ASSOCIATION OF ACADEMIC HEALTH CENTERS

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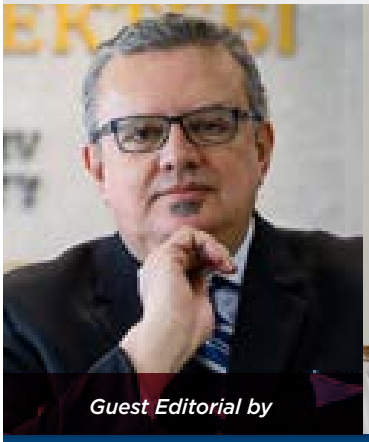
Post-COVID Opportunities and Challenges in Healthcare: Equity and Inclusion around the World and Across Cultures



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2021 // ISSUE 3
aahcdc.org

Association of Academic Health Centers®
Association of Academic Health Centers® International

PERSPECTIVE

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While we were developing our strategic plans to address the post-COVID-19 challenges and opportunities in the "new normal", on November 26, 2021, the World Health Organization (WHO) was designating B.1.1.529 as a Variant of (Great) Concern, named ***Omicron***. This announcement was a wake-up call to remind us that the pandemic was not yet under control and Omicron, or even more dangerous variants, may continue to expose the global inequality in human resources, public health infrastructure, diagnostics, and therapeutics.

In addressing "Equity and Inclusion around the World and across Cultures" in this issue of *Post-COVID Opportunities and Challenges in Healthcare*, three academic health center leaders from North America, Europe, and the Middle East offer different examples of how inequality and discrimination can jeopardize post-COVID global recovery. Unequal access to healthcare, education, and technology and the impact of the pandemic on social determinants of health will widen even more the "health gap" between developed and developing countries.

Dr. Angela Clark and Dr. Greer Glazer (University of Cincinnati, USA) note the unique role that academic health centers can and should play to address both health and healthcare inequities. They are indeed a powerhouse of talent and technology fostering collaborations between different institutions and the local communities to deliver patient- and family-centered value care using a multi-disciplinary approach. Academic health centers are becoming increasingly community-facing institutions providing community-based service learning, community-focused research, and community-driven health service delivery within an interprofessional learning environment. The success of academic

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health centers in the post-COVID era will depend very much on their ability to create a flexible and efficient public health infrastructure for their communities built on cultural competency, trust, mutual respect, and beneficial value. Focusing on citizen well-being in a holistic way by considering physical, mental health, and social determinants of health will improve quality of life health statistics, and create a resilient society able to withstand further pandemics and other health threats.

Dr. Luciano Saso (Sapienza University, Italy) describes how the COVID-19 pandemic has disrupted aspects of medical education and training of healthcare professionals. Many higher education institutions, including universities that notoriously do not have agile and flexible decision-making processes, have rapidly adopted new education technologies and digital solutions in response to COVID-19. It was "a necessity for survival" in order to provide business continuity (i.e., teaching, training, and research) during the pandemic as well as protecting the health and safety of students and employees. In 2010 (well before COVID-19 started to disrupt our daily lives), a *Lancet* commission recommended the need to develop new transformative health professional educational

programs due to many systemic problems, such as mismatch of competencies to clinical needs of patients and population, outdated curricula, poor teamwork, and narrow technology focus.

Ten years later, COVID-19 has shown that gaps and inequities persist within and between countries not only in health and healthcare delivery but also in how doctors are educated and equipped to deal with new infectious or environmental health risks. The use of digital technology in medical education has expanded exponentially during COVID-19 with the development of virtual rounds, artificial intelligence-led learning resources, and the use of digital applications to record symptoms and clinical histories. However, it is essential to evaluate the impact of such developments on student learning, competencies, inclusivity, and how they complement the traditional in-person learning and teaching activities without creating the "medical education gap" between low-, middle-, and high-income countries.

Dr. Sola Aoun Bahous (Lebanese American University, Lebanon) describes a compelling successful test case on how to progress and sustain outstanding medical development and innovation in Lebanon. Over the years, many social and economic crises have created inequity in health and healthcare access; but a series of initiatives under the "Partnership for Service" strategy were launched by the Lebanese American University School of Medicine and its medical centers to address any gap between the needs of patients and population and access to healthcare. For example, mobile clinics were established to reach out to underserved populations in remote areas to provide vaccination, free testing, and telemedicine consultations. In partnership with the WHO, healthcare professionals from public hospitals also received training in high-quality management protocols.

More than ever—whether in Europe, the United States, or the Middle East—academic health centers must reinforce international and transnational collaborations and partnerships with governments and private organizations to build resilient, decisive, and agile institutions equipped with the technology and talents to respond to the next pandemic. Academic health centers should become more community-facing and their fourth dimension (e.g., population health and citizen well-being) should be fully integrated and aligned with their research, education, and clinical programs to directly benefit society.

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What does it take to progress and sustain outstanding medical development, equity, inclusion, and innovation in a country agonized by a dire economy and a climate of instability?

Lebanon has been hit by more than one crisis, which aggravated further socio-economic segregation and inequitable healthcare access. With its relatively small geographic area, Lebanon is currently hosting the most significant percentage of refugees per capita in the world (UNHCR, 2020). Moreover, the fierce and continuing economic contraction that started in 2018 worsened poverty and inequality. It also prompted a massive social revolt a few months prior to February 21, 2020, when the first case of COVID-19 was detected in Lebanon. Expectedly, academic health centers have played a significant role in supporting the underserved populations, including refugees.

Most of the Lebanese population relies on government healthcare insurance programs to cover healthcare services. However, the unpreparedness of most governmental hospitals outside of Beirut, the capital, reinforced the role of academic health centers in advancing equity. The Lebanese American University School of Medicine (LAUSOM) and its Medical Centers undertook a series of initiatives to bridge the gap toward better and more equitable healthcare. Diversity is a backbone of our medical school, which has inevitably led to enriching the medical profession and delivering physicians to new frontiers with a competitive edge.

Based on a "Partnership for Service" strategy, we embarked on building a multi-level collaboration with industries, municipalities, the Lebanese government, and the World Health Organization (WHO). Our mobile clinic had the mission of reaching out to the underserved and providing free testing for COVID-19. Thousands of such tests were performed and supported by telehealth sessions to provide accompanying advice. These visits were organized in collaboration with municipalities that registered all people in need of the service. On another front, we partnered with industries to secure mass vaccination of the community. A "Vaccination Village" was created at the main hospital for that purpose, and vaccine administration was coordinated with the government using a common platform and registry. Moreover, the mobile clinic started vaccinating communities in remote areas to assist in the global mission of reaching immunity and mitigating disease spread. At the same time, we participated in the WHO Private-Public Twinning Project intended to train public hospitals' staff on best practices to provide high-quality disease management.

Academic health centers in Lebanon are facing a hard reality of a worsening economic crisis that is causing a substantial exodus of the healthcare workforce and magnifying healthcare inequality in the post-pandemic era. LAUSOM is expanding its strategy to establish a partnership 'Hub' for service. We aim to associate with NGOs, industries, and other academic health centers to form a hub that believes in the serving mission. Academic health centers need to understand and act toward fulfilling their mission of social accountability in healthcare, as they do for education and research. The objective is not to leave the historically marginalized and underserved behind.

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Post-COVID 19 Opportunities and Obligations of Academic Health Centers

For 20 months, providers from all disciplines have responded to the insurmountable and relentless impact of COVID-19 around the globe. Life events are now filed under the dichotomy of pre- and post-COVID-19 and, although the initial shock and acute surges have passed, we are left managing our new normal, sifting through the evidence and preparing for the next global pandemic.

The pandemic dually exposed the dark underbelly of health and healthcare inequities, while also shining a light on opportunities for improvement. Throughout the pandemic's course, health inequities remained pervasive—often heightened, with health profession silos exemplified and the fractured nature of the United States public health infrastructure exposed. Responding to the complexities of the virus required the interplay of professions, infrastructures, and resources allowing the power of engaged academic health centers to stand out. Now, post-COVID, academic health centers have an obligation to extend their reach into communities beyond completing mandated community assessments; equally, they have a responsibility to advance their role in addressing health and healthcare inequities.

Health equity is the difference in health status between populations and groups; healthcare inequities are the differences in the distribution of health resources. While closely related, readily addressing healthcare inequities through academic health center leadership can support health equity and positive health outcomes. But how? Academic health centers are uniquely positioned to address both health inequities and healthcare inequities by partnering closely with communities to expand collaboration beyond community surveys, but through the promotion of inclusive learning environments centered on educating prepared, proactive, integrative care teams as the norm.

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Academic health centers are resource-rich in that they include all health professionals from across each university. Many also include experts in related disciplines—such as psychology, sociology, informatics, and data analytics—who can add expertise to the difficult challenge of health and healthcare inequities. However, most often each discipline and profession works separately, turning university faculty and academic health center professionals into two isolated islands. Can you imagine what could be accomplished if these resources were combined and worked together? Research provides new and deeper knowledge about the community: reach efforts should penetrate the region and support rural, often unreached community networks, serving as the conduit to create safety-net services and medical homes for vulnerable and underserved populations. We must go beyond a static community health survey.

Communities around the world are suffering—many in silence. We recently conducted a survey in rural Appalachia to find out more about the knowledge and attitudes of the community. As a follow-up to the survey, we conducted focus groups and our findings concluded that, while the community had reported adequate resources, those who needed these resources most did not have access to them. Wrap-around services and the public health framework to support chronic, comorbid, multigenerational care was fragmented and incomplete. However, the

academic health center—through partnerships with the community hospital, health department, and public-school system (the United States' predominant public health delivery system)—can, as demonstrated during the COVID-19 pandemic, improve access to care.

Our efforts also illustrated the need to address our curriculum and change the way we educate health professions students. Curriculum across health professions programs should be developed jointly and delivered in an interprofessional manner with content scaffolded throughout curriculum, supporting the capacity for a growth mindset. Curricular topics should be specific to the current and historical needs of the community and include addressing and eliminating implicit bias, understanding and addressing structural racism, social privilege and the social determinants of health, trauma-informed care, motivational interviewing, behavior change, health and healthcare policy, population health, and wrap-around services. This means that we need to figure out how we can teach more together and bust the siloes that exist among the health professions. We CAN address the practical barriers that prevent most of our programs from truly providing a robust interprofessional education. Community relationships should include interprofessional and cross-sector practice partnerships where team-based care and evidence-based intervention strategies underpin experiential learning.

Healthcare is changing. The pandemic catapulted many of us into the realization that care is no longer predominantly in-patient, as we saw our regional hospitals become overwhelmed with COVID-19 patients around the world. Academic health centers—given their diversified make-up of health professions educators, researchers, providers, and community stakeholders—are the link to a public health safety-net post-COVID. It is our professional obligation to care for our communities.

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Health professions education is changing rapidly in most countries, and the recent digital push resulting from the COVID-19 pandemic is accelerating the process. Simulation, augmented reality, machine learning, artificial intelligence, digitalization, and big data are taking on increasing importance. Ethics, intercultural, and communication training also are critical in health professions education to advance high-level performance in the new global and digital society. The Association of Academic Health Centers International (AAHCI) recently launched a series of webinars on "Innovation in Health Professions Education"[1] to highlight these important points.

Technologies Transforming Education

Recent significant advances in fields such as simulation, machine learning, artificial intelligence, and big data analysis have demonstrated that medical doctors and other health professionals need no longer perform in traditional ways. We regularly need to take this into account when we look at and update university curricula to avoid disruptive, sudden changes. Students should become familiar with these topics before graduating and not have to learn them afterwards—increasing their workload, often in an unsustainable way. Of course, there are many challenges, such as the competencies of teachers, the availability of appropriate equipment and infrastructure, and laws and regulations, which can often be lacking in flexibility in many countries. Indeed, university degrees related to health professions are very often strictly regulated, and it is very difficult to make curricular changes.

The Dramatic Digital Push of COVID-19

The COVID-19 pandemic has had a strong impact on education at all levels and in all areas of the world. In many countries, strict lockdowns were imposed, requiring students to learn from home. Teachers adapted very quickly and, in many cases, managed to be effective despite the challenges. Innovative pedagogical models, such as the flipped classroom[2], have become more popular. Innovative software and apps were utilized. In the "new normal" awaiting us at the end of this terrible pandemic, we expect students and teachers to be more open to innovation in medical education as well as in other education fields.

Innovative Medical Education as a Driver for Innovation in Other Education Fields

Technological innovation in the medical field can move more quickly than in others for multiple reasons, including endeavors toward improved quality of healthcare and reduced costs. This is reflected in higher education institutions where hospitals are often among the most advanced learning centers for students, PhD candidates, and residents. Innovations in medical education can be very beneficial for all disciplines, not only STEM[3] but also SSH[4], such as archeology[5].

The Challenges of Equity and Inclusion

Many aspects mentioned above require expensive modernization of equipment and infrastructure at higher education institutions. During the strict lockdowns in 2020, many teachers and students experienced difficulties due to a lack of modern digital devices or fast internet connections. In some areas of the world, millions do not even have access to electricity[6]. While in some regions people could have several intelligent devices in their pockets[7], in others they will have none. We need to do our best to push for homogenous digital transformation worldwide and leave no one behind. I believe it is unethical and dangerous to social stability not to do so.

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Conclusion

We live in an amazing period of human history. Technologies are evolving very rapidly, and education can benefit very significantly from this. Universities are centuries old institutions, and now are called to innovate rapidly curricular methods and contents. This is certainly challenging, but can be most interesting for students. For example, studying anatomy and other medical disciplines using mannequins and augmented reality can be more interesting, stimulating, and effective for students beyond the traditional methods of medical education.

[1] https://www.aahcdc.org/Meetings-Events/AAHC-Connect

[2] https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2019-1-ES01-KA229-063792

[3] https://tech.ed.gov/stem

[4] https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/ssh_en.htm

[5] https://digitalcommons.library.umaine.edu/cgi/viewcontent.cgi?article=1016&context=jae

[6] https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=ZG

[7] https://reports.weforum.org/digital-transformation/the-internet-of-things-and-connected-devices-making-the-world-smarter