 4 FACTS EVERYONE SHOULD KNOW, borgen project, <https://borgenproject.org/maternal-healthcare-in-algeria/> 6 / *Algerie Eco*. (2023, December 12). Lancement de la deuxième version de la carte Chifa. Retrieved from <https://www.algerie-eco.com/2023/12/12/lancement-de-la-deuxieme-version-de-la-carte-chifa/>

SYDNEY, AUSTRALIA

KALAIVANE KANNADASAN





THE EVOLUTION OF TELEHEALTH AND THE ROLE OF JUNIOR DOCTORS IN SHAPING ITS FUTURE

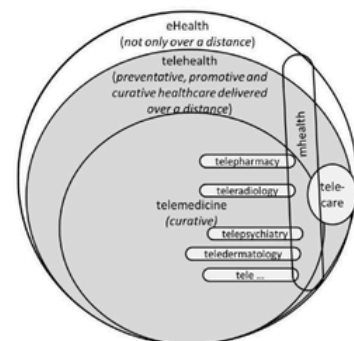
Telehealth is an evolving and rapidly expanding service that is transforming how healthcare is delivered globally. Its adoption surged during the COVID-19 pandemic in 2020 when physical access to healthcare was limited. Since then, telehealth has grown significantly, playing a critical role in achieving Universal Health Coverage (UHC) by enhancing equity and access to healthcare services. But what exactly is telehealth? To fully grasp its benefits, it's essential to understand its various components and how each contributes to the remote delivery of healthcare.

Telehealth refers to delivering healthcare services remotely using advanced technologies in communication, health informatics, and medical devices. It has evolved from basic phone consultations to sophisticated apps on smartphones, tablets, and computers. Telehealth encompasses a broad range of services, equivalent to conventional healthcare, though its implementation often faces challenges such as differing departmental practices and governance. The complexity is further compounded by the need for collaboration among various stakeholders, including healthcare providers, IT specialists, and policymakers¹.

Van Dyk's framework classifies telehealth into key components, including eHealth, telecare, mHealth, and telemedicine. While telemedicine focuses on therapeutic care, telehealth expands to preventive, promotive, and curative services. Telecare involves remote patient monitoring, while mHealth emphasizes the use of mobile technologies. Previous research shows that telehealth improves health outcomes by enabling early intervention and patient education through digital consultations².

Figure 1 Scope of telehealth

Source: Van Dyk, L. (2014). A Review of Telehealth Service Implementation Frameworks. International Journal of Environmental Research and Public Health, 11(2), 1279-1298. <https://doi.org/10.3390/ijerph110201279>





THE EVOLUTION OF TELEHEALTH AND THE ROLE OF JUNIOR DOCTORS IN SHAPING ITS FUTURE

Telehealth's significance lies in its ability to extend healthcare services to underserved and rural populations, reducing the need for travel and lowering healthcare costs. During the COVID-19 pandemic, telehealth played a pivotal role in ensuring the continuity of care while minimizing infection risks. Even beyond emergencies, telehealth is crucial for managing chronic conditions, providing mental health support, and delivering preventive care, thereby contributing to better overall health outcomes³.

Telehealth services are appreciated for its convenience and effectiveness. However, some challenges remain. Users have expressed dissatisfaction with the lack of effective communication with healthcare professionals on telehealth platforms, indicating the need for more interactive and responsive tools. Additionally, older populations often struggle with navigating these platforms, suggesting that they may not be user-friendly for all age groups. In contrast, telehealth is well-received by younger patients and those employed in the private sector, who appreciate its flexibility and compatibility with their busy lifestyles.

Moving Forward: Enhancing Telehealth Services

To improve telehealth, it's important to fix key issues. Making communication clearer and interfaces easier to use, especially for older adults, will help patients. Adding language options and offline access can make it more accessible. Personalizing care and connecting with wearable devices can keep patients more engaged. Offering 24/7 support, including AI chatbots, will ensure access for all. Strengthening security and providing affordable devices and public telehealth stations will make the service more inclusive. Working with healthcare teams and involving caregivers can improve outcomes and satisfaction.⁴

Contribution of Junior Doctors to Telehealth

As junior doctors, there are several ways to contribute to improving telehealth services while advancing our careers in healthcare technology. Developing digital health skills through online courses or certifications in areas like telemedicine, health informatics, and electronic health records is crucial. This knowledge will help us work more effectively with telehealth platforms and contribute to their improvement.



THE EVOLUTION OF TELEHEALTH AND THE ROLE OF JUNIOR DOCTORS IN SHAPING ITS FUTURE

Participating in quality improvement (QI) projects focused on telehealth is another way to get involved. By assessing how telehealth services are functioning, identifying areas for improvement, and developing new protocols, we can enhance patient care and system efficiency. Engaging in hospital telehealth committees or task forces and sharing frontline experiences allows us to influence telehealth policies and practices.

Participating in quality improvement (QI) projects focused on telehealth is another way to get involved. By assessing how telehealth services are functioning, identifying areas for improvement, and developing new protocols, we can enhance patient care and system efficiency. Engaging in hospital telehealth committees or task forces and sharing frontline experiences allows us to influence telehealth policies and practices.

Research is another avenue through which we can make an impact. Conducting studies on patient satisfaction, telehealth accessibility, or the effectiveness of telemedicine can not only improve telehealth systems but also build our academic profiles. Publishing research or presenting findings at conferences opens new career opportunities in digital health.

Advocating for better telehealth policies is important, too. By raising concerns and suggesting improvements in hospital meetings, we can help drive changes that make telehealth more user-friendly for both patients and doctors. Over time, exploring specialized career paths in telemedicine, such as clinical informatics, can combine medicine and technology in a fulfilling way. In addition, we can play a key role in educating others. Training fellow healthcare workers and patients to use telehealth effectively will improve the overall experience for everyone involved. By doing this, we can make a direct impact on the success of telehealth while gaining a deeper understanding of the system.



THE EVOLUTION OF TELEHEALTH AND THE ROLE OF JUNIOR DOCTORS IN SHAPING ITS FUTURE

Telehealth has revolutionized healthcare delivery by offering a flexible, remote solution that is particularly beneficial for underserved populations. Addressing the challenges of usability, communication, and accessibility will ensure that telehealth continues to improve and evolve. Junior doctors have a unique opportunity to contribute to this field, enhancing telehealth services and shaping the future of healthcare technology.

References

1. Totten AM, McDonagh MS, Wagner JH. AHRQ Methods for Effective Health Care. The Evidence Base for Telehealth: Reassurance in the Face of Rapid Expansion During the COVID-19 Pandemic. Rockville (MD): Agency for Healthcare Research and Quality (US); 2020.
2. Van Dyk L. A Review of Telehealth Service Implementation Frameworks. International Journal of Environmental Research and Public Health. 2014;11(2):1279-98.
3. Haleem A, Javaid M, Singh RP, Suman R. Telemedicine for healthcare: Capabilities, features, barriers, and applications. Sens Int. 2021;2:100117.
4. Arriaga Criscuoli de Farias F, Matté Dagostini C, de Assunção Bicca Y, Falavigna V, Falavigna A. Remote Patient Monitoring: A Systematic Review. Telemedicine and e-Health. 2019;26.



WORLD
MEDICAL
ASSOCIATION

Who can become a JDN member?

To join the JDN you:

Must be within 10 years of graduation from medical school or registered in an ongoing postgraduate medical education program, until it is completed.

Must be an associate member of the WMA*

Note: Associate membership of the WMA is free for all doctors for the first five years after graduation. To join the JDN, please follow the links and complete: How to become a JDN member?

1. Associate Membership Registration (and select the Junior Doctor form):

<https://www.wma.net/sign-up/>



2. JDN Registration:

<https://bit.ly/3S49PLu>



Registration requires validations of the associated documents, there may be a delay of a few weeks from the time of registration to the time you are added to the mailing lists. All registrants who have submitted a completed application will receive an email confirming that they have been added and an invitation to be added to the mailing list; others will be informed how to adequately complete their application.

For more information, please contact jdj@wma.net.

MEMBERSHIP

BECOME A JDN MEMBER