# What does the next 25 years hold for global health?

Analysis of survey data looking at 25 years of progress in and the future challenges for tropical medicine and global health

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### Foreword

The Royal Society of Tropical Medicine and Hygiene (RSTMH) was established in 1907. Since then a huge amount has changed in the field of tropical medicine and global health. From the discovery of new diseases that were then confined to certain areas of the world, to the development of new and improved technologies to control them, as well as new drugs, diagnostics and vaccines – much progress has been made and millions of lives saved.

Over 100 years later, we are faced with many new and diverse challenges. Climate change, globalisation, urbanisation, demographics and technology are just a few of the mega-trends in global health that mean the world in which we – as a sector and as a Society – operate is changing dramatically. These changes are happening so quickly that we are often unable to respond adequately to them, as well as to the impact that geopolitical decisions have on health policy.

Emerging diseases and epidemics may often start in the tropics, but the risk of spread is enormous. Population movements, both forced and voluntary, are currently at the highest levels seen since World War II. They further add to the complexities of healthcare and remind us that diseases do not respect borders.

Clinical care in big cities is often available to a high standard for patients who can afford it, but the situation is very different for those who cannot. For those living with limited means, on the periphery of urban areas, or in informal settlements, healthcare provision is often severely under-resourced.

In September 2019, RSTMH hosts the 11<sup>th</sup> European Congress on Tropical Medicine and International Health (ECTMIH) on behalf of the Federation of European Societies for Tropical Medicine and International Health (FESTMIH), both in their twenty-fifth year. This presents a unique opportunity to evaluate the progress made and look ahead to the challenges of the next quarter of a century.

To this end, we polled RSTMH's members and Fellows, and the wider tropical medicine and global health community; asking our international networks for their opinions on the most pressing issues relating to the future of global health. These cover emerging diseases, climate change, ageing populations, artificial intelligence, the healthcare divide and funding, as well as population movements, to name but a few.

The respondents are from 79 countries and represent all sectors involved in medicine and healthcare. The results provide a snapshot of tropical medicine and global health in a time of political uncertainty and growing inequity on one hand, and great advances and innovations on another.

As the following report deals solely with the findings of the surveys, there are some absences of important areas and diseases. Mental health, for example, featured in a few of the questions but did not come across strongly in any answers. Malaria and HIV were framed as infections that could be eliminated in the next 25 years, but again were not selected as such by the respondents.

We did not want to single out any specific institutions in this exercise, which is why the role of the World Health Organization is not a focus – although it, as well as universal health coverage, are both mentioned in relation to some of the other responses.

Finally, the data also serve to establish a set of recommendations for us as a Society to act on as we continue in our ambition to save lives and improve health around the world through increased access to and greater equity in global healthcare.

Tamar Ghosh, RSTMH Chief Executive

# **About RSTMH**

The Royal Society of Tropical Medicine and Hygiene (RSTMH) is a charity and membership society that has been dedicated to improving tropical medicine and global health since 1907.

We support many activities, including events around the world, grants for our members, the publishing of two scientific journals and recognising excellence in practice through our medals and awards.

Our members, based in over 80 countries, are at all stages of their careers, working across a multitude of disciplines and from a range of sectors.

Our first president was "the father of tropical medicine", Sir Patrick Manson, who discovered the role of mosquitoes in the transmission of filarial worms, which revolutionised thinking about disease transmission, thereby opening up the field of vector-borne diseases. Our members and Fellows have made significant discoveries in numerous areas, including malaria, African sleeping sickness, leishmaniasis, schistosomiasis, river blindness, cholera, leprosy, Burkitt's lymphoma, kuru and kwashiorkor.

One of our two journals, *Transactions* was first published in 1908 and has featured the work of some of the most prominent scientists in the field of tropical medicine, including Sir Patrick Manson, Sir Ronald Ross, Sir David Bruce and Cyril Garnham, among many others.

In over a century of publication, *Transactions* has also printed many highly influential papers, including the first description of the Zika virus in 1952 by George Dick and colleagues.

### Contents

Foreword	2
About RSTMH	3
Executive Summary	4
Key findings	5
Conclusion and recommendations	13
Narrative report	15
Climate change	16
Globalisation	18
Urbanisation	20
Demographics	21
Technology	24
Conclusion and recommendations	27
References	29

# **Executive Summary**

In September 2019, the Royal Society of Tropical Medicine and Hygiene (RSTMH) is hosting the 11<sup>th</sup> European Congress on Tropical Medicine and International Health, now in its twenty-fifth year. This landmark presents a unique opportunity to take stock of the progress made and the challenges that lie ahead in the next quarter of a century.

To this end, we polled the tropical medicine and global health community; asking our networks their opinions on the most pressing issues relating to the future of the global health. They cover emerging diseases, climate change, ageing populations, artificial intelligence, the healthcare divide and funding, as well as population movements, to name a few.

In this executive summary, we explain the main findings from the survey, as well as lay out our recommendations for the future of tropical medicine and global health.

### **General overview of respondents**

There were 619 respondents in total, representing six continents and 79 countries.

The largest proportion of respondents resided in the United Kingdom, making up 25.9% of the total number of respondents. This was followed by Nigeria (11.8%), India (5.5%), and Ethiopia (4.4%). On a broader scale, 40.9% of respondents resided in the African continent, followed by 36.2% in Europe and 14.1% in Asia. The remaining 8.9% comprised respondents from North America, South America and Australia. Respondents were recruited from across RSTMH's membership, networks and partners, as well as the survey being open to the broader public.

Overall, respondents were roughly split between male and female, with 51.1% female and 48.8% male respondents. However, respondents from Africa skewed more towards men (only 41.3% were female respondents), whereas respondents from Europe skewed heavily towards women (67% were female respondents).

89.3% of respondents were health professionals. Researchers made up the largest proportion of this group, accounting for 38.9% of health professionals. This was followed by doctors (25.3%) and public health professionals (24.1%). The remaining 11.8% was made up of nurses, policy makers, allied health workers, managers and administrators, and other health professionals.

# **Key findings**

### **Optimistic outlook**

Perhaps surprisingly, considering the dominant negative narrative that grips us globally at the moment, many respondents believe that in terms of global health, the future is bright. 52.5% said they were very or somewhat optimistic about the future of global healthcare.

Respondents from the African continent were most optimistic, with 62.5% reporting being very/ somewhat optimistic. In comparison, respondents from Europe were among the least optimistic (42%). Men were also more optimistic than women, with 58.6% of men reporting being very/ somewhat optimistic compared to 46.8% of women. This gender effect remained after controlling for continent of residence.



### **Diseases confined to the history books?**

In line with this optimism, they identified conditions that might be eliminated in next 25 years. We asked respondents to identify the top three conditions (out of a choice of twelve) that they thought were most likely to be successfully eliminated in the next 25 years.

An overwhelming 66.9% of respondents selected polio as one of their top three choices. The next most popular option was guinea worm (56.1%), followed by blinding trachoma (38.8%).

### **Biggest challenges to global health**

However, we have some significant challenges to overcome if we are to see that optimism rewarded. We asked respondents to rank the importance of eight major challenges to global health and three overwhelmingly emerged as the biggest challenges.

- The climate crisis
- Drug-resistance, including antimicrobial resistance and multi-drug resistant tuberculosis
- Emerging epidemics

When asked to predict the top three biggest challenges to health (out of eight) as a result of the climate crisis over the next 25 years, mass migration, new emerging diseases, and health and nutrition implications were each selected by over 49% of respondents.



### More commitment and action from governments needed to address challenges

The optimism expressed by respondents doesn't extend to governments and their commitment to dealing with these issues, however. 87.1% said governments are not investing enough to tackle big health challenges over next 25 years and 92.1% believe governments and health bodies are not doing enough to prepare for the impact of the climate crisis on health.

81.1% said governments and health bodies aren't doing enough to empower communities to make decisions and take action on their own healthcare. This was generally more of a concern in Europe (84.2%) than in Africa (78.3%) or Asia (72.9%).

"Antimicrobial resistance will be one of the critical public health challenges of the coming decade, comprising ABR (including MDRTB) as well as antiviral resistance and resistant malaria strains."

Kiran Jobanputra, Head of Manson Unit and Deputy Medical Director, Médecins Sans Frontières

"Non-communicable diseases, once seen as the problem of high-income countries, are fast becoming one of the biggest challenges to health in low- and middle-income countries. There are significantly increased costs of addressing NCDs, as well as the need to address the problems of mental health, which are so under-resourced and unrecognised, despite the evidence they represent the biggest global health burden. For these chronic conditions to be addressed successfully a major rethink must occur."

> Professor David Molyneux, Liverpool School of Tropical Medicine Professor Emeritus and Editor-in-Chief of RSTMH's journal, *International Health*

Respondents also identified three specific health challenges out of a choice of five that they believe are going to increase in prominence and impact over the next 25 years, namely:

- Non-communicable diseases (NCDs), such as diabetes, hypertension and cancer (82.9%)
- Drug-resistant strains of infectious diseases, such as tuberculosis (75.8%)
- Emerging infectious diseases (66.4%)

### **Prevention versus treatment**

A consistent source of discussion in the healthcare sector is on the balance between treatment and prevention; the survey suggests that this debate will continue over the next 25 years. 45.2% said the focus should be split evenly between treatment and prevention, with a third thinking we should focus strongly on prevention.



There was much less of a split when it came to where we should prioritise health investment over next 25 years, with maternal health coming out as the top choice by a long way above NCDs, neglected tropical diseases (NTDs) and other areas.

When asked to rank eight potential areas of health investment over the next 25 years, 31.8% of respondents identified maternal and child health as the highest priority area, followed by the elimination of NTDs (23.6%) and prevention and supporting lifestyle changes (21.2%).

### Quality of life versus extending life

While both life expectancy and quality of life are clearly important, 90.3% of respondents indicated that the primary focus of healthcare systems should be to improve the latter.

Respondents from Europe believe this most strongly. 96.7% supported improving quality of life. In comparison, only 86.3% of African respondents and 82.4% Asian respondents supported improving quality of life.

A small but significant proportion (11.5% and 16.5% respectively) believed prolonging life was more important.

#### **Five global health mega-trends**

We identified five global health mega-trends that we think will play a huge role in shaping the health of all of us around the world in the next 25 years: climate change, globalisation, urbanisation, demographics and technology.

### **Climate crisis**

The big problems we will face over the next 25 years will need big thinking and solutions. 97.7% said we need more coordination and cooperation to tackle health challenges and on the climate crisis.

### **Globalisation**

When asked to predict the top three biggest health challenges posed by globalisation (out of nine choices), drug resistance was identified by an overwhelming 72.3% of respondents (as one of their top three choices).

This was followed by NTDs increasing in prevalence across the globe (45.6%) and health and medical capacity to deal with crises (39.7%).

"Outside of sub-Saharan Africa, the workforce in general is shrinking rapidly; migration trends will continue and may suddenly change in function of political conflicts and environmental degradation and disasters, linked or not with climate change; the largest cohort of adolescents in Africa's history will generate unprecedented health and many other challenges, and some opportunities."

Professor Baron Peter Piot, Director of the London School of Hygiene & Tropical Medicine

### **Urbanisation**

When it came to urbanisation, respondents were again asked to predict the three biggest health challenges out of a choice of ten, and they highlighted:

- Urban density (52.5% of respondents selected this as one of their three choices)
- Air pollution (51.3%)
- Healthcare gap for those living in rural communities (46.3%)



Of the respondents, 67% said healthcare for rural communities will be neglected as resources are focused on urban areas.

"We are currently faced with many inter-linked and overlapping global health challenges that are likely to increase in significance over time. These include the rapid demographic transition from undernutrition to overnutrition within a generation and a subsequent increase in NCDs, expansion of cities and health problems of enormous urban settlements and the effect of climate change on disease epidemiology, particularly vector-borne diseases."

Professor David Lalloo, Director of the Liverpool School of Tropical Medicine

### Technology

### **Fake news and misinformation**

Technology has played a role in the rise of fake news and increasing distrust in expertise and evidence: 91.7% of respondents strongly agree or agree that misinformation and anti-science pose a dangerous threat to the future of healthcare.

A general trend in the responses appeared, indicating that while the vast majority of those who took part in the survey feel positively about technology in healthcare, men generally viewed technology much more positively than women.

### **Increased healthcare divide**

67.7% of respondents said technology has increased the healthcare divide between high-income countries and low- and middle-income countries.

Respondents from the African continent were much more likely to support this statement, with 78.9% in support and 12.6% against, versus European respondents of whom 59.2% were in support and 24.9% were against. Male respondents were also much more likely to support this statement (73.2%) than female respondents (62.8%).

The concern of an increased divide in healthcare can be also seen by the 64.4% who said that the drain of medical expertise from low- and middle-income countries to high-income countries will get worse over next 25 years. Unsurprisingly, respondents from Africa (75.1%) and Asia (65.1%) were much more likely to support this statement than respondents from Europe (56.7%).



### Positive outlook on technology and health

But 89.1% said technology will improve global health overall, with respondents from Africa much more supportive of this prediction (94.6%) than respondents from Europe (84.5%). Again, men were much more supportive of this prediction (95.3%) than women (83.3%).

91.9% said technology has improved our healthcare system over the last 25 years, and respondents from Asia were most supportive of this statement, with 97.6% in support, compared to 94.8% of respondents from Africa and 88.7% of respondents from Europe.



### A new disrupter in healthcare?

64.9% think it likely or very likely that a company will emerge and disrupt how we deliver healthcare, much like Amazon has in retail, and this was fairly consistent across subgroups.

### **Artificial intelligence (AI)**

There were mixed views on the potential role of AI, with almost as many people excited (44.9%) as concerned (38.3%) about its place in the healthcare system.

Respondents from the African continent were more likely to be concerned (49.8%) than excited (40.4%) about AI in healthcare.

In contrast, respondents from Asia were the most excited (59%) about AI in healthcare, compared to 31.3% who felt concerned.

Respondents from Europe were also more excited (43.2%) than concerned (31%), but a significant proportion didn't know how they felt about Al in healthcare (25.8%).

Finally, many more men (51.8%) were excited about AI in healthcare compared to women (38.6%).



### **Demographics**

With global ageing having a huge impact on health systems around the globe, almost 60% said these global health systems won't deal well with ageing populations, (i.e. voted "not well" or "not well at all").

This view seems to be much more of a concern among European respondents than African or Asian respondents: 75.8% of European respondents voted "not well" or "not well at all", compared to 44.3% of African respondents and 52.9% of Asian respondents.

## **Conclusion and recommendations**

There can be no doubt that our world is facing multiple, serious challenges, not least in health, and it is therefore easy to forget that we have both made huge steps forward in the last 25 years and have the opportunity to take yet more great leaps forward in the next quarter of a century.

This view is echoed by the many health professionals around the world we polled, with over half saying they are optimistic about the future of global healthcare.

What then do we need to do to increase the chances of making those great leaps forward, and how do we overcome the barriers the global health community is going to face in doing so?

Off the back of the survey findings, RSTMH will be reviewing five issues for action, which are in keeping with the Society's ambition to save lives and improve health around the world through increased access to and greater equity in global healthcare. These are:

### 1. Make tackling the climate crisis a priority for global health

The global health community has always struggled to get the balance right between tackling the causes of health problems and treating the impact.

With the climate emergency, we are faced with a challenge that needs us all to work together and commit significant resources to tackling the issue at source, investing health resources in reducing emissions and tackling air pollution.

### 2. Unite around early intervention to tackle NCDs across the world

The vast majority of our respondents felt that NCDs will increase in prominence and impact over the 25 years.

Almost a third thought we should strongly focus on prevention over treatment and management when it comes to investing resources in healthcare over the next 25 years, which is crucial to tackling lifestyle influenced chronic conditions.

### 3. Combat health inequality

The overwhelming majority of respondents believe we need more coordination and cooperation to tackle the health challenges of the next 25 years. However, nearly two thirds believe the drain of medical expertise from low- and middle-income countries to high-income countries will get worse over the same time period.

We cannot tackle those challenges nor increase coordination and cooperation without first reducing health inequality and closing the healthcare gap.

### 4. Prioritise quality of life over life expectancy

The days of measuring the success of healthcare purely through increasing life expectancy are over. It is a 20<sup>th</sup> century measure that is no longer fit for purpose and over 90% of respondents believe our focus should be on improving life over extending it at all costs.

# **5.** Put the power of technology in the hands of health professionals and the communities they serve

The world has changed hugely over the last 25 years, one of the main reasons for this is the impact of technology. Technology will continue to change our lives over the next 25 years, but we need to make sure it benefits all of us when it comes to healthcare. 91.9% said technology has improved our healthcare system over the last 25 years but over 80% believe that governments aren't doing enough to empower communities to make decisions and take action over their own healthcare.

Communities and the health professionals that serve them should be given the support they need to take ownership and control of emerging innovations in healthcare, through ensuring open access to data and insights, investment in innovation, and research and development at a grassroots level.

# **Narrative report**

### **Introduction and context**

The context in which we frame this report is very important. According to the World Health Organization (WHO), at least half of the world's population still do not have full coverage of essential health services.<sup>1</sup>

This huge problem is part of the challenges being addressed by the Sustainable Development Goals (SDGs). Indeed, as part of the SDGs, all UN Member States agreed to try and achieve universal health coverage by 2030.<sup>2</sup> The SDGs are also the context in which we frame our strategy and thematic priorities.

The problems with achieving UHC are affordability, availability, accessibility and capacity. Again, according to the WHO about 100 million people are still being pushed into extreme poverty (defined as living on 1.90 USD or less a day) because they have to pay for healthcare.<sup>3</sup>

People in rural areas, who don't have the funds or time to travel, as well as those living with disabilities, are limited in terms of the healthcare they can access, if it exists.

The gap in terms of the health workforce needed to meet the Sustainable Development Goals and universal health coverage targets, is an additional 18 million health workers by 2030.<sup>4</sup>

This is the backdrop against which we posed our questions, one that underpins everyone's basic right to healthcare and whether or not they can enjoy it.

With this in mind, we asked a group of experts in global health, some of whom are quoted throughout the executive summary and report, to identify the five current mega-trends in tropical medicine and global health. We developed a survey accordingly to find out what they think lies ahead for the sector in the next 25 years.

Those mega-trends are climate change, globalisation, urbanisation, demographics and technology. We realise that this list is by no means exhaustive, but we do touch on some of the other big healthcare issues, including non-communicable diseases and mental health, as part of the mega-trend analysis.

# **Climate change**

One cannot ignore the impact that the climate crisis is having on all aspects our lives. Our weather is changing, and natural disasters are increasing in number and frequency, which has knock on effects on people's food security, their ability to earn an income and, of course, on their short-term and long-term health.

Between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.

The direct cost to health is enormous, an estimated \$2-4 billion/year by 2030<sup>5</sup> and, sadly, the areas with the weakest health infrastructure are the least able to prepare and respond to current crises, whether it be extreme heat, floods, storms or influxes of people due to disasters in surrounding areas.

### Top challenges posed to health by the climate crisis

When asked to pick the three top challenges that climate change would pose to health over the next 25 years, the respondents ranked mass migration and new emerging diseases as joint first, with health and nutrition implications due of climate-ravaged food supplies in second place.



Indeed, with rising temperatures and unpredictable rains comes the risk that the production of staple foods with be affected. According to the WHO, the prevalence of malnutrition and undernutrition, which currently cause 3.1 million deaths every year, will increase.<sup>6</sup>

Although the respondents highlighted emerging diseases as one of the top climate change related challenges to health in the future, it is interesting to note that climate change will also have a huge impact on diseases that are already familiar to us.

In "Global climate change and emerging infectious diseases", the authors note:

"Climate-related increases in sea surface temperature and sea level can lead to higher incidence of water-borne infectious and toxin-related illnesses, such as cholera and shellfish poisoning."<sup>7</sup>

We also know that changes in climate can lengthen transmission seasons of diseases like malaria and grow areas of transmission for diseases such as schistosomiasis.<sup>8</sup>

One reason put forward for the huge increase this year in global cases of dengue fever is again a changing climate and warmer temperatures in many parts of the world.

### The role of governments and health bodies

When asked whether governments and health bodies are doing enough on climate change, as well as the global coordination needed to address the impacts of climate change, the responses were overwhelmingly negative.

92.1% think governments and health bodies are not doing enough to prepare for the impact on health that the climate crisis poses, whereas 97.7% of the respondents think that more coordination and cooperation is needed globally to tackle the health challenges of the climate crisis.



# **Globalisation**

Our world has become a lot smaller over the last 25 years. Travel has become cheaper and easier, and technology and communication networks mean we can connect to more people and access more information than ever before.

However, more movements of people and easier access to information could also be having a negative impact on health around the world.

### Top challenges to health from globalisation

When asked to pick the top three challenges that globalisation would pose to health over the next 25 years, a huge majority think drug-resistance, including antimicrobial resistance and multi-drug resistant tuberculosis is the most significant issue.

Second was neglected tropical diseases increasing in prevalence all over the world, followed by the ability of healthcare and medical systems to deal with crises.

According to the WHO, 490,000 people developed multi-drug resistant tuberculosis globally in 2016, and drug resistance is also starting to complicate the fight against HIV and malaria:

"Antimicrobial resistance is putting the gains of the Millennium Development Goals at risk and endangers achievement of the Sustainable Development Goals."9

### The role of misinformation and anti-science

When we asked if misinformation and anti-science pose a dangerous threat to the future of healthcare, 91.7% of respondents agreed or strongly agreed.



In the last year or so, we have seen the re-emergence of vaccine hesitancy, which has subsequently been linked to the huge increase in the number of cases of measles around the world.

Many experts put this down, at least in part, to the spread of misinformation on the risk of vaccines through social media and other news platforms.

This has culminated in August 2019, with four European countries, including the UK losing their measles-free status, which has been covered widely in the global media.

### Will globalisation lead to a brain drain?

With greater movements of people, comes the risk that qualified individuals in low- and middleincome countries will seek seemingly better job opportunities and an improved standard of life in high-income countries, therefore increasing an already significant disparity in healthcare provision.

When asked about this, 64.4% of respondents think the drain of medical expertise or "brain drain" from low- and middle-income countries to high-income countries will get worse over the next 25 years.

As is clear from the graph below, there are also big differences in the answers to this question, depending on the location of the respondent. Unsurprisingly, respondents based in Africa thought this was more of a concern than those living in Europe.



# **Urbanisation**

Today, around 55% of the world's population lives in urban areas, a proportion that is expected to increase to 68% by 2050.<sup>10</sup>

### The risks of urban living

An increase in urban population density, with many urban dwellers in low- and middle-income countries often living in informal settlements without appropriate access to sanitation or water, comes huge risks of disease outbreaks. According to the WHO: "One in three urban dwellers lives in slums, or a total of 1 billion people worldwide".<sup>11</sup>

There are also other health risks associated with urban living. Living in cities can encourage negative lifestyle choices, such as avoiding exercise. Urban dwelling is also associated with other high-risk factors when it comes to health, such as overcrowding and poor air quality.<sup>12</sup> Linked to this is heavy traffic and the higher risk of road traffic accidents.

Often forgotten is the impact on the rural populations left behind in terms of access to vital medicines and healthcare, as the majority of resources are allocated to urban areas.

### Top challenges to health from urbanisation

When asked to pick the three top challenges (of ten) that urbanisation would pose to health over the next 25 years, the answers were very evenly spread across the health implications of urban density, air pollution and the healthcare gap for those living in rural communities.

Air pollution is one of the biggest healthcare issues of our time. It is estimated that "urban air pollution kills around 1.2 million people each year around the world", it being linked to respiratory and cardiovascular diseases.<sup>13</sup>

As mentioned above, when asked if they thought rural populations were being left behind, 67% replied that rural communities will be neglected in the next 25 years as more resources are focused on urban areas.



# **Demographics**

Our world is rapidly ageing and, contrary to common belief, this ageing is happening in all areas of the world, not just high-income countries.

Increasing life expectancies surely can be seen as a triumph of the twentieth and twenty-first centuries and of our work to fight diseases such as polio and smallpox, as well as to reduce maternal and infant mortality and secure better living standards with better nutrition and clean drinking water.

According to the United Nations' Department of Economic and Social Affairs, World Population Ageing report 2017:

"The global population aged 60 years or over numbered 962 million in 2017, more than twice as large as in 1980 when there were 382 million older persons worldwide. The number of older persons is expected to double again by 2050, when it is projected to reach nearly 2.1 billion.

"Two thirds of the world's older persons live in the developing regions, where their numbers are growing faster than in the developed regions. In 2050, it is expected that nearly 8 in 10 of the world's older persons will be living in the developing regions."<sup>14</sup>

This increase in life expectancies is a success for the healthcare community, but one that brings many challenges. With global ageing has also come an increase in non-communicable diseases, diseases that currently kill 41 million people each year.

### Top challenges to health from demographics

Our respondents identified three specific health challenges out of a choice of five that they believe are going to increase in prominence and impact over the next 25 years, namely:

- Non-communicable diseases (NCDs), such as diabetes, hypertension and cancer (82.9%)
- Drug-resistant strains, such as tuberculosis (75.8%)
- Emerging infectious diseases (66.4%)

### The big issues for women's and men's health for the future

Also aware that women and men have very different needs when it comes to healthcare, as well as face different challenges, we asked our respondents their opinions on some of these issues.

The two (of five) most important issues regarding women's health over the next 25 years, according to our respondents were reproductive health and non-communicable diseases with very similar percentages of votes.

The same question regarding men's health saw the top two challenges highlighted noncommunicable diseases and mental health.

It is worth noting that 80.6% of respondents picked NCDs as one of top challenges for men's health going forward, a lot higher than 44.9% for women's health.

"In our programmes we see an increasing gap in health outcomes between men and women with chronic diseases, with women doing better than men. Often chronic disease services have been added onto standard community health services (which in many cases are designed primarily to meet the needs of women and children). This reflects a need for more person-centred programming, e.g. services more accessible to men, open outside working hours, etc."

Kiran Jobanputra, Head of Manson Unit and Deputy Medical Director, Médecins Sans Frontières

### Global ageing and global health

Looking at global ageing, we asked how well our respondents think the global health system will deal with ageing populations over the next 25 years.

Around 60% think health systems will not deal well with ageing populations. Interestingly and potentially due to cultural differences, respondents from different continents had different opinions.

It must also be noted that the pace of population ageing is much faster than in the past:

"France had almost 150 years to adapt to a change from 10% to 20% in the proportion of the population that was older than 60 years. However, places such as Brazil, China and India will have slightly more than 20 years to make the same adaptation."<sup>15</sup>

The fact that European countries have had longer to experience the process of population ageing and its impact on health systems, might explain the differences in answers from continent to continent.

75.8% of European respondents chose "not well" or "not well at all", compared to 44.3% of African respondents and 52.9% of Asian respondents.



### **Quality of life over extending life?**

Location also made a big different to the next question. We wanted to find out people's opinions on whether they thought healthcare systems, over the next 25 years, should prioritise extending life or improving the quality of life.

While both life expectancy and quality of life are clearly important, 90.3% of respondents indicated that the primary focus of healthcare systems should be to improve the latter.

Respondents from Europe believe this most strongly. 96.7% supported improving quality of life. In comparison, only 86.3% of African respondents and 82.4% Asian respondents supported improving quality of life.

A small but significant proportion (11.5% and 16.5% respectively) believed extending life was more important.





Innovations in technology over the last 25 years have irreversibly changed the world we live in. Some of the most obvious examples of these changes involve the way we communicate online, with even some of those in the most remote areas of the world now able to access the internet.

Technology has influenced every sphere of our lives, including healthcare. From electronic health records to mHealth, geo-spatial mapping to genome sequencing, there has been much progress.

Much has been made of the positive impact of technology on healthcare, however we were also interested in hearing our respondents' opinions on the entire spectrum of technology's impact, including potentially increasing inequalities in access to healthcare.

As mentioned above, when asked if technology had increased the healthcare divide between lowand middle-income countries and high-income countries, 67.7% of respondents said yes.



Respondents from the African continent were much more likely to support this statement, with 78.9% in support and 12.6% against, versus European respondents of whom 59.2% were in support and 24.9% were against. Male respondents were also much more likely to support this statement (73.2%) than female respondents (62.8%).

However, the feeling from our respondents was that, overall, technology would improve global health over the next 25 years, with 89.1% of them agreeing with the above statement.



Similarly, 91.9% of respondents also thought that technology has improved our healthcare system over the last 25 years.

Respondents from Asia were most supportive of this statement, with 97.6% in support, compared to 94.8% of respondents from Africa and 88.7% of respondents from Europe.



However, there were more mixed views on the potential role of artificial intelligence (AI), with almost as many people excited (44.9%) as concerned (38.3%) about its place in the healthcare system.

Respondents from the African continent were more likely to be concerned (49.8%) than excited (40.4%) about AI in healthcare.

In contrast, respondents from Asia were the most excited (59%) about AI in healthcare, compared to 31.3% who felt concerned.

Respondents from Europe were also more excited (43.2%) than concerned (31%), but a significant proportion didn't know how they felt about AI in healthcare (25.8%).



Finally, many more men (51.8%) were excited about AI in healthcare compared to women (38.6%).

The last question we asked was about potential future disrupters in the field of healthcare. Asking respondents to think about whether or not, in the next 25 years, there will be a new company that will completely disrupt how we deliver healthcare, as Amazon has done with retail, 64.9% think this is either likely or very likely.

The huge amounts of personal data that big companies own on individuals could indeed lead to a customer-centred and more personalised approach to healthcare. This prospect will likely make many people feel very uneasy and hopefully any big companies that enter this very lucrative market – now estimated to be worth some \$10tn<sup>16</sup> – will be held to high standards and scrutiny when it comes to respecting people's privacy and data.



## **Conclusion and recommendations**

There can be no doubt that our world is facing multiple, serious challenges, not least in health, and it is therefore easy to forget that we have both made huge steps forward in the last 25 years and have the opportunity to take yet more great leaps forward in the next quarter of a century.

This view is echoed by the many health professionals around the world we polled, with over half saying they are optimistic about the future of global healthcare.

What then do we need to do to increase the chances of making those great leaps forward, and how do we overcome the barriers the global health community is going to face in doing so?

Off the back of the survey findings, RSTMH will be reviewing five issues for action, which are in keeping with the Society's ambition to save lives and improve health around the world through increased access to and greater equity in global healthcare. These are:

### 1. Make tackling the climate crisis a priority for global health

The global health community has always struggled to get the balance right between tackling the causes of health problems and treating the impact.

With the climate emergency, we are faced with a challenge that needs us all to work together and commit significant resources to tackling the issue at source, investing health resources in reducing emissions and tackling air pollution.

### 2. Unite around early intervention to tackle NCDs across the world

The vast majority of our respondents felt that NCDs will increase in prominence and impact over the 25 years.

Almost a third thought we should strongly focus on prevention over treatment and management when it comes to investing resources in healthcare over the next 25 years, which is crucial to tackling lifestyle influenced chronic conditions.

### 3. Combat health inequality

The overwhelming majority of respondents believe we need more coordination and cooperation to tackle the health challenges of the next 25 years. However, nearly two thirds believe the drain of medical expertise from low- and middle-income countries to high-income countries will get worse over the same time period.

We cannot tackle those challenges nor increase coordination and cooperation without first reducing health inequality and closing the healthcare gap.

### 4. Prioritise quality of life over life expectancy

The days of measuring the success of healthcare purely through increasing life expectancy are over. It is a 20<sup>th</sup> century measure that is no longer fit for purpose and over 90% of respondents believe our focus should be on improving life over extending it at all costs.

# **5.** Put the power of technology in the hands of health professionals and the communities they serve

The world has changed hugely over the last 25 years, one of the main reasons for this is the impact of technology. Technology will continue to change our lives over the next 25 years, but we need to make sure it benefits all of us when it comes to healthcare. 91.9% said technology has improved our healthcare system over the last 25 years but over 80% believe that governments aren't doing enough to empower communities to make decisions and take action over their own healthcare.

Communities and the health professionals that serve them should be given the support they need to take ownership and control of emerging innovations in healthcare, through ensuring open access to data and insights, investment in innovation, and research and development at a grassroots level.

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