World Medical Journal

WMA

Contents

World Medical Association Officers, Chairpersons and Officials

Official Journal of The World Medical Association

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Editorial

This is incomprehensible time. Covid-19 provides a serious lesson for doctors, politicians and economists in the whole world. There is still much unknown about this virus. There is no experience with SARS-CoV-2, but virologists and clinicians have knowledge about and experience with other RNA viruses. There is in-depth knowledge about coronaviruses in veterinary medicine. There is experience in human medicine regarding other coronaviruses, especially concerning SARS and MERS. People have experience in producing vaccines against RNA viruses, and these vaccines are effective in both human and veterinary medicine. And yet – we are not able to answer the main question: how long and persistent will the immunity of people against SARC-CoV-2 be? We have only the views and insights of the most distinguished specialists in the world, but sometimes these are controversial points of view. And we believe a scientist or a school who, to our mind, is more persuasive or whose achievements have been acknowledged, or for example, the Nobel Prize awarded. We believe high impact journals and we are used to trust them. And we also listen to information we want to believe – for example, I read articles about viruses with great interest – and learn that the virus is self-limited, it will become less aggressive, less infectious, and people will have milder virus symptoms in the near future. I understand there is no convincing evidence for it, but I am eager to believe it.

We, doctors, are not protected from disinformation, and a prominent doctor may cause a chain reaction, when subject to disinformation. It is enough to come forth with exaggerated messages in serious non-medical news channels; and many doctors also start believing it. It is time the World Medical Association, the largest and most serious forum of doctors, takes the initiative and defines certain things. The need of staying 6 feet apart is to be repeated every day, just as the requirement not to scream, not to sing and not to be sneezed at. The virus spreads much better indoors, and people must use the opportunity to communicate more outdoors. It must be understood that the world population is not prepared to accept any longer communication restrictions. We must teach people how important it is to treat their chronic diseases – diabetes, asthma, cardiovascular diseases, hypertension – so that the virus does not kill them.

A key issue for the medical world will be attitudes toward newly created vaccines. If I was able to trust the Oxford researchers in moving towards a vaccine, I could not believe the news that military personnel are already being vaccinated against Covid-19 in some major post-socialist states. And indeed, we have no chance of predicting whether we can expect long-lasting and permanent immunity of the SARS-CoV- 2 virus to vaccines. And we don't know if people have cross-immunity to coronavirus.

And in the end, we do not know how expensive, safe and effective the vaccine will be, and whether there will be enough of it for all the people of the world, both – in rich and poor countries. The virus does not recognize national borders.

One thing is clear. The World Medical Association should renew its cooperation with the World Veterinary Association without delay and raise the concept 'One World, One Health' to a new level. We have zoonoses and and we will have to face zoonoses in the near and distant future. The more the people in this world produce meat for their own consumption, the more industrial the keeping of pet animals and meat production will become. The more high-density domestic animal farming develops, the more likely the outbreaks of zoonoses. Covid-19 reminded the world about hygiene and cleanliness. Maybe it is time to discuss globally modern standards for hygiene.

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The WMA and the Foundations of Medical Practice. Declaration of Geneva (1948), International Code of Medical Ethics (1949)
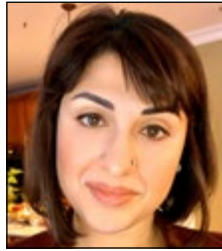
Sean Murphy   *Ramona Coelho*   *Philippe D. Violette*   *Ewan C Goligher*   *Timothy Lau*   *Sheila Rutledge Harding*

Practising Medicine "with conscience and dignity"

Beginning with the Declaration of Geneva (the Declaration), for over 70 years the World Medical Association (WMA) has maintained that physicians must practise medicine with conscience and dignity [1]. On the Declaration's 70th anniversary, seven associate WMA members raised serious concerns about their ability to remain in medical practice if they fulfil this obligation by refusing to support or collaborate in the killing of their patients by euthanasia and assisted suicide (EAS)[2].

The physicians practise in Canada, where euthanasia and assisted suicide (EAS) are legal, [3,4] recognized as therapeutic medical services by the national medical association [5,6] and provided through a public health care system controlled by the state, which also regulates medical practice and medical ethics. The national government is now poised to make EAS available for any serious and incurable medical condition, vastly increasing the number of patients legally eligible for the service [7].

In these circumstances, it is urgent to reassert that the duty to practise medicine "with conscience and dignity" includes unyielding refusal to do what one believes to be wrong even in the face of overwhelming pressure exerted by the state, the medico-legal establishment and even by medical leaders and colleagues. That the founders of the WMA not only supported but expected such principled obstinacy is evident in the WMA's early history and the development of the Declaration, all of which remain surprisingly relevant.

Early Developments: 1945–46

A meeting of physicians from 30 countries in London in June 1945 discussed the formation of an international medical association [8, 9]. Some continental physicians spoke of crimes by physicians in their countries during the war [10], and over the next 18 months the world medical community became increasingly aware of physician participation in crimes against humanity [8, 11, 12].

National medical association delegates returning London in September 1946 were uneasy and ambivalent about plans to na-

tionalize health care systems in Britain and the Continent. On the one hand, they welcomed the growing interest in medicine by governments around the world. On the other, they worried about the consequences of (as later expressed) transforming all physicians into "Civil Servants controlled by the State" [13, 14]. They conceived an international medical association as support for national associations defending practitioners and patients from government demands. They reminded the British health minister that physicians treat human beings, not collections of tissue, and must practise with "a discipline of the heart that makes it difficult to integrate [them] into the State machine" [15].

While delegates were motivated to organize the WMA by concerns about the profession-state relationship, they were also deeply disturbed by physician participation in war crimes [8].

In the month following the London gathering, twenty German physicians were arraigned in Nuremberg [13]. And the organizing committee drafted the WMA constitution and prepared for the first General Assembly while the Nuremberg "Doctors Trial" was in session. Reports from

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the trial resonated deeply with physicians anxious about being integrated into a "State machine" [16,17,18,19].

First General Assembly: War Crimes and Medicine (September 1947)

Physician war crimes dominated the agenda of the first WMA General Assembly, displacing discussion of the profession-state relationship. Delegates heard impassioned testimony from physician victims of the Third Reich and received the BMA report, *War Crimes and Medicine* [20, 21, 22].

The report denounced physicians responsible for crimes against humanity as lacking "moral and professional conscience," condemning them for having allowed the state to use medical knowledge and science as "instruments of wanton destruction in the pursuit of war." It asked the WMA to endorse the prosecution of physicians for war crimes and adopt a World Charter of Medicine, explicitly reaffirming medical ethics "in the spirit of the Hippocratic Oath," suggesting that medical graduation should include a promise to adhere to the Charter [10].

The Assembly accepted the recommendations and approved a public apology and undertaking to be required of the German Medical Association as a condition for admission to the WMA. It also approved an oath affirming that a physician's first duty is to care for a patient, "to resist any ill treatment that may be inflicted on him" and "to refuse my consent to any authority that requires me to ill-treat him." Finally, it appointed a committee to produce a report about war crimes [23, 24].

Over the following year, the war crimes committee solicited forms of medical engagement from national associations with a view to formulating an international medi-

cal oath. The WMA Council also agreed to develop an international code of medical ethics, concerned that jurists reacting to physician war crimes might do so if the WMA did not [24,25].

Second & Third General Assemblies

Declaration of Geneva (September 1948), International Code of Medical Ethics (September 1949)

At the second WMA General Assembly, delegates were presented with *War Crimes and Medicine: The German Betrayal and a Re-statement of Medical Ethics*. It urged the Assembly to prevent physician crimes against humanity by reaffirming basic Hippocratic principles, which, it argued, would be universally acceptable. Requiring medical graduates to abide by a modern version of the Hippocratic Oath would help to impress them with the fundamentals of medical ethics. The suggested modern version, containing ten promises, was approved by the Assembly and published as the Declaration of Geneva [26].

The Second General Assembly also approved the development of an international code of medical ethics. The final version, which included the Declaration of Geneva, was approved at the Third General Assembly in 1949 [27].

Refusing the fatal surrender of conscience

The documents make clear that what the authors of the Declaration and the ICME meant by practising medicine "with conscience and dignity" was not only doing what one believes to be right, or only doing what one believes to be best for patients, but refusing "to make the easy and fatal surrender of one's conscience to the mass mind of the totalitarian state" (18). A British physician responding to the BMA report on war crimes commented:

During the terrible years of occupation by a brutal enemy the large majority of doctors of most of the occupied countries maintained their moral integrity, their unswerving loyalty to their patients, and their spiritual and professional freedom, even at the risk of torture and death. They thereby set a great example and vindicated the honour of their profession [19].

According to Leo Alexander, writing a year later, just before the ICME was adopted, Dutch physicians collectively demonstrated such heroism [28]. Steadfast refusal to do what one believes to be wrong was understood to be central to practising medicine "with conscience and dignity," an essential safeguard for personal and professional integrity and patients.

That was then; this is now

It is easy to understand this duty in relation to refusing to comply with the murderous dictates of a totalitarian regime that have been universally derided for decades. It is more difficult to see why it should apply to refusing to provide legal services requested by patients in a democracy. The difficulty disappears once one admits that both totalitarian and democratic regimes can make grave moral errors in law and public policy.

Events in Germany from 1920 to 1945 demonstrate that physicians willingly enlisted and collaborated in the implementation of a biopolitical ideology thought to be on the cutting edge of science and progressive ideas. Exactly the same thing has happened elsewhere and is likely to happen again. When it does, the medical profession is likely to be most accommodating and even anxious to participate to ensure that the state "gets it right."

At issue here is the freedom, integrity, dignity and obligations of individual physicians who are convinced that the profession and the state have got it wrong, yet face

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demands that they participate in activities that they reasonably believe to be immoral or contrary to good medical practice.

Then...

When the Nazi regime was installed, officials of the largest German medical associations "gladly" welcomed it and placed themselves at its service, celebrating the intimate links of the medical profession with "the wisdom and aims of the State". Those intimate links were reflected in the law directing compulsory sterilisation of those with "genetic illnesses" (including alcoholism and mental deficiency) enacted in response to a petition from the associations [29]. Physicians sterilized about 300,000 persons before the war, and began killing the handicapped when the war began, a project supported directly and indirectly by colleagues and scientists [30].

Physicians were predisposed to cooperate because they were convinced of the value of eugenics. Eugenics was a widely accepted scientific discipline, "on the cutting edge of science", supported by respected scholars, various scientific disciplines, major universities and scholarly journals [30, 31]. The eugenics movement propagated the belief that people inherited not only eye and hair colour, but were criminals, or rich, poor, lazy, industrious, promiscuous or faithful because they were "born that way" [32]. Leading scientists and activists campaigned to prevent the reproduction of such "defectives" by contraception and sterilization of "inferior types," including the mentally ill, physically handicapped, criminals, and certain "degenerate" races [33,34].

Eugenics was popular among the socially elite, including Winston Churchill, Herbert Hoover and Alexander Graham Bell (35). Eugenic societies and scientists successfully lobbied for laws authorizing voluntary or compulsory sterilization of "defectives", including criminals, the mentally handicapped and mentally ill; 27 US states had such laws

in 1931. By 1935 sterilization laws had been adopted in Canada, Denmark, Switzerland, Germany, Norway and Sweden [36].

Eugenics was especially influential in Germany after the First World War [37] and was absorbed into Nazi party policy. Since physicians were among eugenics' foremost exponents, to hear Nazi policy described as "nothing but applied biology" was especially attractive to them. Hence, many willingly joined the vanguard of what became "the most ambitious and murderous eugenics program in human history". Their characteristic response was not just acquiescence, but "eager and active cooperation" [31,38,39].

Such eagerness was not limited to German physicians. In 1936, the *Canadian Medical Association Journal* featured a lengthy essay on the superiority of the Aryan/Nordic Race by an author who, the year before, had held up Germany as a model for other nations and toasted Adolph Hitler as "a great leader" [40,41]. Two years earlier it had published a glowing report about eugenic sterilizations authorized by the Alberta Eugenics Board [42].

Over 44 years Alberta physicians sterilized 2,822 people at the Board's direction [43]. A court reviewing its operations found that it had routinely flouted the law, and, as late as the early 1960's, physicians had performed illegal sterilizations and medically unnecessary castrations, hysterectomies, oophorectomies and biopsies of testicular tissue, behaviour the judge described as "unlawful, offensive and outrageous". He excoriated one Board geneticist for, among other things, encouraging the use of persons with Down Syndrome as "medical guinea pigs" [44]. However, she had "no regrets," defending her activities as "a very reasonable approach to a very difficult problem" [45]. Awarded the Order of Canada and other honours [46, 47, 48], she was eulogized in 2014 as one of Canada's most respected geneticists (49).

Even as the Alberta court was ruling on the Alberta Eugenics Board, Alberto Fujimori was mobilizing physicians in Peru for the National Program for Reproductive Health and Family Planning. By the time it ended four years later, 200,000 to 300,000 people had been sterilised, most without valid consent: some forcibly, others bribed or threatened by government officials or health care personnel. Most victims were poor and often illiterate women from indigenous ethnic groups. The technical standard of medical care was often appalling, and numbers of women died [50, 51, 52, 53].

The WMA's denunciation of coercive sterilization came 12 years too late for Fujimori's victims [54]. In the United States, Oregon abolished its eugenic sterilization law only in 1983, and another 20 years passed before the state acknowledged the injustice suffered by victims sterilized according to the ethical standards of the day [55]. The Tuskegee Syphilis Study continued until it was exposed in 1972, the same year the Alberta Eugenics Board was abolished. It took almost 25 years for victims to receive a public apology for unethical human experimentation [56, 57].

In 2012, when a generation of German physicians unconnected with the Nazi era admitted the enthusiastic participation of German physicians at all levels of the profession in crimes against humanity, apologized, begged forgiveness, and described what their predecessors had done "as a warning for the present and the future" [58].

The warning points, in the first place, to the risk of sea changes with incalculable consequences. It appears that the German medical profession's eugenic outlook and interests converged with other social and political dynamics and Hitler's rise to power. The convergence triggered a sudden, seismic socio-political shift that supercharged Nazi biopolitical ideology. The medical profession rapidly transformed

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itself and was transformed to fulfil its new biopolitical responsibilities [29], and new possibilities suddenly materialized [59]. Carl Jung experienced this as an "earthquake" and an "avalanche" that was sweeping all before it [60].

Second, the warning reminds us that modern biopolitical ideologies are advocated worldwide by lobbyists as prominent, powerful and influential as the eugenic enthusiasts of yesteryear.

Finally, we are warned that state collaboration with the medical profession in support of faulty biopolitical ideologies is far more dangerous than the exercise of freedom of conscience by individual physicians. Literally millions have suffered and died as victims of what seemed like a good idea at the time, at least in the eyes of those in positions of power and influence.

Now...

The euthanasia/assisted suicide (EAS) movement backs a biopolitical ideology that is enormously popular in the developed world, now entrenched in Canadian law and collectively supported by the medical profession. This has serious implications for the nature of medical practice.

Leading Canadian EAS advocates told the Supreme Court of Canada that physicians are ideal EAS practitioners because they will agree to it only "as a last resort" [61]. Indeed, they argued that "physician-assisted dying" is not only "medical treatment," but "at the *core* of health care" [62]. This must place killing patients at the core of the practice of medicine and require transformation of the medical profession to fulfil its role in the new order. How far this will go remains to be seen.

Physicians cannot currently be compelled to personally administer or prescribe lethal drugs, though some prominent academics argue that should change [63,64]. However,

the national government allows state medical regulators to compel unwilling practitioners to facilitate EAS by effective referral [65] or effective transfer of care [66], which even some strong supporters of the procedures acknowledge to be morally equivalent to personally killing patients [64,67,68]. Courts in the province of Ontario support this coercive policy, ruling that physicians unwilling to comply can move into fields like sleep medicine, hair restoration and dermatology [69].

Unsurprisingly, some academics recommend that medical schools deny admittance to anyone with conscientious objections to providing whatever the state considers medical treatment or health care, including EAS [70]. Anecdotal reports indicate that some dissenting medical students face intense pressure to conform to the EAS biopolitical agenda, experiencing isolation, disregard and disdain among their peers (71).

No wonder Canadian physicians who refuse to support or collaborate in killing their patients feel themselves to be in the midst of a socio-political and ethical avalanche.

Summing up

The historical record suggests that support for physicians who refuse to kill or facilitate the killing of their patients is justifiable on prudential and pragmatic grounds. Tolerating refusal to participate in killing seems to be a safer course than imposing an obligation to kill and is certainly consistent with the high value EAS advocates have placed on physician reluctance to kill as a primary safeguard for patients.

As a matter of principle, one must distinguish what is demonstrably necessary to preserve a free and democratic society from what may be necessary to enforce a biopolitical ideology. The difference is significant but can be difficult to discern in an avalanche. EAS ideology is grounded upon

metaphysical, philosophical and moral premises that can be rationally contested but cannot be empirically validated. Among these is the dogmatic claim that a human being can be better off dead. In a free and democratic society, it ought to be unacceptable to force physicians to profess this article of faith, or to demonstrate practical adherence to it by killing or facilitating the killing of a patient.

Finally, there is an issue that goes to the heart of what concerned the authors of the Declaration of Geneva.

Competent patients may refuse even life-saving/sustaining interventions based entirely on their subjective views of what is beneficial, harmful, or in their best interests. Physicians ensure that patients have information relevant to such decisions and may make recommendations, but they are legally and ethically obliged to respect patients' inviolability and abide by their decision. The foundations of medical ethics and the personal integrity of physicians who disagree are untouched by the patient's decision.

While competent patients can absolutely refuse interventions, they cannot demand interventions because medical decisions to intervene are not based solely upon patients' demands [72]. Among other things, they engage physicians as moral agents.

Patients request an intervention, including euthanasia, because they believe it is not harmful, is beneficial, or is in their best interests. Physicians may reasonably disagree. If, despite this, physicians are compelled to further a patient's request, the concepts of benefit, harm and best interest become irrelevant. All that remains is the demand of the patient, backed by the power of the state to ensure compliance.

This treats physicians as mere technicians or state functionaries, as cogs in a state machine delivering services upon demand, not as responsible moral agents who, like their

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patients, must form and act upon judgements about benefits and harms. It imposes a form of servitude that is incompatible with human equality, dignity and personal and professional integrity.

The authors of the Declaration and ICME denounced such instrumentalization of physicians and the medical profession in the strongest terms. The precept to practise medicine with conscience and dignity imposes an obligation to resist and refuse such demands, notwithstanding overwhelming pressures exerted even in democratic societies.

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Palliative Care: Free App and Tips to Improve Quality of Care

Romayne Gallagher

Based on 2011 data, the WHO Global Atlas of Palliative Care [1] was released in 2014 and revealed that 42% of countries had no palliative care and 38% had only pockets of service provision. That same year the World Health Assembly passed a resolution [2] calling for all member states to develop, strengthen, and implement palliative care services as part of universal health coverage. A recently published study [3] based on 2017 country data showed the same categories were now 24% and 7%.

In the WHO Global Atlas Canada was rated as having "advanced integration of palliative care into mainstream service provision." I believe this is overly generous and would say that Canada, like many other countries, suffers from lack of integration of palliative care into chronic illness care, particularly non-cancer, and has a long way to go before claiming equitable service and quality across urban, rural and remote areas.

One issue raised by Canadian clinicians is not having palliative care symptom management guidelines or communication tips on hand when seeing patients. Our palliative care program developed an app so clinicians would have essential palliative care knowledge at their fingertips. The app design follows similar thinking formats used in medicine – assess, manage, communicate, plan. A website-based app allows us to add content without users having to download current versions. St. Paul's Hospital Foundation in Vancouver Canada funded this development and continues to fund the costs of maintenance in order to keep content free. It was launched in 2014 and continues to be used on a regular basis by doctors, nurses, social workers and others throughout North America. It is accessible at *ipalapp.com* and can be "bookmarked" or

its icon added to the home screen of a device. It is also usable on a desktop computer.

After launching and reviewing usage data we realized many users were from parts of the world where the palliative care challenges and available medications may be significantly different. Thus iPal Global was born with some significant differences.

iPal Global is a downloadable app that provides access to essential palliative care information without requiring continuous internet access. The app uses the International Association for Hospice and Palliative Care (IAHPC) List of Essential Medicines for Palliative Care – the most effective and safe commonly available medicines throughout the world. The content of the app has been reviewed and revised by clinicians working with Two Worlds Cancer Collaboration to ensure its content is relevant to resource constrained countries.

The app contains advice on when a palliative approach to care is indicated and contains basic assessment and management of 22 symptoms, as well as managing the last hours of living. The app features advice for planning future care and decision-making. The Communication section, is intended to improve therapeutic efficacy of communicating as well as give suggested approaches to specific situations such as breaking bad news, discussing prognosis and deciding on goals of care in managing an illness. Talk

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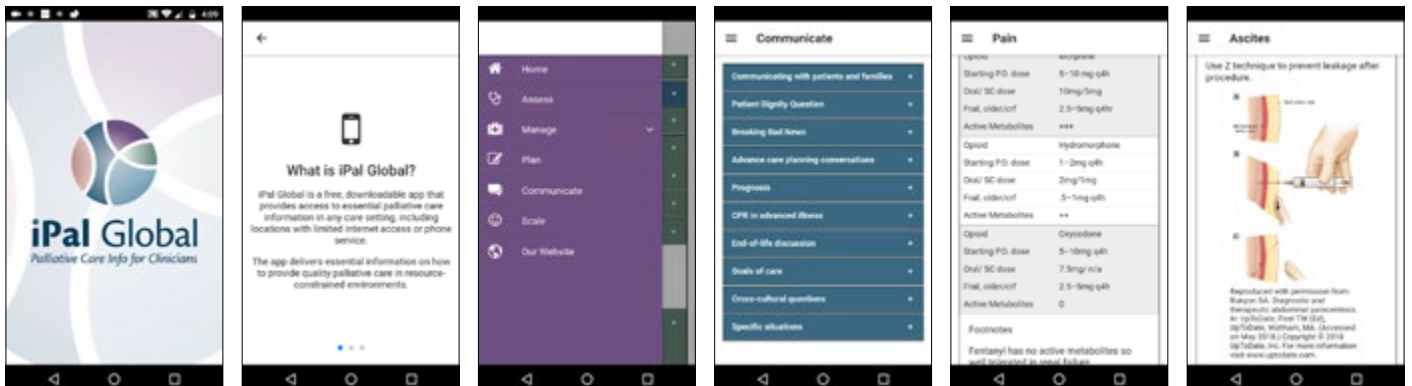
tips are placed throughout the app in appropriate situations.

Downloading the app requires 15 Mb of memory so it is quite modest for most phones. Go to the website: _https://global.ipalapp.com_ where you will find links to download the app to your smart phone, tablet or desktop computer.

The apps are applicable to COVID-19 as many people can suffer with shortness of breath if they develop Acute Respiratory Distress Syndrome as a consequence of a severe infection. If available and appropriate, ventilation is the next step. If not available, or the person has multiple morbidities the "Dyspnea" section under the heading "Manage".

Improving Palliative Care Takes Much More than an App!

Many colleagues struggle to improve palliative care capacity in their healthcare system in resource-constrained nations. It is often a physician or nurse who makes it their personal mission to improve palliative care in their area and sacrifice a great deal of their time and energy to make that happen for patients. That is not sustainable in the long term because of personal burnout of the individual and it doesn't change the way the system provides care.

There is a greater likelihood of success in establishing change if you form a group of interested colleagues that includes nurses, pharmacists, social workers, other allied professionals and administrators. Don't forget volunteers as no palliative care service is complete without volunteers. There may be already people in the community who do visits to sick people and they can be invaluable in understanding the barriers to accessing care and may even have workable solutions.

Establishing who and how many people need palliative care is an essential first step.

To win support of administrators in the hospital and ministry and justify requests for increased medication and salary support you will need to show that there is an unmet need. The Lancet Commission on Palliative Care [4] calculated the world-wide serious health-related suffering and developed a package of resources to aid countries in developing their palliative care. They defined serious health-related suffering as being caused by illness or injury of any kind that could be alleviated by palliative care or pain management. One valuable resource is a database that estimates the number of patients needing access to palliative care and you can find your country at the database website on the International Association for Palliative Care at _https://hospicecare.com/what-we-do/resources/global-data-platform-to-calculate-shs-and-palliative-care-need/database/_. You will likely see that the estimate is greater than what you thought it would be and that is because the estimate covers those who are dying from the illness as well as those living with chronic illness.

Palliative care home visits have repeatedly shown to reduce hospital admissions and costs [5, 6] which is a significant help to the healthcare system in any country. Reference 5 is available in an infographic at: _https://www.capc.org/seminar/poster-sessions/home-based-palliative-care-reduces-hospital-readmissions/_. Having an estimate of the need for palliative care as well as evidence that it reduces visits and admissions to hospital can help you to demonstrate a need for care in the community that deals with suffering, improves quality of life and prevents hospital admissions.

If you begin to treat more people's pain and shortness of breath you will use more opioids. Opioids remain the medication of first choice for moderate to severe pain and shortness of breath due to advanced illness of any cause [7, 8]. My experience has been that if doctors don't use opioids, hospital and community pharmacists don't stock them. If you talk to doctors, they say

their prescriptions are not filled because the pharmacy doesn't have them. The pharmacist says they have thrown out opioids that expired and don't want to do that again so they don't order them in. Working together always sorts out these issues and ongoing communication is key to sorting out issues with demand and supply.

The United States and Canada have experienced an increase in opioid-related deaths over the past decade known as the "opioid crisis". It is a complex problem, not well understood by media and many healthcare providers. While the focus of the "crisis" has been on opioids and how to reduce their use in and out of the healthcare system, there has been a poisoning of the illicit opioid supply by synthetic opioids (fentanyl and others), great stigma around opioid use disorder (addiction) and a lack access to treatment for the disorder. It is not a simple relationship that the more you prescribe the more people are harmed. It is possible to treat pain and shortness of breath and keep abuse of these medications to as low as possible. More about this in a subsequent article.

Improving the quality of the palliative care you offer includes the use of validated tools for assessing symptoms and tracking function. It promotes a standardized assessment and tracks efficacy of the treatment. The most widely used tool, available in many languages, is the Edmonton Symptom Assessment Scale [9]. The reference is online and has a description of how to use the tool to improve quality of care. The Palliative Performance Scale is a tool to measure patient function and progression of the illness. It is available on line at _https://victoriahospice.org/how-we-can-help/clinical-tools/_ and has been widely translated. With training these tools could be used by volunteers checking up on patients at home with serious illness to determine if a visit by the healthcare professional is needed. This means that the doctor/nurse save their visits for those who most need their help.

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Getting more education in palliative care for your team is challenging as online courses do not have the evidence [10] to show that they improve palliative care practice. Participation in the learning such as a journal club that reviews clinical articles regularly may improve practice but the evidence is not there yet. Additionally, case review of patients, especially when the symptoms were not well controlled or the death was not well managed is essential. What tends to stick with physicians is experiential learning where they encounter a clinical situation (e.g. neuropathic pain) and seek evidence for its management. That is where the app and some supplemental reading of medical literature can boost your practice.

Most healthcare providers find palliative care work meaningful and rewarding. If burnout occurs it is usually due to the frustration and challenges of doing this work "off the side of your desk" or not being able to get the resources you need to do this work in a sustainable way (salary, necessary medications, support from colleagues etc…) If you have a team you can share experiences and potential solutions as well as provide emotional support to each other. Self-care tips are on the global app under self-care.

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Interview with Miguel Roberto Jorge by WMJ Editor Peteris Apinis

Brazil is one of the countries where Covid–19 has spread very widely. How are you in this difficult time? How are Brazilian doctors these days?

We see that the situation worsens day by day. We have the second highest number of cases and soon will also rank second as to the number of deaths. And we know that the current numbers are undercounted. Besides this sanitary crisis, we had some years of a crisis in economy and, unfortunately, we are also experiencing a political crisis, with a polarized country and a President who is against the recommendations from specialists on how to face the COVID-19 pandemic. Physicians, nurses and other health personnel are trying to do their best to help those affected by the virus, but there is shortage of specialized people at public hospitals, lack of PPE, lack of reliable data (only seriously ill patients are tested) and specialists are stigmatized by people in fear of being infected.

Miguel Roberto Jorge

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As I understand, you contact your fellow colleagues, doctors around the world, almost every day. What is the mood among our friends – the leaders of National Medical Associations?

There is an enormous mobilization of medical leaders around the world in order to overcome all sort of obstacles to have efficient and safe working conditions. I am particularly following the group of NMAs that belong to CONFEMEL (Confederation of Medical Entities of Ibero Latin America) and CMAAO (Confederation of Medical Associations in Asia and Oceania). Despite the difficulties, they are doing their work and trying to build efficacy with great enthusiasm.

We know you as a distinguished psychiatrist, professor and a long-term specialist of the World Health Organization. As a specialist of such a kind, I must ask you, hasn't the Covid–19 pandemic caused a very large outbreak of mental diseases in the world, defined by fear, ignorance, worry, the loss of loved ones?

The COVID-19 pandemic and the needed confinement at home brought out a series of mental health problems as well as new cases or worsening of previous mental disorders. Anxiety and different types of fears are common reactions when facing the possibility of infection and also after some weeks of quarantine. Depression and alcohol abuse are problems affecting the vulnerable ones. The loss of someone close, economic loss or becoming unemployed are factors contributing to emotional distress.

There are many interesting articles in world literature that solitude and isolation reduces non-specific immunity, increases the risk of neurological and endocrinological diseases. Many people in the world now live more or less in isolation, quarantining. Doesn't loneliness and isolation lead to depression, anxiety, and other psychological changes? Can these psychological changes become a cause for psychosomatic diseases?

We have to be careful when considering isolation or loneliness for a period of some months in comparison with an endless situation. As I have said before, we are observing anxiety, depression and other emotional reactions to the pandemic and the associated quarantine. That situation is also contributing to decreasing physical activity and the consumption of non-healthy food, gaining weight and potentially triggering some health problems. Sleep disorders have also been observed.

It is known that isolation and confinement in very small spaces can lead to domestic violence and aggression. Isn't the world threatened by a wave of violence as a response to lasting isolation?

Confinement of people in not large spaces that create difficulties to have privacy or for a long period of time is associated with rising tensions among them, increase of irritability, and potentially causing verbal and/or physical aggression. Some couples can even experience a serious marital crisis.

World experience has shown that in difficult times like these people tend to pour out their discontent and aggression on relatives, doctors and pharmacists. Doctors around the world often become victims of negative feelings, not only verbally, but they are attacked also physically. What can we do to make doctors feel safe at such a moment of tension?

We see reports about people applauding health professionals and also reports about violence against them. As regards safety, people need to be informed in what difficult situations professionals at the pandemic's frontline are, risking their lives to save others. Physicians, nurses and other members of the health team also experience fears of being infected, to infect their relatives at home, to die or not being able to save many patients they attend to. They are people like any other. When someone attacks health professionals, usually it is because of a wrong idea about getting infected from being in their presence. And if a health worker is attacked, it will be one less at the frontline

helping patients. Public campaigns are important to educate people.

From the experience of China and Italy, we know that doctors are really exposed to the disease, as it is very common to get sick with Covid–19. Most doctors are very afraid of getting sick, mainly because they can take the disease home to their parents, relatives. The worrying about a potential disease can be very serious.

Can doctors in the world feel protected from the illness and feel more or less safe?

Governments and health managers have the responsibility to offer good and safe working conditions to doctors and health workers at the frontline. Adequate personal protective equipment needs to be fully available and services need to take into account the required sufficient number of personnel so as not to expose one another to a bigger risk of being infected. Time off between shifts and breaks during shifts also contribute to rest and focus when returning to work.

From the experience of China and Italy, we know that doctors who face a large number of severely ill Covid–19 patients daily are forced to make very difficult decisions – which patients should be assisted to. Are doctors psychologically supported and what can the World Medical Association, National Medical Associations and Governments do to maintain the psychological health of doctors?

Even before the COVID-19 outbreak, there were reports about increasing burnout among physicians, particularly among those in training or with few years of practice. Good and safe working conditions protect physicians from psychological problems but even in rich countries there are situations where they have to choose between patients – those who will be placed in an Intensive Care Unit or not or have access to a ventilator. National Medical Associations and their specialized societies are developing guidelines with algorithms to help physicians be less subjective in their decision making and consequently

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experience less psychological stress in that undesirable situation.

Covid–19 has produced fantastic developments in science and research. Every day there is new research, new lessons, new information. There has never been so much contradictory information about one topic. How do doctors feel about this information flow and how to adapt to it?

There is an enormous effort from scientists worldwide to know better this new coronavirus and the pathophysiology of COVID-19. The world is anxious for a vaccine to prevent new cases and the right medication to treat the disease. Moreover, there are lots of researches being done to study human behavior during the current pandemic and trying to figure out how habits will change after the COVID-19 outbreak. Unfortunately, good research takes time to achieve results that will last and not be contradicted by another research. And doctors know it better than anyone not familiar with the development of science. What is important – science was not properly considered or even rejected before this pandemic and now we see people more interested and recognizing the importance of science development.

In the world, not only doctors and patients have conversations in Zoom, Skype or over the telephone, but also the relationship between doctors, their mutual advice and communication is remote. Do we not lose much of the human communication qualities? Don't our doctors lose professional ties? Maybe we need psychotherapy for the all-global medical community?

Different forms of telemedicine and the utility of remote work are tested during the situation the world is experiencing since the outbreak that started in China. I am sure that it will affect the work of everybody and our work as physicians as well. As a psychiatrist and psychotherapist, I do not believe that a virtual consultation will give us all we can have when in the physical presence of our patients. Unfortunately, sometimes physical examination is replaced by labs and images, and the patient as a person loses importance to the signs and symptoms they present. Evidence based diagnosis and treatment are of great importance but the human contact is an essential aspect of the practice of medicine. Telemedicine can be a wonderful tool to complement the possibilities of an encounter between a physician and their patient.

Your final remarks?

I believe that the most important thing that the COVID-19 outbreak brought to us was the astonishing awareness of how unequal is the world we live in. We discussed in the previous questions situations that can be more applicable to privileged people but we must think about those who live in low and middle income countries and even in the outskirts of cities or urban areas of rich countries. Think about those who do not have access to health services or have limited and difficult access to not too good quality medical services. At this particular time, during the current pandemic, while I am here, in my small but comfortable apartment, answering questions, typing on my computer, there are millions of people fighting to survive in this difficult situation. There are cultures were philanthropy is not rare and I do not know about every country but I have never seen people being mobilized to do something or to donate a considerable amount of money to the underprivileged as nowadays in my country, Brazil. I hope and wish that such attitudes will increase and reach every corner of the world.

What is the potential impact of the COVID-19 Pandemic on Achieving the Sustainable Development Goal of Reaching Zero Unmet Need for Contraception by 2030?

The World Health Organization is reporting this June 2020, that there are over 6 million cases globally of COVID-19 with over 380,000 deaths and the human cost of this pandemic could be extraordinary [1]. It is important to shine a lens on the potential impact of the pandemic on Women's Health Issues and the Sustainable Development Goal of reaching Zero Unmet Need for Contraception by 2030. Unplanned teenage pregnancy is a global health issue, a women's health issue, and a human rights issue.

The Nairobi Summit on ICPD+25 held in November 2019 had a major theme, Reaching Zero Unmet Need for Family Planning by 2030. At that time, in Developing countries 214 million women did not have access to modern contraception and thus, become pregnant as young adolescents, often while they are still in school. There still exists a disparity in contraceptive use between the high and middle-low countries, even within African countries, and between the higher and lower income quintiles within countries. The economic and physical disrup-

tions related to COVID-19 could have vast consequences for the sexual and reproductive rights and health of women and girls, a new analysis by UNFPA and partners shows. The pandemic will undermine efforts to end gender-based violence and limit the progress of ending gender-based violence by 2030 [2]. For every 3 months the lockdown continues, assuming high levels of disruption, up to 2 million women may be unable to use modern contraception. Significant levels of lockdown-related disruption over 3 months could leave 47 million women in

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low- and middle-income countries unable to use modern contraceptives, leading to a projected 7 million additional unintended pregnancies [2]. In the most severe scenario, with significant service disruptions lasting for a full year, 51 million women would be unable to use modern contraceptives, resulting in 15 million unintended pregnancies [2]. During the past 4-5 months, the COVID-19, a highly infectious virus that we do not have a vaccine for yet, has spread to every corner of the world.

Dr. Natalia Kanem, Executive Director of the United Nations Population Fund (UNFPA) stated "This new data shows the catastrophic impact that COVID-19 could soon have on women and girls globally. The pandemic is deepening inequalities, and millions more women and girls now risk losing the ability to plan their families and protect their bodies and their health," said Dr. Natalia Kanem, UNFPA Executive Director. "Women's reproductive health and rights must be safeguarded at all costs. The services must continue; the supplies must be delivered; and the vulnerable must be protected and supported [3]." Some clinics may not have the Personal Protective Equipment (PPE) to protect themselves or the patients and staff illness may impact service provision. Staff will need to focus on COVID-19 patient care and may not have the resources to provide contraceptive advice and services. The function of supply chains in some countries has been disrupted with the closure of

borders and production of some contraceptives have been disrupted. It is essential to ensure supply chains of contraceptive products so that there is unimpeded flow from manufacturer to the patient. FP2020 has created a platform to ensure information from global experts about family planning [4].

Key action points to consider maintenance of essential Family Planning services during the COVID-19 pandemic have been published by the International Federation of Obstetrics and Gynecology [5]. These include an urgent need to use points of care such as postpartum and prenatal visits for providing education and access to long acting reversible contraceptive (LARC) options. Also, self-care family planning methods which include self injectables, condoms and vaginal rings which can be supplied to women are important. Implementation of telemedicine using mobile phones and social media can be used for both information and access to supplies [5] Adolescents are particularly vulnerable in the pandemic as they may have restricted ability to seek services away from home but there are opportunities to remove some barriers to care with use of telemedicine.

Contraception is a human right for adolescent girls, and healthy families are by choice, The impact of the COVID-19 Pandemic on Family Planning requires a collaborative and novel approach so that we can continue to strive towards Zero Unmet Need for Contraception by 2030.

Medical Women's International Association (MWIA): Teenage Pregnancy Task Force

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COVID-19 Pandemic: a Possible Reversal Mechanism for Outward Medical Tourism by African Political Leaders

Osahon Enabulele

Medical Tourism is the process of people travelling to another country, across international borders and outside their country of residence, for the purpose of obtaining medical care, which may include the full range of medical services such as preventive, promotive, curative and rehabilitative services. Importantly, it includes the range of socio-economic activities undertaken by an individual or group of persons in the process of accessing medical care/health care services outside his/her country of residence. These activities, which are usually undertaken after completion of the primary medical procedure, could include leisure and business activities in the destination country.

Outward Medical tourism, particularly political health tourism by African political leaders, has been a major challenge confronting the African continent, with healthcare systems in most of the African continent left undeveloped, at huge cost to the health of African people and the economy of the African continent. Instead of investing required resources in the development

of their healthcare systems, some African political leaders prefer to seek medical care abroad, outside their respective countries. However, with the outbreak of Coronavirus disease (COVID-19) in China and its subsequent spread to other regions of the world, including Africa, most parts of the world have been on lockdown with closures of international airports, land and sea borders.

Apart from the COVID-19 pandemic exposing the long-standing challenges and fragility of African healthcare systems, it has severely limited the opportunity to seek medical care abroad, with African political leaders and elites left with no choice but to seek healthcare in their home countries.

While it may be premature to tell if this switch to the utilization of local health facilities by African political leaders will remain a permanent feature in the post-COVID-19 era, this article is aimed at reviewing the impact of outward medical tourism by Africa's political leaders and the likelihood of the COVID-19 pandemic serving as a reversal mechanism, with a projection into the post-COVID-19 era.

Funding: This research/paper did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

The global community is currently confronted with the challenge of containing coronavirus disease (COVID-19) caused by a novel strain of coronavirus, called SARS-COV-2 [1]. The disease first came to public attention following the outbreak of an acute respiratory illness in Wuhan City, Hubei province of China in December 2019 [2]. Since the outbreak was reported to the World Health Organization (WHO) by

Chinese authorities [3], it has spread beyond China to many other countries of the world. This trend of regional and continental spread, as well as the increase in the number of cases, informed WHO's declaration of the disease as a Public Health Emergency of International Concern (PHEIC) on January 30, 2020 [4], and as a Pandemic on 11th March, 2020 [5]. As at Sunday, 14th June, 2020, over 200 countries have been affected by COVID-19, with 7,948,001 persons confirmed to have COVID-19 and 434, 097 deaths recorded, globally [6]. Africa recorded her first case of COVID-19 in Egypt on the 14th of February, 2020 [7], and as at Sunday, 14th June, 2020, over 50 African countries have been affected by COVID-19, with a total of 233, 732 persons confirmed to have COVID-19 and 6, 253 deaths recorded [8].

Coronavirus disease (COVID-19) is spread through respiratory droplets from infected individuals (especially when they cough or sneeze), aerosols, and contact with infected objects and surfaces [9]. It is characterized by symptoms such as fever, cough, sore throat, difficulty with breathing/shortness of breath, myalgia, anosmia, fatigue, as well as complications such as acute respiratory distress, septic shock, metabolic acidosis, bleeding and coagulation dysfunction [10]. There is currently no approved drug treatment or vaccine for the disease [11]. Therefore, Infection Prevention and Control measures and other public health interventions such as respiratory and hand hygiene, social distancing, use of face mask, public lockdown, risk communication, etc. have been the mainstay of containment efforts [12]. This has resulted in movement restrictions, including stoppage of international, national and local travels, closure of international and domestic airports, closure of land and sea borders, closure of schools

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and offices, and prohibition of mass gatherings [13].

Covid-19 has had great impact on many countries. Indeed, the health, socio-economic, political and cultural implications of COVID-19 have been quite evident. Even countries with well-developed healthcare systems have had their healthcare systems seriously challenged and overwhelmed by COVID-19 [14]. The lives and livelihoods of the people have been grossly affected by the shutting down of the economy and people's sources of livelihood/income. It has been estimated that half a billion more people in the world could be pushed into poverty as governments shut down entire economies to manage the spread of the virus [15]. COVID-19 has enthroned a "new normal" and way of life, with various coping strategies developed to cope with the effects of COVID-19, including new ways of living and conduct of human affairs and transactions, increased local production of essential commodities and human needs, increased utilization of local, homegrown resources and facilities, etc [16]. These implications are more glaring in most of the developing countries of the world, including the African continent where most of the countries have fragile economies, institutions, and fragile health care systems [17, 18].

Impact of COVID-19 Pandemic on Outward Medical Tourism

What is Medical Tourism?

Medical tourism as a concept has been practiced for centuries in Africa and other parts of the world. However, the emergence of technology and globalization, as well as the involvement of political leaders, governments, and the corporate world, has accelerated its transformation and significance over the decades.

Though there is currently no universally agreed definition of medical tourism [19], it is sometimes simply defined as the process of people travelling to another country, across international borders and outside their country of residence, for the purpose of obtaining medical care [19, 20]. This may include the full range of medical services, including preventive, promotive, curative and rehabilitative services [19]. This simplified definition may however not truly reflect the important factor of tourism associated with these foreign medical travels [21]. Therefore, to better appreciate its significance, it may be better defined as the range of socio-economic activities undertaken by an individual or group of persons in the process of accessing medical care/ health care services outside his/her country of residence. These activities, which are usually undertaken after completion of the primary medical procedure, could include leisure and business activities in the destination country [21].

Medical Tourism is usually classed into Outward Medical Tourism (when it involves travel for medical care outside one's country of residence) and Inward/In-bound Medical Tourism (when it involves travel for medical care within one's country of residence) [21].

Aside from the patients, there are several stakeholders currently involved in the multi-billion dollars medical tourism market. These include the healthcare providers, medical tourism agents, insurance and travel agencies, national governments, etc [21].

Reasons for Outward Medical Tourism

There are various reasons for outward medical tourism (foreign medical travels) by individuals and groups. These include better quality of health infrastructure and healthcare services in the destination country, reduced cost of healthcare services in the destination country, lack of access to required health care and diagnostic services in the source country (such as reproductive tech-

nologies and cancer diagnostic facilities), political instability and insecurity in the source country, availability of the required expertise/highly skilled medical personnel in the destination country, ambience of the health facilities and receptiveness of the health personnel, etc [21, 22]. In the case of Africa, Nigeria inclusive, it sometimes also includes the absurd such as inordinate quest for government estacodes by some political and public office holders, poor political commitment to the development of the health system and health of the citizens, and official secrecy [21]. Indeed, some elites, public and political office holders see it as a status symbol, even when such medical conditions or medical care needs can be satisfactorily attended to in Africa [21]. This notwithstanding, it is important to note that there are Africans who genuinely travel abroad to access quality healthcare services and technologies (such as heart surgeries and oncological treatments) which may not be readily available in most of Africa's healthcare facilities [21].

Outward Medical Tourism by Africa's Political Leaders

It is well known that rather than investing resources in the sustained development of their healthcare systems, some African political leaders and public office holders utilize public resources to undertake frequent travels abroad to receive medical care, sometimes for medical conditions that can be readily managed in their respective countries [21, 23, 24]. The common destination countries for African political leaders and elites include India, United States, United Kingdom, United Arab Emirates, Germany, Turkey, Thailand, and Israel.

Aside from the huge loss to their country's healthcare systems and economies, some of these African political leaders have unfortunately kicked the bucket either in the course of obtaining foreign medical care in the destination countries, or shortly after

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returning to their home countries. Some have also had to spend upwards of 4months in the destination countries, at great loss to the governance/political leadership and economy of their countries [24].

In the words of Professor Khama Rogo of the World Bank, much as Africa is heavily resource constrained, a lot of money is spent on treatment abroad that could have instead helped develop capacity locally. Africa, according to Prof. Khama Rogo, is exporting money and patients to the East, especially India, which has largely contributed to a flourishing private health sector at the expense of Africa's. Prof. Rogo went further to state that 25% of the passenger loads on major airlines such as Kenya Airways and Ethiopian Airlines, are medical tourists from Africa to foreign countries [25].

The unceasing trend of outward medical tourism by African political leaders in the pre-COVID-19 era is a reflection of their poor priority for the health of their citizens. It is also a strong reflection of their unsatisfactory level of political commitment to the development and utilization of health facilities/systems within their respective countries.

Amongst several enablers of health system development are two critical enablers, which clearly depict the poor priority for health and unsatisfactory level of political commitment to the development of healthcare systems by most African political leaders/governments, viz:

1. *Inadequate Government Health Financing and Budgetary allocations.*

One of the major factors that has blighted African health systems is inadequate health financing and budgetary allocations to the health sector by most African governments. This is coupled with the injudicious utilization of even the insufficient funds allocated to the health sector. An evidence of this is the fact that many African countries are yet to meet up with the 2001 Abuja declaration of African Heads of Government (signed over 18 years ago) in which they pledged to allocate a minimum of 15% of their annual budgets to the health sector [24, 26, 27]. Whereas Africa currently (as at Sunday, June 14, 2020) constitutes about 16.72% of the global population [28], and bears about 24% of the global disease burden [29], public health spending in Africa is reported to be 1% of global health spending [30, 31], with the average public expenditure on health in the African region put at 10% of total public spending [32].

This state of poor financial investment in African healthcare systems has led to poor and fragile health infrastructure, equipment and diagnostic facilities, poor investment in research, poor emergency preparedness and response to epidemics, as well as a serious dearth in human resource for health, amongst other challenges [33, 34].

2. *Dearth of Human Resource for Health.*

A very significant factor in the development of healthcare systems is the Human Resource for Health, comprised largely of physicians, nurses, pharmacists and other allied health professionals/health workers. These professionals play a significant role in the provision of the much-needed access to quality, effective and efficient health care services.

Currently, there is a global crisis of availability of human resource for health, reflected in the acute and chronic shortages of health care workers in most countries of the world. This crisis is even worse off in the African continent, which though accounts for about 24% of the global disease burden, only boast of about 3% of the global health work force [29]. Notwithstanding the globally acknowledged significance of the human resource for health, most African countries hardly accord this component of the healthcare system serious consideration and importance, an attitude that has led to continuous emigration of medical doctors and other healthcare professionals to countries in the developed parts of the world with better economic climate and more enabling health care environments, such as United States of America, United Kingdom, Canada, United Arab Emirates, Germany, etc [35, 36].

Consequences of Outward Medical Tourism on African Healthcare Systems

There have been several consequences of outbound/outward medical tourism by African political leaders and elites in the pre-COVID-19 era. One of such consequences is the huge outflow of foreign exchange (capital flight) to other countries outside Africa, in the course of accessing foreign medical facilities, healthcare services and technologies that ought to be available locally in Africa.

In 2016 alone, Africa is reported to have lost over $6 billion from outward medical tourism [37]. Indeed, it is important to note that there are some African countries whose economic loss (country wise) to outward medical tourism exceeds $1billion. This is more so as each foreign medical trip typically cost an average of $20,000–$40, 000 per individual traveler, with each traveler usually accompanied, most of the time [21]. In the case of foreign medical travels by African political leaders, the expenditures are even more, on account of the fact that they usually travel with outlandish entourages/ horde of aides and in expensive chartered jets which sometimes incur huge parking costs in the destination countries. For instance, in the year 2013, Nigeria alone, lost over $1billion to capital flight from outward medical tourism [21, 23, 38, 39].

The unfortunate trend of frequent foreign medical travels by African political leaders in the pre-COVID-19 era has also led to the sustained de-marketing of the healthcare

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systems of their respective countries [21]. This has been at great loss to the economies of African countries with tremendous negative knock-on effects on the healthcare systems of African countries, with most of them left in very fragile states.

The fragile and deteriorated state of health facilities in most African countries has over time led to loss of confidence in the available local health facilities, thus promoting outward medical tourism for the average African citizen.

The emergence of COVID-19 on African soil on the 14th of February 2020 [7], has only exposed further, the fragility of most African healthcare systems. The current COVID-19 pandemic revealed that most African healthcare systems lacked enough capacity to respond to COVID-19 as was evident by the insufficient numbers of suitable isolation centers and inadequate human resource for health, as well as the insufficient diagnostic capacity to screen and detect COVID-19 [40]. Before the first recorded case in Africa on the 14th of February, 2020, most of the African countries had very limited number of Laboratories to process confirmatory tests for COVID-19 [40]. In Nigeria (the most populous country in Africa), for example, as at the 27th of February 2020 when the country recorded her first case of COVID-19, there were only 5 diagnostic laboratories (4 public and 1 private) for test confirmation of COVID-19. This was to serve a Nigerian population of over 200 million people resident in the 36 States of Nigeria and the Federal Capital territory, Abuja [41].

Expectations in the Post-COVID-19 Era

With the deficits in African healthcare systems exposed by the COVID-19 pandemic, there are lots of expectations by African people, particularly in terms of African political leaders recommitting themselves

to health system development in the post-COVID-19 era.

Interestingly, COVID-19 has indubitably compelled most governments in Africa with poor priority for health, to have a rethink about their commitment to their healthcare systems, particularly with the grim reality that COVID-19 is no respecter of social class, age, gender or race, and the fact that the opportunity for foreign medical travels does not currently exist. Truly, African governments have been compelled by COVID-19 to make the kind of investments in the healthcare system that they may ordinarily not have made in the pre-COVID-19 era; a fact that is evident when their current responses to the COVID-19 pandemic is compared with their responses to other epidemic and endemic diseases like Malaria, Lassa fever, Tuberculosis, and Cholera, some of which have caused more deaths in the African continent than COVID-19.

These COVID-19 induced investments have led to the development of new health infrastructure and equipment, including Isolation centres and Infectious Disease Hospitals, the upgrade of existing ones, purchase of diagnostic machines, recruitment and motivation of healthcare personnel, encouragement of local production of some essential commodities like Ventilators, Face masks, and Personal Protective Equipment (PPEs), amongst other initiatives to contain COVID-19 in Africa.

This notwithstanding, it remains to be seen if these investments and commitment to emergency preparedness and response, as well as health system development, will be sustained in the post-COVID-19 era. This author hopes that it will no longer be "business as usual" in the post-COVID-19 era, and that African governments will emplace an effective and focused strategic development plan that incorporates effective performance monitoring and evaluation (in the short, medium and long-term), to address

the following expectations, amongst others, in the post-COVID-19 era:

(1) Improved healthcare financing and level of political commitment by African political leaders to the health of African people and the development of African healthcare systems.

With the grim realities thrown up by the COVID-19 pandemic, it is expected that African political leaders will step up their level of political commitment to the health of African people, through more sincere commitment to the protection of their health rights and sustained development of the healthcare systems in their respective countries. It is expected that they will continually appreciate the significant nexus between investments in healthcare, and the productivity and economic prosperity/wealth of their respective countries and people. They need to appreciate the imperative of making greater investments in the health of African people, health system development and quality healthcare service provision, particularly through improved budgetary allocations to the health sector, in line with the 2001 Abuja declaration of African Heads of Government [26].

(2) Reversal and restriction of Outward Medical Tourism by African political leaders.

The first real step towards limiting or reversing outward medical tourism in the African continent, particularly the frequent foreign medical travels by African political leaders, is the recommitment of African political leaders and governments at all levels, to quality healthcare development and the health of their citizens. This is the first real step towards limiting the huge loss of foreign exchange from Africa and ploughing back the saved resources to the development of the healthcare systems in the African continent, on a sustainable basis.

Interestingly, one obvious effect of the COVID-19 pandemic is the fact that it

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has apparently conditioned African people, particularly the African political leaders and elites, with a penchant for foreign medical travels, to stay back home to utilize the healthcare facilities and systems in their respective countries to resolve their healthcare needs. Instructively, since COVID-19 arrived in Africa, various political leaders have come down with the disease. However, unlike what was the case in the pre-COVID-19 era where they could easily travel abroad to resolve their medical challenges, the option of foreign medical travel has been virtually blotted by the restrictions and challenges imposed by the COVID-19 pandemic. The main choice available to them has been to use the healthcare facilities that are available in-country. This may be seen as a positive effect of COVID-19, particularly when viewed against the humongous capital flight out of the various countries in Africa on account of outward medical tourism/foreign medical travels, with grave consequences for the economies and healthcare systems of African countries.

It is therefore expected that this trend of reversal of outward medical tourism along with the associated reversal of capital flight will be sustained and consolidated upon in the post-COVID-19 era. A critical factor in the realization of this objective is the commitment of African political and public office holders to leadership by example through their utilization of health facilities in their respective communities and countries, rather than indulging in frequent foreign medical trips for their healthcare needs. The positive knock-on effect on the confidence of their citizens (African people) in utilizing health facilities in their communities and countries, along with the growth and development of the healthcare system, cannot be over-emphasized.

(3) Sincere development and effective management of the Human Resource for Health.

A critical element needed for health system development is the presence of an adequate number and distribution of well skilled and motivated health workforce. For African healthcare systems to make the needed progress in the post-COVID-19 era, there is urgent need for African governments to pay greater attention and care for their human resource for health. They must develop a focused, strategic, dynamic and robust Human Resource for Health Development plan; one that takes cognizance of the need for sustained production of sufficient numbers of quality and competent physicians and other healthcare professionals, as well as their recruitment and retention in Africa.

They must pay attention to the push and pull factors that influence the emigration of physicians and other healthcare personnel from the African region. This will particularly require the institution of motivational mechanisms, incentives and competitive wages, training and retraining of healthcare personnel, better conditions of service and enabling work/practice environments for healthcare personnel, improved security and safety of healthcare personnel, as well as schemes for turning brain drain to brain gain.

(4) Improved Quality of Health Infrastructure and Technologies.

It is expected that African governments will make greater commitments to the sustained provision of quality health infrastructure, technologies and equipment, along with the development of a maintenance policy to guarantee continuous upgrade of existing health infrastructure, diagnostic facilities and technologies, in the post-COVID-19 era.

(5) Development of the Primary Healthcare System.

One of the realities of the COVID-19 pandemic is that the existence of a robust primary healthcare system is a significant factor in the containment and management of the pandemic. This is particularly on account of the report that over 80% of cases of COVID-19 affected individuals are in the mild category [42]. The primary healthcare system is therefore well suited for the management of these mild cases, thus removing some burden from the higher levels of the healthcare system. This is also of particular relevance in Africa where home management of mild cases of COVID-19 may be challenging because of the multiple number of occupants that generally characterizes each African household.

Unfortunately, most African countries cannot boast of having a robust and effective Primary health care and referral system, hence the overburdening of the secondary and tertiary levels of care in the management of individuals with COVID-19.

Arising from the foregoing, it is expected that African governments will invest more in the strengthening of the Primary healthcare system, but without relegating their investments in the development of the other levels of the African healthcare system. Along with this is the need for strengthening of the referral system, and the national system in general, in a way that improves confidence in the system by communities and consumers of care.

(6) Development of the Private health sector.

It is not in doubt that most patients first visit private healthcare facilities in an attempt to get solutions to their healthcare needs. It is therefore imperative that in advancing progress in the African healthcare system, the sustained development and quality regulation of the African private healthcare sector must be given priority consideration. The private healthcare sector and private healthcare providers should not be seen as competitors but as great partners in the quest for enthronement of robust, effective and efficient healthcare systems. This will require the blurring of old concepts

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and ideological frameworks, and modification of health seeking behaviours in Africa, to enable the private healthcare sector get the required significant support. This can be in the form of sustained grants and single-digit (very minimal) interest loans extended to private healthcare providers in the post-COVID-19 era, the institution of a Health and Hospital/Health system Development Intervention Fund (HHDIF) and strengthening of beneficial and productive Public-Private-Partnership arrangements. All these will help guarantee the development of an effective, efficient and responsive private healthcare sector, to complement the public healthcare sector in the delivery of accessible and quality healthcare to African people.

(7) Strengthening the Quality Regulatory and Clinical Governance Framework.

For real progress to be made by African healthcare systems in the post-COVID-19 era, African governments must pay particular attention to the quality component of their healthcare systems. This will require the enthronement of clinical governance frameworks at all levels, with the development of quality, ethical and safety frameworks and protocols/practice guidelines. Additionally, there is need to support and empower the health professional regulatory bodies meant to enforce quality standards in the health sector.

There is no doubt that sustained implementation and adherence to clinical governance protocols, safety and quality standards/regulatory frameworks, will improve the quality accreditation of healthcare facilities in the African region, and the people's confidence in African healthcare systems.

(8) Self-sufficiency in Pharmaceutics and Vaccine production

The challenges thrown up by the COVID-19 pandemic revealed once again that, the African continent is imbued with lots of talents, initiatives and energies, which need to be harnessed and developed for the progress of the African continent and its healthcare system. In this regard, it should no longer be fashionable in the post-COVID-19 era for African governments to sustain the practice of importing most of Africa's healthcare requirements, including drugs and vaccines. Indeed, time has come for African countries to be self-sufficient in drug and vaccine production. It is therefore expected that the post-COVID-19 era will witness more commitment by African governments to sustained efforts at supporting and boosting local drug manufacturing and vaccine production, on a sustainable basis.

(9) Research, Data and ICT/Health Management Information System

It is important for African governments to significantly invest in Research development and innovations so as to improve the quantum and quality of research and innovations in African healthcare systems.

It is also necessary to promote the effective and ethical management of data and the Health Management Information architecture by African countries, to aid more productive data deployment for development of the healthcare system, and improvement of the health and well-being of African people. The dazzling opportunities and avenues created by the Information, Communication and Technology (ICT)/Digital age, should be explored to advance equitable, affordable, quality and ethical access to healthcare services and commodities. This will particularly be of benefit to African people residing in rural and hard-to-reach communities.

(10) Legal framework for health/Regulations restricting use of public resources for Outward Medical Tourism by Public and Political Office Holders, and Empowerment of the Citizens.

An empowered citizenry is a necessary ingredient for the advancement of good governance. To enthrone good governance of African healthcare systems, and good governance in general, it is important that the perspectives and needs of the governed (citizens) are given due

consideration. It is therefore fundamental that African citizens are empowered to play their expected roles more responsibly and courageously, in the post-COVID-19 era. This is especially as it is expected that in the post-COVID-19 era, African citizens will consistently and courageously demand accountability and transparency from their African political leaders (and managers of the healthcare system) at all levels. It is also expected that African citizens will consistently demand for sustained development of the healthcare system, as well as the unrepressed expression of their health rights (including their right to access quality health care), particularly as enshrined in the constitution of the World Health Organization [43] and other declarative International instruments such as the Universal Declaration of Human Rights [44].

It is the author's considered view that for sustained commitment to the expected post-COVID-19 healthcare reforms and expression of the health rights of African citizens, it is imperative for African countries without an existing National Legal framework for health, to consciously develop one, with the inputs of the citizens, professional health associations, Civil Society Organizations (CSOs), and other stakeholders in the health sector, incorporated. The Legal framework for health should contain provisions that guarantee the sustained development, growth and regulation of the healthcare system, including the obligations and commitment of government to this objective. It should importantly contain protective provisions for the health rights of African citizens, including their right to hold their leaders to account, particularly as it concerns the development of the healthcare system and expression of their health rights.

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Additionally, the Legal framework for health should, amongst other provisions, contain provisions restricting the use of public/tax payers' resources for the sponsorship of foreign medical travels by African political and public office holders. Necessary criteria should however be established for exceptional cases that may be considered for sponsorship. For instance, where a Medical Board of Experts have conclusively determined that a medical condition cannot be handled by healthcare facilities in the country, or where the required experts/expertise, health technologies or diagnostic services are unavailable in the country, an approval could be considered in these instances, but with a proviso that such identified gaps be filled by the relevant authorities/government with a specified period. These suggested restrictions are without prejudice to the fundamental right of such political and public office holders to use their private resources to access healthcare services and technologies wherever they may so wish.

Conclusion

While the new spirit of commitment to the development of African healthcare systems by African political leaders during the current COVID-19 pandemic is commendable, the big question remains whether this new spirit of healthcare investment and commitment is going to be sustained in the post-COVID-19 era or not. Will it be one of sustained sincere commitment or another flash in the pan, as was the case during and after the ravaging scourge of Ebola Viral Hemorrhagic Disease and other previous epidemics that ravaged the African continent?

While it may be difficult to immediately resolve these questions, one critical factor needed to ensure that African political leaders/Governments do not turn back to their old ways is the Citizens' capacity to

demand for their health rights to access health care facilities and services comparable to those in the developed countries of the world. African people must stand against the use of their commonwealth/public resources or tax payers' resources for financing foreign medical travels by African political and public office holders. They must insist that African political and public office holders utilize healthcare facilities and services in their various countries, except for cases where it is proven by a team of indigenous medical experts that facilities for managing such medical conditions are unavailable in their countries.

The citizens' decision to vote for their leaders during electoral contestations should be predicated on the ability of such candidates to make significant commitments in their electoral manifestos, to health system development, the citizens' health and health rights.

For countries without a Legal framework for health, the citizens should demand for its enactment, with significant provisions protecting and promoting their health rights incorporated. Above all, African people should consistently demand for good governance, transparency and accountability from their leaders.

If these and other progressive steps are taken, the African continent may yet see brighter days ahead for African people and African healthcare systems.

Indeed, the author is convinced that with the commitment of African political and public office holders to leadership by example, with commitment to good governance and transparency frameworks, with political stability and political will, backed by the support of all Africans, the trend of outward medical tourism, particularly as it concerns frequent foreign medical travels by African political leaders, may be substantially reversed in the post-COVID-19 era.

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COVID-19: Junior Doctors Response in Myanmar

Osahon Enabulele

The outbreak of COVID-19 started as a cluster of pneumonia in China, reported in other Asian countries, Europe, Africa and America. COVID-19 has devastated the lives and livelihoods of communities globally as they grapple with such an unprecedented crisis [1]. The State Counsellor played a key and prominent role in the government's response, heading two newly established committees, using social media, and hosting televised virtual meetings engaging with health care workers, officials, volunteers, and union representatives [2]. MMA also communicates and cooperates with the Government Response Plan for reacting to the epidemic of COVID. A significant contribution comes from junior doctors who have made an immense amount of voluntary commitment stepping into new roles to support their colleagues in a range of positions in this time of uncertainties.

It is clear that many junior doctors in Myanmar are working frontline across the government hospitals fighting the pandemic. There was a significant reduction in surgical activity – elective operating and some outpatients were cancelled. Given the discrepancy in the workload between specialties and COVID 19 dedicated hospitals, the junior doctors across the specialties had re-organized as part of the COVID-19 response. These doctors have generic skills that can be used anywhere. They voluntarily took park in hospitals designed for treating COVID-19 cases to help their colleagues in these hospitals. As Myanmar is one of the developing countries, there are shortages of personal protective equipment in hospitals and reserving this equipment for doctors who are involved in the direct care and treatment of patients. A junior doctor across the country has been fundraising for essential protective gears for their hospitals. The well-wishers from Myanmar and those working overseas generously have donated ventilators, monitors and personal protective equipment, foods directly to hospitals in need and to the government [3, 4].

A thousands of brave junior doctors who are working in private sectors have signed up as volunteers doctors for MMA and other local health services to keep all safe from the virus. National and regional governments have rolled out increasingly stringent social distancing measures to mitigate the pandemic's spread, including localized lockdowns of buildings and streets with confirmed cases, "Stay at Home" programs, de facto curfews, and mandatory quarantines for travellers [5]. The need for the most accurate, latest information on self-protection is critical. The junior doctors took part in mask campaign, hand washing campaign, and strict stay at home & social distancing.

In this pandemic, millions of Myanmar people lack basic information about how to keep themselves and their communities safe and well. The misinformation and disinformation is overwhelming all over the country. People started panicking, calling health care centres for more information. There are many people who give advice, quoting from books that don't exist, deliberate wrong and misleading translation of text and things that are never evidence based and never tested. There were also a lot of rumours circulating, including through social media channels, which spreads faster than the infection and or disease. Failing to address their information and communication needs will prevent the pandemic response from being as effective as we all need it to be. In efforts to speed up the prevention, containment and treatment of the COVID-19 disease, the national COVID-19 call centre was established by MOHS with the help from com-

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munications operators. Junior doctors from MMA voluntarily joined their hands to the staff from the Medical Research Department to provide free of charge live consultation for information about disease prevention and how to access medical treatment to an estimated 60 million mobile subscribers in Myanmar [6, 7].

The fever clinic in Myanmar serves a frontline role to test patients for COVID-19 and, if necessary, to send them to the nearest public hospital for further tests. The fever clinics are run by collaborative effort of junior doctors and MMA to relieve pressure on the under-staffed and under-resourced hospitals and health care system, to reduce infection in primary care doctors and reduce nosocomial infection transmission of patients in hospitals. With the help of well-wishers, doctors in fever clinics are well equipped with level 2 PPE for screening of COVID-19 and diagnosis and treatment of other aetiology and proper referral to hospitals throughout the country [8].

Currently, there are no effective medicines or vaccines available to treat or prevent COVID-19. (9) Early implementation of quarantine and its combination with other public health measures may reduce spread of the disease. For this reason, restrictive public health measures such as social distancing, and quarantine have been used to reduce transmission of the virus. The Community Based Facility Quarantine play major role for containment of COVID-19 spread. Those who had close contacts with the COVID-19 positive patients and the peopled travelling from foreign countries need to take part in this program. Despite no symptoms, they need to stay under surveillance for a total of 28 days during incubation period – 21 days facility quarantine and the 7- day home quarantine. Those in community based facility quarantine will require assistance of well-trained volunteers. For the specific process and period, the volunteers will have to perform their daily duties in inner circle or outer circle

depending on the requirement and available services for the whole period of 21 days. They will also have to live at specific places for the 7-day recreation [10]. Junior doctors from MMA provide training course to these volunteers, which includes the topics of public communications, counselling, taking care of vulnerable population, practical use of PPE, safe disposal of hazardous material and environmental cleaning all over the country. In addition, junior doctors working in private sector stepping forward as quarantine site doctors to early detection, and prompt management of the patients [11].

To conclude, having such enthusiastic and selfless junior doctors from public and private sector in Myanmar has further boosted for other junior doctors participation and help the country to flatten the curve at this time of greatest need.

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Emergency Care for Health Unit System Patients in Brazil

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Introduction

In Brazil, one of the health care priorities is emergency care. As everywhere, there are challenges related to the models of care that accompany population growth, increase in health problems and aging. The spectrum of patients seen in emergency medical situations is generally associated with increased risks of undesirable outcomes, and obviously greater than in chronic or subacute conditions. And despite the population differences between the different parts of the world, this is very common among all and thus the frequency of the characteristics of these patients: upper respiratory tract infection, cough, pharyngitis, tonsillitis, myocardial infarction, angina pectoris, coronary heart disease, lower respiratory tract infection, bronchitis, pneumonia, acute hyperthermia, acute abdominal pain, stroke, cerebral hemorrhage, cerebral apoplexy, fracture and contusion, stomachache and gastroenteritis, vomiting, diarrhea, hematochezia, bloody stool, urinary calculi, renal colic, hypertension, hemorrhage of

digestive tract, dizziness, fainting, acute appendicitis, acute pancreatitis, drug and food poisoning, urination disorders and delivery/parturition [1].

Emergency care has been defined by various attributes, such as time-to-care provision and acuity of the condition addressed. Common definitions include care delivered within minutes or hours and care for conditions that require rapid intervention to avoid death or disability or for which delays of hours can worsen prognosis or render care less effective. People in need of care may access the system at many points, including by activating the pre-hospital system, or by visiting a primary health centre, or by presenting directly to a hospital-based emergency unit; providers at every level of the health system deliver emergency care, whether or not they have the dedicated training and resources to do so effectively. Frontline emergency care may involve early recognition and initial resuscitation for dangerous conditions followed by transfer for definitive care or may encompass definitive therapy [2].

A systematic approach to emergency care – centred on acuity-based triage, early recognition and resuscitation, and simple initial management and referral – has been shown to decrease the mortality associated with a range of medical and surgical conditions. Despite the substantial positive impact emergency care can have, however, many low- and middle-income countries (LMICs) lack the fundamentals of organized emergency care: basic pre-hospital care and transport, a dedicated area and standards for hospital-based emergency care, and a core of nonrotating providers trained in the care of emergencies and assigned to the emergency unit. These gaps are reflected in wide global discrepancies in outcomes across the range of emergency conditions [2].

Although severe global discrepancies exist in outcomes from emergency conditions, both these modelling estimates and direct evidence suggest that emergency care has the potential to narrow this gap dramatically. Powerful examples of feasible life-saving emergency care interventions in LMICs may include: organizing low-cost pre-hospital systems with a dramatic decrease in all-condition or in road-traffic mortality; designating an area for emergency care of all critical patients at a third-level hospital transformed care and halved mortality; restructuring a hospital intake area to create a dedicated emergency care area and initiating formal triage associated with halved inpatient mortality and a reduction in the proportion of deaths occurring within 24 hours; timely simple interventions (fluids, antibiotics, and clinical monitoring) within the first six hours of hospitalization in adults with serious infection reduced mortality; in rural area improved access to emergency obstetric care halved the risk of maternal mortality and reduced the risk among women with hemorrhage; the introduction of standardized resuscitation protocols reduced hospital length of stay and all-cause mortality among injured patients; short course trainings in trauma management associated with reduced mortality in

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injured patient with no significant increase in resource usage; the use of pulse oximetry, combined with current guidelines for recognition of severe illness, has the potential to avert deaths per year [2].

Evidence from around the world shows that emergency care is an effective means of saving lives, and evidence from LMICs suggests that feasible and simple steps to improve emergency care could rapidly improve outcomes and reduce global disparities in outcomes [2].

It is then possible to reflect on relevant Brazilian and global aspects in medical emergency to assist decision making by the leaders regarding priority actions to reduce the risk of these patients who face acute and potentially serious situations. The challenges are enormous, but they have many experiences that point in an apolitical and technical-scientific direction.

The Unified Health System in Brazil (SUS) [3]

The Brazilian Unified Health System (Sistema Único de Saúde, known by the acronym SUS) is one of the largest and most complex public health systems in the world and includes primary, medium and high complexities, urgency and emergency services, hospital care, epidemiological surveillance actions and services, sanitary and environmental and pharmaceutical assistance. The conceptual principles of SUS are Universalization, Equity and Integrality. The organizational principles are Regionalization and Hierarchization, Decentralization and Single Command, and Popular Participation. These responsibilities are shared between the Union (Ministry of Health of Brazil), States (State Health Departments) and Municipalities (Municipal Health Departments). The Charter of Rights of Health Users contains the six basic principles of citizenship that ensure the Brazilian dignified entry into health systems,

whether public or private, and which prescribes to every citizen the following rights: orderly access to organized health systems; adequate and effective treatment for their problem; humane, welcoming and free from any discrimination treatment; care that respects their person, their values and their rights; treatment conducted in an appropriate manner; the commitment of health managers so that the above principles are adhered to.

The Brazilian Urgency and Emergency Program [4, 5]

The analysis of the rules that regulate the National Emergency Care Policy shows that – in a context of increased demand, overload of care at hospital doors as a result of the increase in accidents, violence and chronic diseases and insufficiency of the basic network – attention to emergency care in Brazil was centred on hospital care, on the implementation of the Centres for Medical Regulation of Urgencies and the Mobile Emergency Care Service (SAMU) in large capitals as an auxiliary line to the hospital door. However, the recent implementation of Emergency Care Units (UPAs 24hs) induces even more the urgencies inserted in a care network, tuned in the national policy of forming regional networks.

However, among the various barriers to the implementation of this policy are: the fragmented nature of assistance with the logic of the market; the insufficient supply of beds; the public financing; the relationship and inequality between private operators and the philanthropic network due to technological requirements and the concentration of this market in the richest and most developed regional headquarters. In addition, the number of doctors in Brazil is permeated by profound inequalities, related to geographical distribution, unbalance between the public and private health sectors, and the lack of professional specialization, including the emergency specialty.

Urgency and Emergency Care Network (RUE) [4, 5]

The organization of the RUE has the purpose of articulating and integrating all health equipment aiming to expand and qualify humanized and integral access to users in urgent/emergency situations in health services in an agile and timely manner. Its components and interfaces are the following: the basic health units (patients in need of observation in urgent/emergency cases in the period of operation of the unit, articulated and connected to the other services of the emergency care network for later transport and referral); the Emergency Care Units (UPAs) and other services open 24 hours a day; the Emergency Medical Service (SAMU/192); hospital doors for emergency care; rear wards and intensive care units; and home care.

The principles of this network are guided by expanding access, with acceptance, to acute cases and in all points of care; articulation and integration between points of care, with primary care as the centre of communication; risk rating; regionalization of health and territorial action; institutionalization of the practice of monitoring and evaluation through process, performance and result indicators; promotion, coordination and execution of strategic projects to meet collective health needs of an urgent and transitory nature, resulting from situations of imminent danger, public calamities and accidents with multiple victims; qualification of urgent and emergency hospital doors and of care for critically ill patients through qualification of intensive care units; organization and expansion of clinical rear beds; creation of inpatient long-term care units (UCP) and specialized long-term care hospitals (HCP); qualification of care through the organization of cardiovascular, cerebrovascular and traumatological care lines; definition of home care organized through multidisciplinary home care teams (EMAD) and multidisciplinary support teams (EMAP).

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Mobile Emergency Service (SAMU) [4, 5]

It is the component of the urgency and emergency care network that aims to order the flow of assistance and provide early care and adequate, fast and resolving transport to victims affected by health problems of a clinical, surgical, gynecological-obstetric, traumatic and psychiatric nature through the sending of manned vehicles by a trained team, accessed by the number 192 and activated by an Emergency Regulation Centre, reducing morbidity and mortality. SAMU is fundamental in the rapid assistance and transportation of victims of exogenous intoxication, serious burns, mistreatment, suicide attempts, accidents/traumas, cases of drowning, electric shock, accidents with dangerous products and in cases of hypertensive crises, cardiorespiratory problems, labour in which there is a risk of death for the mother and/or the fetus, as well as in the inter-hospital transfer of patients at risk of death. The mobile units for emergency care can be basic terrestrial life support (USB), advanced terrestrial life support (USA), aeromedical and rapid intervention vehicle (VIR), varying the composition of the teams in each unit. The emergency medical regulation centre is an integral part of SAMU 192, defined as a physical structure with the performance of medical professionals, auxiliary telephone operators for medical regulation and radio operators trained in the regulation of telephone calls that require guidance and/ or emergency care through a classification and prioritization of urgent care needs, in addition to ordering the effective flow of referrals and against referrals within the Health Care Network.

The Emergency Care Units (UPAs 24h) [4–6]

The 24-hour emergency care units are structures of intermediate complexity between the basic health units (UBS), family health units (USF) and the hospital network, which must operate 24 hours a day, every day of the week, and compose an organized network of attention to urgencies and emergencies, with pacts and flows previously defined, with the objective of guaranteeing the reception of patients, intervening in their clinical condition and against referring them to other points of care, to primary or specialized care services or to hospitalization, providing continuity of treatment with positive impact on the population's individual and collective health.

However, there are some limitations in its implementation, such as: the fragmentation between the sectors involved, due to the presence of several instances of coordination, without articulation with each other; little interference in the formulation of municipal networks and, therefore, in the choice of the location and size of the UPAs; the municipalities stop allocating the resources that are needed by the UPAs to philanthropic hospitals; the activation of emergency units without the proper hospital backup; and the impossibility of regulating the totality of beds in regional and teaching hospitals.

Hospital Component of the Emergency Care Network [7]

It is the qualified service of the Emergency Hospital Entrance Doors, the rear clinical wards, the long-term care beds and the Intensive Care Unit Beds belonging to the Emergency Care Network. The Hospital Component is part of the Emergency Care Network. The Hospital Component must be integrated and articulated with the other components belonging to the Urgency and Emergency Network: Health Promotion, Prevention and Surveillance; Primary Health Care; SAMU 192; Stabilization Room; SUS National Health Force; UPA 24h and the set of 24h emergency services and Home Care. The organization of the Hospital Component of the Urgency and Emergency Care Network aims to qualify the service to spontaneous and/ or referenced demand from other points of care of less complexity in the care of patients in urgent or emergency situations; ensuring support for medium to high complexity care, offering diagnostic procedures, clinical rear beds, Extended Care beds and ICU beds; reinforcing the guarantee of hospital care in the priority lines: traumatology, cardiovascular and cerebrovascular.

Pre-hospital Emergency Medicine

Pre-hospital care is emergency medical care given to patients before arrival in hospital after activation of emergency medical services. It traditionally incorporated a breadth of care from bystander resuscitation to statutory emergency medical services treatment and transfer. New concepts of care including community paramedicine, novel roles such as emergency care practitioners, and physician delivered pre-hospital emergency medicine are re-defining the scope of pre-hospital care. For severely ill or injured patients, acting quickly in the pre-hospital period is crucial with decisions and interventions greatly affecting outcomes. Pre-hospital clinicians should be generalists with a broad understanding of medical, surgical, and trauma pathologies, who will often work from locally developed standard operating procedures, but who are able to revert to core principles. Pre-hospital emergency medicine consists of not only clinical care, but also logistics, rescue competencies, and scene management skills (especially in major incidents, which have their own set of management principles). Traditionally, research into the hyper-acute phase (the first hour) of disease has been difficult, largely because physicians are rarely present and issues of consent, transport expediency, and resourcing of research. However, the pre-hospital phase is acknowledged as a crucial period, when irreversible pathology and secondary injury to neuronal and cardiac tissue can be prevented [8].

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When pre-hospital emergency personnel reach an injured person, two types of strategic evaluations are performed to determine the patient's needs: a diagnostic analytical decision-making process and an interpretation of the patient's needs based on their health status. Depending on severity, the transfer time to a care facility differs; however, almost all emergency patients are transferred to an appropriate care hospital regardless of condition severity. In general, the three tasks of emergency teams involve arriving at the scene, providing fast and effective treatment, and transferring the patient to the hospital. Generally, pre-hospital emergencies are characterized by judgment and decision making in uncertain situations. Physicians and pre-hospital specialists must make advanced decisions and evaluate and treat patients with various symptoms. Clinical decision support systems help users make decisions by using available resources, thus promoting effective decision-making and optimal medical emergency care. Clinical decision support systems in pre-hospital emergency care result in better triage of patients, reduced pre-hospital time, facilitate mass gathering management, optimize resources, increase diagnostic accuracy, improve patient outcomes, and enhance the quality of pre-hospital care [9].

Physician treatment was associated with increased survival in patients with out-of-hospital cardiac arrest and patients with severe trauma; in the latter group, the result was based on more limited evidence. The success rate of pre-hospital endotracheal intubation (ETI) has improved over the years, but ETI by physicians is still associated with higher success rates than intubation by paramedics. In patients with severe traumatic brain injury, intubation by paramedics who were not well skilled to do so markedly increased mortality. Current evidence is hinting at a benefit of physicians in selected aspects of pre-hospital emergency services, including treatment of patients with out-of-hospital cardiac arrest and critically ill or injured patients in need of pre-hospital intubation. Evidence is, however, limited by confounding and bias, and comparison is hampered by differences in case mix and the organization of emergency medical services. Future research should strive to design studies that enable appropriate control of baseline confounding and obtain follow-up data for the proportion of patients who die in the pre-hospital setting [10].

Pre-hospital care has evolved dramatically during the past decades from being a basic transport facility into offering advanced patient care on scene and during transportation. In recent years, much focus has been placed on the utilization and effect of pre-hospital resources underlining the need for research and system performance evaluations. The pre-hospital organizations are responsible for the care and treatment on scene and during transportation until the patient reaches the hospital. Helicopter Emergency Service (HEMS) acts as a supplement to ground EMS (ambulances and nurse- or physician-staffed rapid response vehicles). The HEMS is organized and staffed by a consultant-level anaesthesiologist, a pilot and a specially trained paramedic and operating 24 h/day, 7 days a week. Most parts of the country can be reached within 30 min. The decision to dispatch a helicopter is taken by the medical dispatchers who are healthcare professionals (specially trained nurses, ambulance technicians and paramedics) handling medical emergency calls from the public dialling the emergency phone number 112. Technical dispatchers trained in logistics undertake the actual dispatch. The HEMS undertakes both primary critical care missions (request from citizens through emergency calls and crew request from ambulances and rapid response vehicles on scene) and time critical secondary missions (inter-facility transfers). Furthermore, the HEMS also provides pre-hospital care and transport for less ill or injured patients located on islands not connected by road to the mainland [11].

Developing integrated emergency medical services in a low-income country can be referred to as "the neglect model" where no rules and regulations exist about service providers. Pre-hospital care is very minimal, and the EMS system is still a new concept. In an emergency room of a hospital only 9.9% patients arrived in ambulance, whereas 53.6% came in a taxi, 11.4% came by private vehicle, 13.5% came by bus, 5.4% came by bike, and the rest 6.2% came by other modes of transportation. Police are always the first person to be asked for help in case of road traffic accidents. Ambulance services are operated by not just government but multiple trusts, non-profitable organizations, and also almost all private hospitals. Most of the ambulances have no formal paramedics and are not able to accommodate any medical equipment. These ambulances carry pediatric and adult patients, and even those who require a ventilator. The general population lacks proper knowledge and information about hospitals and health care. Most of the time patients land up in the wrong hospital where the service for a particular disease or condition is not available. They are further referred to another hospital causing loss of critical time period increasing morbidity and mortality of the patient. Most of the private hospitals have their own ambulance and are also responsible for their function and maintenance. The patient is charged by these hospitals for their use of services. Charge usually depends on the amount of distance covered which is similar or more than the cab service. A non-profitable private organized ambulance service system (NAS) was established and began its service of pre-hospital emergency care. It provides pre-hospital medical care by emergency medical technicians (EMTs) who undergo 3 months training. These EMTs provide variety of medical interventions including BLS, ALS, splinting fractures, bracing spinal cord injuries bleeding control, airway management, and starting IV fluids for patients in shock. It also has helicopter-based emergency services (HEMS). Lack of medical personnel and equipment has reduced its efficiency below its potency. The fragmented system, high demand–low supply, inequity with the service, and low quality of the responders are major problems associated with the EMS. Although the HEMS rescue has

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boosted the system, it still does not have its own proper air ambulance which is more spacious than a helicopter and can accommodate more people required for rescue. The HEMS often resulted in over triage leading to higher financial burden and workload at trauma centres. Patients with minor injuries make the majority of transport accounting for unnecessary larger funding requirements. The HEMS are expensive and its misuse can have a great deal of financial burden to a poor country [22].

Quality of Emergency Care

The organization of acute care can be improved by strengthening the primary care and community systems by improving access closer to home, increasing the accessibility of General Practitioner (GP) and optimizing the use of out of office hours GP services. The system can improve ambulatory care to reduce pressure on in-patient beds and improve patient experience, rather than the more traditional models of out-patient care. Ambulatory emergency care can provide an appropriate support to primary care when escalation is needed, and reduce the use of the inpatient bed base, thereby facilitating more treatment of acute illnesses from a community setting [12].

Freestanding Emergency Departments

Freestanding emergency departments (EDs) are changing the landscape of emergency care in the United States and are being considered around the world. These facilities provide emergency care to patients while remaining physically distinct from a hospital, unlike a traditional hospital-based ED. These facilities may help alleviate the stress faced by the emergency care system and may help address crowding at traditional hospital based EDs and improve access to care. They may be able to improve access to care for trauma patients in rural areas. Free-

standing EDs, however, face their fair share of criticism. Many individuals worry that patients are mistaking freestanding EDs for cheaper urgent care centres, that freestanding EDs may be misleading patients about their insurance network status, and that these facilities may be exacerbating increasing medical costs.

According to American College of Emergency Physicians (ACEP), facilities should be available to the public 24 hours a day, 7 days a week, 365 days per year; be staffed by qualified emergency physicians; have adequate staffing by qualified medical and nursing personnel to meet the written emergency procedures and needs anticipated by the facility; always be staffed by a registered nurse currently certified in advanced cardiac life support and pediatric advanced life support; have policies and procedures in place to transfer patients in need of a higher level of care to appropriate facilities; and have the same standards as hospital-based EDs for quality improvement, medical leadership, medical directors, credentials, and referral policies. In most metrics, freestanding EDs perform as well as if not better than hospital based EDs, with some significant exceptions. Freestanding EDs tended to have higher patient satisfaction rates compared with hospital based EDs. The wait times, treatment times, and time to pain medication administration for long bone fractures were similar between freestanding EDs and hospital based EDs. Freestanding EDs had shorter lengths of stays, lower hospital admission rates, and lower radiograph and ECG use. They found similar usage rates for ultrasonography, computed tomography, and laboratory testing compared with that for hospital based EDs. Although this may indicate better care, it may also just reflect the lower acuity level of patients presenting at freestanding EDs [13].

Hospital ED visits, wait times, length of visit for discharged patients were not associated with the number of competitor Freestanding Emergency Departments (FrEDs) in the local market. Hospitals that opened

satellite FrEDs had significantly higher visit volume in general but did not experience shorter wait times or length of visit if located in large metropolitan areas. The entry of FrEDs did not help relieve congestion in nearby hospitals in major metropolitan areas. By offering more treatment options to patients, FrEDs are associated with increased usage of emergency services [14].

Patient-centred Access to Health Care

Access is central to the performance of health care systems around the world. There are five dimensions of accessibility: 1) approachability; 2) acceptability; 3) availability and accommodation; 4) affordability; 5) appropriateness. And five corresponding abilities of population interact with the dimensions of accessibility to generate access: the ability 1) to perceive; 2) to seek; 3) to reach; 4) to pay; and 5) to engage [15].

Emergency Department (ED) crowding has been identified as a major issue in health services research. Access block, leading to prolonged ED length of stay (EDLoS) for admitted patients has been associated with ED overcrowding. Adverse effects associated with delays in ED have included: increased mortality and morbidity, delayed pain relief, longer hospital stays, increased aggression and delayed ambulance offloads with poorer response times. The National Emergency Access Target (NEAT) policy was implemented to increase ED flow. The policy stated that 90% of patients presenting to EDs were to be admitted, transferred or discharged within 4 hours. After the NEAT introduction, ED length of stay ≤4 h increased and access block decreased. Short-stay admissions increased. Unplanned ED re-attendances did not change significantly. ED presentations continued to increase over time in all jurisdictions. There showed significant improvements in time-based measures. Significant increases in short-stay admissions suggest a strategic change in ED process associated

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with the NEAT implementation. Rates of unplanned ED re-attendances and those leaving at their own risk showed no evidence for adverse effects from NEAT [16].

Maternal Emergency Health

An access framework for integrating emergency medicine with maternal health to reduce the burden of maternal mortality can be divided in three components or phases:

Phase I: Seeking care-approachability and acceptability within access, approachability (the ability to perceive that EC services are required) and acceptability (the ability to seek EC services) are part of the care-seeking attributes of the first delay in maternal health theory. The individual has to subjectively decide that they require emergency care and treatment based on a set of personal health beliefs, their health literacy, trust, and expectations of the healthcare system. However, their ability to seek the desired services depends on if they have the personal autonomy to seek the care, they perceive they need. Autonomy is determined by a set of norms and expectations that are attributed to individuals in a given society. The community should be educated about EMS operations and the life-sustaining benefits of using ambulance services over taxis and other traditional modes of transport. Education curricula should cover how ambulances are alerted (toll free numbers), qualifications and training of EMS providers, types of life sustaining care for maternal and other emergencies provided on ambulances versus commercial vehicles, etc. Barriers to approachability and acceptability will be unique to each community, based on their distinct social structures and cultural beliefs. A community that perceives EMS to be approachable, acceptable and "normal" would (increasingly) initiate EMS services.

Phase II: Reaching care-availability and accommodation, affordability once emergency care is initiated, the ability to reach the desired services is often determined by issues of mobility. The availability (desired services available) and accommodation (ability to reach desired services) and affordability (ability to pay for the services) of emergency transport depends on the physical and geographic infrastructure of the environment (road conditions, traffic rules, season/weather, etc.). It is during this second phase of the delay model that EMS competes with taxis and other commercial vehicles that are perceived to be more expeditious and less costly. Critics cite that even though ambulances are underutilized, levying a fee for ambulance use will further delay care for the most vulnerable. Measureable outcomes for EC interventions in this phase should incorporate ambulance response time (the time it takes for ambulances to arrive on-scene), on-scene time (time spent on scene, preparing the labouring woman for transport) and arrival time (duration of time spent transporting the woman to the healthcare facility). Other outcomes could include number of ambulance dispatches and dispatch types.

Phase III: Receiving care-appropriateness; appropriateness is subjective, and denotes the fit between services rendered, the patient's needs, and their expectations. Additionally, appropriateness is highly dependent on outcome. In maternal health, survival of both mother and fetus is perhaps the greatest motivator for encouraging labouring mothers to deliver in-hospital, where the staff is expected to be trained to manage labour complications and other obstetric emergencies. Reducing the time to in-hospital interventions is crucial to patient survival, and expeditious services rendered by skilled and well-equipped EC providers can drastically reduce in-hospital maternal mortality. EC interventions in this phase of the integrated model should take a two-pronged approach. The first approach should focus on bridging the care gap in the pre-hospital context. This would involve training EMS providers paramedics and Emergency Medical Technicians (EMTs) to cater to labouring mothers in the field, before they get to hospital. The "golden hour" shows that expediting

urgent care for patients within the first hour after symptom onset can drastically decrease morbidity and mortality outcomes. Having trained EMS providers interact with labouring women before they reach the healthcare facility, expedites the woman's access to obstetric care, and consequentially, improves her (and the fetus') chances of survival. The second approach to EC interventions in this phase should focus on in-hospital care, with the creation and training of Emergency Medicine providers who are adept at properly triaging patients, and skilfully trained to deliver appropriate life-saving interventions. Deliveries necessitating analgesia, forceps or vacuum extraction, and cesarean section should be triaged from lower-risk pregnancies with less maternal and/or fetal distress. Emergency and labour wards should be well equipped and appropriately staffed to deliver the care needed in various emergency situations, so challenging obstetric cases are dealt with appropriately. Subpar outcomes in the third delay heavily influence the cyclical nature of the entire Three Delays model. Thus, measurable benchmarks in this phase of the framework should correlate EMS and EM training programs with in-hospital interventions and maternal mortality metrics to ensure that there is a "fit" between the needs and expectations of the target population, and the services rendered by both pre- and in-hospital providers [17].

Pediatric Emergency Care

Differences in emergency care for children exist between general and pediatric emergency departments (EDs). Some pediatric quality measures are available but are not routinely employed nationwide. We sought to create a short list of applied measures that would provide a starting point for EDs to measure pediatric emergency care quality and to compare care between general and pediatric EDs for these measures. Previously reported lists comprising 465 pediatric emergency care quality measures were reconciled. Performance was better in pediatric EDs for three

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of seven condition-specific measures, including antibiotics for viral infections, chest X-rays for asthma, and topical anesthesia for wound closures. Performance was similar for four of seven condition-specific measures: computed tomography for head trauma, steroids for asthma, steroids for croup, and oral rehydration for dehydration. Compared with pediatric EDs, general EDs discharged and transferred higher proportions of children, had shorter lengths of stay, and sent patients home with fewer prescriptions. General EDs obtained fewer pain scores for injured children. Pediatric EDs had a lower proportion of pediatric visits in which patients left against medical advice. General and pediatric EDs had similar rates of mortality, left without being seen, incomplete vital signs, labs in non-acute patients, and similar numbers of medications given per patient [18].

Emergency Physician-Based Intensive Care Unit

To provide a prompt and optimal intensive care to critically ill patients visiting our emergency department (ED), a specific type of emergency intensive care unit (EICU) managed by emergency physician (EP) intensivists was established. The ED-ICU interval for the EICU group was significantly shorter than that for the other ICUs group. The ICU mortality and hospital mortality of the EICU group were not inferior to those of the other ICUs group. The EICU run by EP intensivists reduced the time interval from ED arrival to ICU transfer without altering hospital mortality [19].

Community Emergency Medicine

Background and objectives. International and national health policies advocate greater integration of emergency and community care. The Physician Response Unit (PRU) responds to 999 calls 'taking the Emergency Department to the patient', when 1924 patients were attended, averaging 5.3 per day, and 1289 (67.0%) patients were managed in the community. The service was estimated to deliver a reduction of 868 inpatient bed days and generate a net economic benefit of £530 107. The PRU model provides community emergency medical care and early patient contact with a senior clinical decision-maker. It engages with community providers in order to manage 67.0% of patients in the community. The PRU offers an effective model of community emergency medicine and helps to integrate local emergency and community providers [20].

Emergency care is under pressure, with demand continuing to increase across the emergency care system. Significant staffing shortages coupled with rising demand may have implications for the quality of care and safety of patients. One solution to this may be to concentrate resources on fewer sites by closing some of these EDs or suspending services overnight. In recent years a small number of EDs have been closed or downgraded to a less acute facility, reportedly due to reasons of inadequate staffing and safety implications. For residents in the areas affected by closure, journey time to the nearest ED increased, but no statistically reliable evidence of a change in overall mortality following reorganization of ED care was found. There was some evidence to suggest that there was a small increase in case fatality, an indicator of the 'risk of death', but this may have arisen due to changes in hospital admissions. We found no evidence that reorganization of emergency care was associated with a change in population mortality in the five areas studied. Further research should establish the economic consequences and impact on patient experience and neighbouring hospitals [21].

Emergency Training and Physician Quality

An Emergency Medicine post-graduate program was initiated, followed by a residency-training program. Prior to the programs, care was provided exclusively by general practice physicians (GPs); subsequently, care has been provided through mutually exclusive shifts allocated between GPs and EM trainees. Patients seeking Emergency Centre (EC) care during pre-training and post-training were assessed. Pre-training EC mortality was 6.3%, while that of post-training – 1.2%. Pre-training overall hospital mortality was 12.2% while that of post-training – 8.2% [23].

Emergency Medicine is a relatively recent medical specialty. Currently, Emergency Medicine is a primary medical specialty in nineteen member states of the European Union (EU)/ European Economic Area and a supra-specialty in two EU countries. One of the main functions of the European Core Curriculum for Emergency Medicine is to define the specialty by spelling out the core concepts that underlie its distinctiveness and by listing the competences that can be expected of specialists in Emergency Medicine. A shared understanding of what Emergency Medicine represents as a specialty, common training goals, training standards and exit examination are intended to promote the development of the specialty throughout Europe and skills transfer across national borders. The European Society for Emergency Medicine (EUSEM) incorporates 30 European national societies of Emergency Medicine with more than 14,000 medical members. The European Core Curriculum for Emergency Medicine lists the core competences in Emergency Medicine, namely: the ability to triage and resuscitate patients; the symptoms, signs and situations Emergency Physicians (EPs) should be able to address; the conditions EPs should be able to recognize and initially manage; the procedures EPs should be able to carry out and investigations they should be able to interpret; the ability to make judicious decisions regarding further investigations and treatments; professional competences EPs should master. Most subsections feature introductory paragraphs that describe the inclusion criteria the lists

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are based on and the level of competence expected of Emergency Physicians [25].

Bringing value, balance and humanity to the emergency department determine a list of quality physician attitudes: (1) 'The quixotic search for certainty' describes the all too common attempt by clinicians to find the last few patients who may be in danger even though an evaluation has shown that risk is minimal. Along with this fear of missing even a single patient with a serious problem, most clinicians have been taught to believe (incorrectly) that 'tests' are more 'objective' than clinical judgement and, thus, that doing more is 'safer' and more 'evidence based'. Even if there is some small benefit in finding the few cases that would otherwise be missed after routine evaluation (in most cases based on clinical gestalt alone), this fails to consider the diminishing returns that inevitably occur as we endeavour to lower the miss rate from 'too many' to 'a few' to 'rarely' to 'never'. More importantly, when further testing is done in a population of patients who can be classified as minimal risk, based on gestalt, this almost cannot fail to cause more harm than benefit – even if the tests themselves are 'non-invasive – because of the downstream consequences of false positives, 'incidentalomas' and overdiagnosis; (2) Medical care is not the sole, or even the most important, determinant of health outcomes. Social determinants – including, but not limited to, food insecurity, homelessness and addiction – are profoundly important to the health of a great many patients; Avoid further testing beyond history, physical exam, clinical gestalt and ECG in patients who are at minimal risk of an acute coronary syndrome (ACS); Avoid further testing beyond history, physical exam and clinical gestalt in patients who are at minimal risk of pulmonary embolus (PE); Be judicious with the use of imaging, especially advanced imaging, in trauma patients; Avoid routine laboratory testing; Consider non-medical reasons for a patient's presentation to the ED; Tailor the intensity of care to the goals of the patient; Employ shared decision-making (SDM)

where appropriate; When prescribing an intervention, make an effort to ensure that the patient is capable of accomplishing what is recommended; Tailor discharge instructions and follow-up recommendations to the individual patient; Be an advocate [26].

Components of Emergency Medicine: we always help the sick; work tirelessly with colleagues to provide universal high-quality care to those in need every second of every day; from a fractured ankle to a cardiac arrest, arterial lines to shoulder relocations and from sick children to the frail, comorbid elderly the breadth of our practice is staggering; be and are ready to respond at a moment's notice to a new more pressing need or a change in circumstance; implementing evidence-based medicine and shaping future practice; moving into understanding the theory of how we think and make decisions, meta-cognition and clinical reasoning; recognition of staff well-being and working to improve our system of safety alert highlighting the need for staff to take adequate breaks; adoption of new technology; change even further as new solutions, including artificial intelligence and immersive technologies, evolve from research environments; free open access medical education; democratizing and spreading clinical knowledge [27].

The roles of emergency physicians and acute physicians should be clear and complementing which may be reached by more uniform staffing. Given the increased complexity of care, experienced consultants need to be present at the ED, providing optimal care pathways, training junior doctors and improving timely and right decision-making and patient flow. It has been shown that presence of consultants at the ED, beside Emergency Physicians, leads to a shorter Length of Stay and higher patient satisfaction. In both countries the ageing population has led to a changing case mix at the ED with an increased amount of multimorbid patients with polypharmacy. As a result, ED presentations are becoming increasingly complex. This requires specialists who

are able to deal with these problems, such as internists and geriatricians, and generalists with the ability to coordinate care for these complex patients, such as Emergency Physicians and acute physicians. A way to reach this broader expertise and treat patients in a holistic way, is assuring superspecialism instead of subspecialism for at least internists. Superspecialism requires persisting interest in areas beyond the subspecialty and willingness to practice medicine in a patient-oriented way, in contrast to subspecialism which focuses on a specific area of interest leading to treatment of a disease rather than treating a patient. Therefore, a proportion of all medical specialists should change their attitude and adapt their training and daily practice to superspecialism, which will match the demand of the future case mix. To improve the organisation of health care, we believe that doctors need to be visible medical leaders and participate in the organisation of care. Doctors should use their experience and medical knowledge to establish the best acute care working with patients and introduce changes in the organisation in concert with the managers. Medical leadership is considered to play an important role in improving organizational performance, including quality of care, patient safety and cost-efficient care [28].

Innovation

Clinician-led design for optimizing flow for an Emergency Department:
1. Pivot nurse: Standard triage and registration is inefficient, delays care and is of low value to the patient. Alternative systems such as a pivot or 'quick-look' nurse are validated and are now established; this nurse greets the patient and rapidly acquires limited critical information including the chief complaint. Following triage category decision, the patient is escorted to one of several 'tracks' in ED;
2. Advanced split-flow system: The track system is designed to increase efficiency,

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reduce clinical risk, increase patient satisfaction and reduce those leaving ED prior to treatment or after treatment commences: Core Track; Mid Track; Fast and Super Track; Paediatric Track (except children requiring resuscitation) [29].

Evolution of the Strategies to Innovate Emergency Care Clinical Trials Network (SIREN) offers an efficient mechanism for conducting large trials in emergency care research. SIREN has successfully submitted several grant applications for trials, and several other trials are in various stages of development. All sponsored trials within SIREN will significantly benefit from the leadership of experienced researchers with established track records of success and a strong culture of cooperation within the network. Another major aim of SIREN will be furthering innovation in trial design, focusing on adaptive trials and registry-based methods. Registry based studies would make use of relationships between the SIREN Clinical Coordinating Centre with other groups, such as the American College of Surgeons Committee on Trauma and the American Heart Association, for use of larger nationwide databases for analysis. Another strength of SIREN – it has allowed access and feedback from the Data and Clinical Coordinating Centres, and it is hoped that it will facilitate increased applications. SIREN is an ideal place where investigators can seek input from both the Clinical and Data Coordinating Centres to increase chances for successful funding of large grants that seek complex adaptive designs outside of the scope of most clinicians. SIREN offers a unique and exciting opportunity to advance the clinical trial enterprise by creating a culture of studying clinical trial methodology and processes. These investigations may enhance the overall conduct of clinical trials, thereby leading to important developments in emergency care research. For individual research sites, engagement with the SIREN network offers the potential for expanding enrolment sites to a larger diverse geographic area with greater possibilities for clinical investigation. Although infrastructure burdens for research must still be shared between the centralized resources and the clinical sites, the support of the broader SIREN network promises to expand the field for future research studies. In summary, through a strong collaborative research network, SIREN offers the opportunity to significantly enhance emergency care research, with the aim of improvement in patient outcomes [30].

Large-scale quality and performance measurement across unaffiliated hospitals is an important strategy to drive practice change. The Michigan Emergency Department Improvement Collaborative (MEDIC) is a unique physician-led partnership supported by a major third-party payer. Member sites contribute electronic health record data and trained abstractors add supplementary data for eligible cases. Quality measures include computed tomography (CT) appropriateness for minor head injury, using the Canadian CT Head Rule for adults and Pediatric Emergency Care Applied Network rules for children; chest radiograph use for children with asthma, bronchiolitis, and croup; and diagnostic yield of CTs for suspected pulmonary embolism. Baseline performance was established with statistical process control charts. Overall baseline performance included the following: 40.9% of adult patients with minor head injury had appropriate CTs, 10.3% of pediatric minor head injury cases exhibited CT overuse, 38.1% of pediatric patients with a respiratory condition received a chest radiograph, and 8.7% of pulmonary embolism CT results were positive. Performance varied greatly, with demonstrated opportunity for improvement. MEDIC provides a robust platform for emergency physician engagement across ED practice settings to improve care and is a model for other states [31].

New research findings may not lead to change in practice, or a change at the front line may be delayed by years. A number of terms have been used to describe efforts and strategies to speed a change in evidence-based practice, such as: implementation science, knowledge translation, research translation and others. In contrast to traditional clinical research, implementation science generally aims to understand and change health professional behaviour to promote evidence uptake as opposed to attempting to change patient behaviour. There are now theoretical frameworks and evolving evidence providing guidance how to change clinician behaviour and, specifically, emerging evidence on how to achieve this in the emergency setting [32].

Today we have many kinds of possible actions in the field of emergency care, varying from education to structural, but all of them that produce proves of efficacy do not use an adaptation process or an old structure of care. Everybody that look to emergency like a individualized and specialized type of care, innovate and are based in a really capacitation process of the emergency teams, with evidence based protocols and with a new flow and decentralized interconnected network that are capable to give an attention adequate, ethical, equitable and effective in the point of care.

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Job Satisfaction: the Nigerian Doctor's Story

Dabota Yvonne Buowari

Introduction

Job satisfaction affects the entire satisfaction with life and it is an indicator of the situation at the workplace [1, 2]. It does not refer to the medical sphere but to other professions as well. Worldwide, chief executives including Chief Medical Directors and Medical Directors face the problem of ensuring job satisfaction for their employees [3–5]. Human resources are the priority for quality in healthcare [4]. This involves cadres of healthcare workers, medical doctors and junior doctors inclusive. Hence, doctors need to be satisfied with their job in order to carry out their duties effectively as a doctor who is dissatisfied with the job will get tired out [2]. The training to become a doctor is expensive, challenging, long and demanding [6]. Doctors should enjoy and be satisfied with their job as training takes a long time. Moreover during the period of medical training, physicians are expected to deprive themselves of sleep and leisure. They are encouraged to disregard their needs when practicing [7]. In most parts of the world, Nigeria including, doctors in hospitals are expected to serve selflessly and emphasis is on patient care [1,8]. Therefore, it is important that doctors are satisfied with their job as it will affect the doctor-patient relationship [9]. The job satisfaction of doctors is also necessary to promote commitment and loyalty to healthcare delivery, effective, service provision and more importantly preventing migration of doctors to other countries [6].

Definition of Job Satisfaction

Job satisfaction has been defined by several scholars. It can be defined as the extent or degree to which an employee likes their job [3, 4, 8–11]. Job satisfaction is related to the attitudes of an employee to their job [5]. It also represents both the positive and negative feelings about the job and also the fulfillment gotten from the job [3, 12]. Hence job satisfaction is a very crucial element for an effective performance of the health care sector [13].

Factors Affecting Job Satisfaction of Doctors

There are some factors that affect job satisfaction. Some of them are related to the individual or the hospital management. The attitude towards job satisfaction results from three areas which are specific job factors, individual characteristics and group relationships outside the job [5]. These factors include job security, interaction with other health workers and colleagues, finance incentives which include salaries and allowances, the number of work days, supervision, conditions of service, conflict and conflict resolution, age, sex, years of employment, opportunities for training and career advancement [3, 5, 9, 14–15]. In a study conducted among doctors working in a tertiary hospital in the capital of India, there was a positive relationship between the dissatisfaction with the job and the average number of work hours per day and also the number of night shifts per month [15]. Various researches have revealed that there is a positive association between the health of staff and job satisfaction as staff who are not satisfied with their job tend to be frequently absent from work due to ill health [12]. In another study conducted in a government hospital in eastern India, younger doctors and those in medical specialties that require spending more time in the hospital were dissatisfied with their job compared to doctors of an older age group and those working in non-clinical specialties. In this study increasing age was found to be associated with a higher level of job satisfaction [9].

In a study conducted among health workers in Zaria, Northern Nigeria, job stress, opportunities for training and the salaries were the determinants of job satisfaction among doctors [12].

Consequences of Job Satisfaction of Doctors

Users of healthcare facilities i.e. patients and hospital clients are the ones who suffer if a doctor has job dissatisfaction. This is because job satisfaction affects job performance and the quality of healthcare service rendered [2, 14–16]. High level of job satisfaction among junior doctors at a Sudanese hospital impacted positively on the quality of the healthcare services and patient's satisfaction [4]. Low job satisfaction predicts the intention to leave the job as doctors who are dissatisfied with their job may be considering leaving the job for elsewhere, either to another hospital or migrating to a developed country as shown in a study conducted in South-East Nigeria [13]. It has been proved that job dissatisfaction leads to migration of doctors as seen in a study conducted in Zaria, Northern Nigeria [12].

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There is a positive association between job satisfaction and employee absenteeism as when the job satisfaction is high, absenteeism is low and vice versa [3]. Oche et al in their study in Sokoto, Northern Nigeria, revealed that was a high rate of absenteeism noticed among resident doctors because they were not satisfied with their job [17]. Therefore it can be seen that the impact of dissatisfaction of a physician with the job is overwhelming. Various researches conducted in the developing countries which are low resource settings and developed countries have shown a difference in job satisfaction [9].

Job Satisfaction Of Doctors

Several studies have been conducted worldwide on job satisfaction amongst doctors but few specifically about junior doctors. Some of these studies were done in conjunction with other healthcare workers. High rate of job dissatisfaction is seen among Nigerian doctors compared to their counterparts in Europe and North America [18]. Job satisfaction brings a lot of benefits [8]. The job satisfaction of doctors is beneficial for the patient/client and the physician [19]. Doctors derive their satisfaction from their work but may not be happy with their work environment [2]. Some doctors may not be happy with their jobs because of long working hours, overwork and heavy workload due to understaffing [15] and this affects the attitude of the doctors towards their colleagues, coworkers, patients and clients [14] as well as this affects the way they carry out their duties [16,20].

In an Indian study, 59.6% of doctors satisfied with their job [9]. In a Nigerian study 58 doctors were studied under four domains, namely, the hospital management, hospital facilities, healthcare providers as well as pay and benefits, and there was a low rate of job satisfaction [20]. In a study conducted among junior doctors in Ibadan, Western Nigeria job satisfaction was a pre-

dictor of job stress [7]. This was also seen in another Nigerian study conducted in Sokoto, northern Nigeria [17]. This may be due to the stressful nature of the residency training program [17, 21]. Job stress has an impact on the health of the doctor and their ability to cope with the demands associated with their job [16].

One of the best ways to strengthen the Nigerian weak healthcare sector is the development of human capacity and identification of factors affecting the job satisfaction of healthcare professionals including doctors [8, 12]. Several reforms and policies have been developed in Nigeria to address the challenges in the healthcare system but the creation of a desirable workplace environment which will eventually lead to a higher rate of job satisfaction has received little or no attention.

Conclusion

Job satisfaction of healthcare workers especially doctors is necessary for the quality healthcare delivery as this will help reduce the current brain drain and migration of doctors to countries with better work environments.

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Comment: Reform of Transplantation in China

We have engaged in research and writing into organ transplant abuse in China since 2006 and have come to the conclusion, as have others after us, that prisoners of conscience have been and are being killed in China in large numbers for their organs. The primary victims are practitioners of the spiritually based set of exercises Falun Gong and Uyghurs.[1]

One focus of our research has been official Chinese government statistics on transplant volumes. We have attempted to determine if these statistics are accurate and what the sources of these volumes are. Shi Bingyi, the author of the article "Reform Proceeding of Organ Donation and Transplantation System in China" published in the World Medical Journal of April 2020, has in the past been quoted in Chinese publications as providing statistical information on transplant volumes and then denied he has done so.

An article posted on Health Paper Net in March 2006 contained this statement:

"Professor Shi said that in the past 10 years, organ transplantation in China had grown rapidly; the types of transplant operations that can be performed were very wide, ranging from kidney, liver, heart, pancreas, lung, bone marrow, cornea; so far, there had been over 90,000 transplants completed country-wide;"[2]

In an interview with Science Times in May 2007, Dr. Shi said:

"The number of organ transplants in China reached a historic peak in 2006, in which nearly 20,000 cases of organ transplants were performed."[3]

Dr. Shi was interviewed for a TV documentary titled "Davids' Report Re-examined" produced by Phoenix TV and broadcast in October 2007.[4] We are the Davids of the documentary title.

Some of the questions asked of Dr. Shi in the TV interview and his answers are these:

*"**Question:** We recently saw a report produced by two Canadian independent investigators. It quotes your statement that by 2005 China had conducted some 90,000 transplants. They include 60,000 such operations from 2000 and [to] 2005 which is a period when the Falun Gong was suppressed. This shows a numerical increase. Under what conditions did you say this?*

***Answer:** I didn't make such a statement because I have no knowledge of these figures. I have not made [a] detailed investigation about the subject. Therefore I have no figures to show how many were carried out and in which year. So I could not have said this.*

***Question:** Although you have not revealed concrete figures, do the figures in the report match the reality?*

***Answer:** I don't think that these figures are correct as the report shows they were calculated on the basis of phone calls to hospitals. They asked for figures from those hospitals in the names of families of patients.*

***Question:** You have read the report. Have you ventured to clarify figures the report says you produced?*

***Answer:** Yes I did. Because I am a soldier what I did was to lodge a protest through legal channels. I sent the protest to the Ministry of Health through the Department of Health of the PLA General Logistics Department. I made it clear in the protest that I never said what is attributed to me.*

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1 See https://seraphimeditions.com/portfolio-posts/bloody-harvest/ https://endtransplantabuse.org/; http://www.david-kilgour.com/

2 https://web.archive.org/web/20060826070646/http://www.transplantation.org.cn/html/200603/394.html

3 http://web.archive.org/web/2010*/news.sciencenet.cn/html/showsbnews1.aspx?id=182075

4 http://web.archive.org/web/20140816105904/http://www.facts.org.cn/Reports/World/200710/26/t20071026_779607.htm

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Question: *Some other figures contained in the report say some Chinese hospital websites advertised to say donors could be found in two weeks in China. In other countries, the waiting period may last more than one year. How do you explain the difference?*
Answer: *I can tell you the fact that some people have waited for three or four years in our hospital. The number of those who have to wait for over one year absolutely exceeds 200."*

Manfred Nowak, the then United Nations Rapporteur on Torture, asked the Government of China to explain the discrepancy between volume of organ transplants and volume of identified sources, relying, in part, in our report and its reference to the article of March 2006 quoting Dr. Shi. The Chinese government, in a response sent to the Rapporteurs by letter dated March 19, 2007 and published in the report of Professor Nowak to the UN Human Rights Council dated February 19, 2008, stated that

"Professor Shi Bingyi expressly clarified that on no occasion had he made such a statement or given figures of this kind, and these allegations and the related figures are pure fabrication."[5]

Dr. Shi, MD and Li-Ping Chen wrote in the issue of the Journal of the American Medical Association in November 2011:

"Dr Trey and colleagues mention that in 2005, transplant figures peaked with 20 000 transplants. However, as organ transplant specialists, we and our colleagues have never heard of this many transplants per year in China"[6]

Dr. Shi then, in four instances, professed ignorance of something about which his earlier statements show that he knew – the 20,000 and 90,000 figures and our research on the mass killing through forced organ extraction of practitioners of the spiritually based set of exercises Falun Gong.

Neither the article in Health Paper Net nor the article in Science Times nor the Phoenix TV interview are available any more on the internet on their original websites. They are available only because they have been archived through a web crawler, the Wayback Machine.

The Wayback Machine captured the Health Paper Net March 2006 article first on August 26, 2006. The last capture was August 7, 2008. The next web crawler capture of the URL after that date, on June 20, 2009, reports that the page could not be found.

As noted, the Phoenix TV interview was October 2007. So, Dr. Shi was saying during this TV interview that he did not say something which, at the very moment of his denial, was posted on the internet as something he said.

If one looks at the translation of the original Chinese Health Paper Net of March 2006 article which the Google Chrome browser generates, the sentence which contains the 90,000 figure disappears, not just in the English translation, but in all of the many language translations we have examined. Yet, the number 9 appears in the original Chinese paragraph, as one can plainly see.

If one saves the original Chinese language article as PDF through a printing option, convert the PDF to Word, through an optical character recognition app which can recognize Chinese characters, and then put this Word text into Google translate, the sentence with the 90,000 figure appears in the translation. The phrase with the figure 90,000 in Google translate is this: "More than 90,000 cases were transplanted last year".

Because of translations we have had done of the original by persons proficient in Chinese, a better translation would be "More than 90,000 cases were transplanted so far" or "More than 90,000 cases were transplanted up to last year" or "More than 90,000 cases were transplanted last year to date" or "More than 90,000 cases were transplanted by last year". As for the 20,000 figure in the Science Times article, that remains in the translation of the original Chinese Science Times article of May 2007 which the Google Chrome browser generates.

Given this history, the article "Reform Proceeding of Organ Donation and Transplantation System in China" should be approached with caution. Anything Dr. Shi writes about organ transplantation reform in China needs to be independently verified.

Sincerely yours,

David Matas

David Kilgour

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5 https://documentsddsny.un.org/doc/UNDOC/GEN/G08/106/97/PDF/
   G081069 7.pdf?OpenElement

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Critical Care Medicine in China–Solid Steps in the Past Forty Years and Future

Xiang-Dong Guan

Novel coronavirus pneumonia is highly infectious and can cause patients to develop acute respiratory failure and multiple organ system dysfunction or even death. To control the epidemic and spread of the virus, the government of China has taken the most stringent isolation and control measures. All provinces and cities across the country have responded to the call of the country. 0n January 29, 2020, The Chinese Society of Critical Care Medicine of The Chinese Medical Association (CMA-CSCCM), The Chinese Society of Pathophysiology and The Chinese Medical Doctor Association, issued a joint call for the colleagues of critical care medicine in China to fight together in danger. As we always said, where there is the need to save lives, there will be intensive care doctors. Medical teams from all over the country which were consisted of more than 40000 medical staffs rushed to Wuhan and Hubei to fight. Among them, more than 19000 medical staffs were from departments of critical care medicine. The total number was more than 10% of the critical care professionals all over the country. In such a high

intensity, high risk working, the team of critical care medicine was not only the leader of the clinical front line, they also summarized and published very valuable Clinical research results about the novel coronavirus pneumonia, what's more they wrote the Diagnosis and Treatment Protocol for CO-VID-19 Critical Cases and Severe Critical Cases, which guided frontline doctors treating critical patients all over the country. The battle of the novel coronavirus pneumonia has again witnessed the importance and prospects of critical care medicine for the people in China and all over the world.

Discipline Construction

Compared with western countries, the development of critical care medicine in China started later but rapidly. In 1970s and1980s, few intensive care units were established in China mainland. In 1990, the Ministry of Health of The People's Republic of China started to include the establishment of ICU as one of the key evaluations of hospital accreditation. Since then ICU constructions all around the country were in full swing. In 1997, the Committee of Critical Care Medicine of Chinese Pathophysiological Society was established. On March 18, 2005, Chinese Society of Critical Care Medicine (CSCCM) was founded in Beijing. On July 4, 2008, The Standardization Administration of the State Council approved critical care medicine as a second-level discipline (320.58). In 2009, Intensive Care Unit (ICU), a national key clinical specialty construction project of the Ministry of Health, became the only specialty covering all provinces in China. In 2010, the intermediate and senior promotion assessment of critical care medicine was included in the National Examination of the Ministry of Health. In 2013, ICU received

special support from the National Natural Science Foundation of the Ministry of Science and Technology. In 2017, critical care medicine was one of the four key support directions for the 15 billion 'National Project to improve the diagnosis and treatment of critical diseases'. Nowadays, in China, critical care medicine is the preferred major for emergency treatment of major disasters and a showcase for modern hospitals.

The results of three national ICU surveys in 2006, 2011 and 2015 showed that the number of ICUs in China increased from more than 1,000 to nearly 4,000 [1]. The number of intensivists in China has increased to 63,605, and the number of ICU nurses has increased to over 100,000 [1]. The proportion of ICUs in third-grade class-A hospitals increased significantly. The ratio of intensivist to bed and the ratio of nurse to bed also increased significantly [1]. The growth rate and range indicate that China's critical care medicine develops rapidly and has abundant reserves. According to the data from the three national surveys of ICU, at the beginning of the establishment of the CSCCM, only about 30% of the ICUs in China were subordinate to the ICU department. With the unremitting efforts of the CSCCM, nearly 66% of the ICUs in China had been included in the ICU department management by 2015, which indicates the rapid development of the ICU department in China [1].

Quality and Staffing Improvement

For the development of critical care medicine, we tried further strengthen the discipline standardization construction and management, and build the discipline construction platform of critical care medicine. On this platform, multidisciplinary integration and innovation can be realized which promised the effective diagnosis and treatment and finally reduce the mortality. With the unremitting efforts of the chap-

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ter, critical care medicine was finally listed in the national best Specialty ranking list in 2016 (evaluated by the Hospital Management Research Institute of Fudan University), which is of great significance to the promotion of the influence of critical care medicine. In April 2015, the CSCCM was awarded the title of Outstanding Specialist Chapter of the CMA at the commendation conference for the 100th anniversary of the establishment of the CMA, which is the recognition of the work by the CMA.

The development of the discipline of critical care medicine needs to be based on clinical work and scientific research, which cannot be separated from each other. More than 180 scientific researches of critical care medicine were funded by the National Natural Science Foundation of China in 2018 alone. In 2018, more than 430 articles related to critical care medicine in China were published in foreign journals related to critical care. According to the preliminary statistics of the top five journals related to critical care, such as INTENSIVE CARE MEDICINE, CRITICAL CARE MEDICINE,CRITICAL CARE and so on, more than 121 research articles were presented by Chinese authors. These voices will certainly represent China's critical care medicine and resound through the critical care medicine field in the world.

The key to resolve the shortage of human resources is not only to increase the staff numbers but also to improve their capabilities (15). 5C was initiated in 2009, which devotes to equipping intensivists with professional knowledge and skills in mainland China. So far, 120 training sessions have been held, with a total of 24,202 students and 208 teachers. It has been held in 31 provinces, autonomous regions and municipalities, and is "the only continuing education quality project"of 88 specialized chapters of the CMA. In order to further improve the professional knowledge and skills of intensivists, the Multiprofessional Critical Care Review Course and current

concepts of Critical Care Medicine from the Society of Critical Care Medicine of the United States to the local critical care society was introduced since 2016.

International Influence

Over the past 10 years, the communication between Chinese critical care medicine and the international community has been increasingly close, and the depth and breadth have been expanding. The voice of Chinese critical care medicine has been increasingly appearing on the stage of important international academic congresses at different levels.

During the 2018 Chinese critical care medicine society annual conference, the society held the launching ceremony of "the Belt and Road initiative" in the spirit of friendly cooperation. The heads of critical care medical academic groups from 16 countries along "the Belt and Road initiative" were warmly welcomed to attend this annual meeting. Up to now, more than 20 countries and regions have signed "the Belt and Road initiative" Agreement with the CSCCM which promoted the integration of CSCCM with the international community.

In 2018, a special session in Chinese was held on the 31st Annual European Conference on Critical Care Medicine. Professors of critical care medicine from China were invited to give keynote speeches. These achievements show that Chinese experts in critical care medicine are playing an increasingly important roles in promoting the development of critical care medicine around the world.

In recent years, international communication boards have been set up in the annual academic conferences of critical care medicine in China (such as the annual academic conferences of CMA-CSCCM). This innovative international communications have

greatly promoted the development of international cooperation in critical care medicine in China.

Challenges and Opportunities in the Future

While reviewing the great achievements of critical care medicine in the past 40 years, we must be soberly aware of the problems and challenges in the development of the discipline.

The Number of Icu Beds is Still Unable to Meet the Demand

According to the results of the national survey of ICU beds, the ratio of ICU to hospital beds increased from 1.49% in 2011 to 1.7% in 2015[1], but still failed to meet the national minimum standard (2%-8%) [2]. In 2010, the ratio of ICU to hospital beds in the United States has reached 13.4% [3].

Challenges of Discipline Construction

It is necessary to gradually improve the 'Peri-Critical Care Medicine' discipline system of 'early warning, prevention, organ support and long-term prognosis'. There is still a need to improve and strengthen the treatment of pre-hospital critical transport, in-hospital critical rapid response team, critical care and life support, and post-critical quality of life management.

Challenges of Informatization Construction

No information, no modernization. Critical care informatization isolated island is a current phenomenon in China. With the top-level design and support at the national level, it is imperative to establish a national online database of critical care medicine in China.

Talent Training

Critically ill patients should be managed by skilled intensivists with the most specialized training in critical care, not by physicians who only receive other specialized training to qualify for 'standardized training' and then perform treatment at the bedside of the ICU. It is an urgent and critical problem to establish a unified and standardized talent training system for critical medical staff. In July 2020, Critical care medicine was included in the national resident training system which will promote the reservation of professionals and development of the discipline.

Integration and Innovation

The development of modern medicine has put forward higher requirements for the connotation of critical care medicine, which greatly promotes the sustainable development of critical care medicine. Therefore, multi-disciplinary integration and innovation are needed to complement each other. Interdisciplinary integration and innovation are not only the needs of the overall development of critical care medicine, but also an important symbol of the development of modern medicine.

Critical care medicine is about to enter the third decade of the 21st century, a decade of opportunity and possibility, a decade of great times. With a clear discipline development plan, clear development ideas, and adherence to integration and innovation, critical care medicine will surely stand at the forefront of modern medicine in the future, have a better tomorrow, and make the greatest contribution to modern medicine and human health.

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Obituary

Tai Joon Moon, MD, PhD
14 January 1928–11 March 2020

Tai Joon Moon was born in 1928 in Youngdeok City, north Gyongsang Province, South Korea. He graduated from the Seoul National University School of Medicine in 1950, just one month before the Korean War broke out, during which he served as a surgeon on the frontline. Shortly after the war ended in 1954, he continued his studies at the Thomas Jefferson Graduate School of Medicine, Philadelphia, USA, where he completed his residency in neurosurgery and neurology to become a neurosurgeon. He returned to Korea in 1957 and started teaching at the department of surgery at the Yonsei University Severance Hospital. In 1961 he was the main contributor in establishing the department of neurosurgery, which until then had been part of the neurology department, as an independent department. He was a founding member of the Korean Neurosurgery Society and served as its President from 1968–1969. Tai Joon Moon received his Ph.D. in Medicine from the Nihon University in Tokyo, Japan in 1969. Among the honours that were bestowed on him were an Honorary Doctorate in Science from Chungbuk University in Korea in 1986, and an Honorary Law Degree from Thomas Jefferson University in 1987.

In 1967 Dr Moon entered politics to devote his life to the good of society. He ran for election to the national legislative and was elected in his hometown at the age of 39. He was subsequently re-elected four times, with his main focus and activities being around the enhancement of community health. He served as chair of the National Assembly, chair of the National Assembly's Commerce Committee, a member of the Democratic Republican Party, and chair of the Gyungbuk Provincial Party.

After 14 years in the Korean National Assembly, he was elected as President of the Korean Medical Association (KMA) and re-elected three times, serving with the KMA until 1988. Following on from his 9-year presidency of the KMA, he was appointed as Minister of Health and Welfare for 8 months. During his term, Korea implemented National Health Insurance, which covered the entire population. He continued to serve the KMA as President Emeritus, especially in the area of international relations.

His leadership skills were extended to an affiliated regional organization of the WMA, namely the Confederation of Medical Associations in Asia and Oceania (CMAAO), as its President between 1981-1983, and subsequently as Senior Advisor until recent years. He made a remarkable impact in strengthening the Asian voice on the global stage.

Inauguration at the 37th World Medical Assembly, Brussels in 1985
(left: Tai Joon Moon, right: J. J. Coury)

180th WMA Council Session during the 59th WMA General Assembly,
Seoul in 2008

The World Medical Association's (WMA) members elected Tai Joon Moon as their President in 1984 and he was inaugurated in 1985 at the WMA General Assembly in Brussels, Belgium. Remaining committed to the WMA, he was later elected as Vice-Chair of Council from 1995 to 2005. We all have special memories of the WMA General Assembly in Seoul in 2008 and his tireless work as Chairperson of the organizing committee to make it one of the most successful meetings of the WMA. Right up until his final WMA meeting in Vancouver in 2010 he displayed outstanding leadership and charisma, especially in the midst of critical debates. We knew him as an Elder Statesman who, in his wisdom, was able to reconcile the different ideas within the WMA. His charisma gave him great influence even without any formal authority.

We, together with our colleagues in Korea, the Asia and Pacific regions and globally, remember him as a great mentor. Dr. Moon is not with us any longer, but the life he devoted to the health of people and society through politics and interna-

Assembly dinner with his wife Mrs Young Boo CHO at the 59th WMA General Assembly,
Seoul in 2008

tional relations will be remembered as an everlasting footprint. He is deeply missed.

Sunny Park, Otmar Kloiber