COMMENTARY

The new facet of healthcare leadership: "Sustainability for NextGen"

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In Pakistan, driving in the scorching heat this time of the year, one cannot consciously think of anything other than global warming. By year 2042 the global temperatures would have risen by 1.5°C.[1] According to the report on climate change, by the Intergovernmental Panel on Climate Change, published in February 2022, global warming would have adverse impacts on human and animal life. This would imply scarcity of water leading to droughts, melting of polar ice leading to flooding, effects of severe heat resulting in fires and all this causing a serious threat to biodiversity.[2] These perils have us all working for sustainability and environmental safety. Although the paradigm of sustainability remains a global concern with international collaborative efforts for "Sustainable Developmental Goals" (SDGs), it is pertinent to mention that different nations have their own unique framework to deal with the impact of the global warming and environmental change.[3] Ever since the inception of the SDGs in 2015, Pakistan has been among the pioneer countries to remain committed to these goals and is working for the "Agenda 2030".[4] According to the SDG report of United Nations Statistics Division, the SDG-3 which concerns the healthcare has still major challenges to be covered by Pakistan. A few of the major challenges are indicators like neonatal mortality rate, incidence of tuberculosis and subjective wellbeing of a common citizen.[1] A positive trend is visible in the childbirths being attended by skilled workers, but even this indicator still falls under a significant challenge.

The need for sustainability for a better environment is ironically grounded in the pace of our technological advancement and rapid economic growth. A toll that the mankind is paying for the industrial revolution and combustion engines has been in the form of the greenhouse gases.[5] Since the mid 18th century, the atmospheric concentrations of carbon, methane, and nitrous oxide has gone up many folds. These being the key element for the "Carbon footprint".[6] These emissions have significantly deteriorated the environmental threats to the health and well-being of the mankind. The global impact of the deteriorating the environmental factors on the health are ironically more for the populations and nations who contribute lesser to the carbon footprint and struggle to combat the detrimental effects.[7] The more technologically advanced nations, like America, have a carbon footprint of 15.5 tons per capita per annum in comparison to the global figure of 4.79 tons per capita per annum.[8] The developing countries like Pakistan have carbon footprint of less than 1 ton per capita per annum.[8] However, the intertwining nature of the deteriorating global environment and its detrimental effects on the health of the diverse populations of the world requires a collaborative effort to limit the expected rise in the global temperature. Global sustainability initiatives are aimed to drop the global per capita footprint to 2 tons per annum.[7]

Healthcare workers enjoy an immaculate repute of being responsible and dutiful professionals. Specifically in Pakistan, for the past many decades, the doctors have enjoyed the pedestal of respect for their professional responsibility, global outreach, societal leadership, and as intellectual leads of the society. The brand of Pakistani doctors has also earned similar respect beyond borders thus establishing a repute of being professionally competent with a sense of societal responsibility. The continuation of this immaculate professional standing makes it our core responsibility to work for sustainability and take categorical steps for SDG-3 which deals with healthcare related indicators. Our current and future generations of doctors need to keep reconfiguring

healthcare industry, to benefit the patient and the planet. Our next generation of healthcare professionals must cater for a focused approach, sustainable framework of delivery and curricular components addressing the health-related sustainability concerns.[8]

A sustainable healthcare framework implies maintaining both the current and future quality of healthcare through balancing social, environmental, and financial constraints. The professionals of healthcare academia should ensure that while drafting sustainable solutions for the next generation it is imperative that they yield a mindset among the healthcare professionals of the next generation with the core competencies pertinent to the sustainability in healthcare. These core competencies are already identified and are resource stewardship, systems thinking and environmental justice.[9] The healthcare professionals while in the making need to understand elements like significance, relevance, implementation protocols, and methodologies for the sustainable undertakings.

Once the core competencies have been inculcated in the healthcare professionals of the next generation, the justified use of resources would become a norm while drafting any plan ranging from institutional to policy development level. A "systems thinking" approach by a healthcare provider would ensure the justifiable resource usage and maximize the standards achieved despite the paucity of resources. However, all of this must be reflected by the healthcare leaders of tomorrow at multiple tiers. Their actions for sustainability should range from propagation of personal action plans for their patients, identifying sustainability related voids that exist, creating sustainable infrastructure, leading the way for policy development that caters for the resources of the future generations, joint international ventures to achieve globally defined limits of decarbonization and to keep the initiatives alive through curricula and trainings at all levels.

The primary aim for sustainability that healthcare academics need to harbinger is preparing the next gen of the "sustainability-oriented" healthcare leaders. These "sustainability-oriented" healthcare leaders have also been referred to in the literature as "eco-ethical" leaders. Our leaders of the next gen need to steer resources for the future as well as cater for alleviating the environmental detriments. The "sustainability-oriented" healthcare leadership needs advocacy for resource allocation and conservations. Such conservatory approach needs resource stewardship for the marginalized as well as for future generations. To achieve intergenerational equitable usage of resources, a workup to identify vulnerable populations and map out the environmental impact for sustainability indicators must be undertaken as a continuous process. The timelines ascribe to all movements and initiatives by the "2030 Agenda" requires consolidated efforts by all sectors of healthcare in Pakistan. Our "sustainability-oriented" healthcare leaders need more diversity of action than mere awareness drives. They need to have an outreach to the population while having a say in the policy making for conserving the environment, advocating the less privileged and having representation at the global forums. The healthcare leadership needs to collaborate and oversee the policy drafting specifically for prospective sustainability.[8]

The current responsibility of healthcare leadership is to identify from a local perspective the effects of air pollution and severity of weather on the vector ecology as well as on the rise in allergens. For example, the current rise in the temperatures in Lahore as compared to the previous years coupled with environmental degradation factors is arguably the denominator for the upsurge in the cases of cholera. Water and food supply impacts can drift the entire morbid patterns for our society. Local context of environmental effects needs to be identified to plan accordingly for sustainability indicators.[8]

Once the voids have been established and the vulnerability of the populations have been mapped out sustainable infrastructure has to be placed or potentiated. Sustainable infrastructure development requires resource management and healthcare advocacy for the remotely placed and marginalized populations for their health vulnerability. The insightfulness of the "sustainability-oriented" healthcare leaders of the next gen need to develop and convert previous setups to more environment friendly and resource sensitive healthcare facilities. This can be achieved by designing and constructing sustainable and carbon-negative hospital buildings. Discovering water smart solutions for the pharma industry to conserve water. Policy drafting for any further developments in the infrastructure should reflect the pivotal role and usage of clean energy. Solarization of the existing and newer setups remain cardinal to the newer infrastructure's sustainability. The solarization would give a grip on achieving the intended carbon footprint limits. Healthcare supply chains being another element to be trimmed up for decarbonization. The hospitals need to manage their fleet and converge the supply chain steps to fossil fuel economy or conversion to clean energy in the long-term moving to hybrid or electric vehicles. These measures will ensure minimizing the healthcare industries contribution to the environmental detriments. The healthcare industry in Pakistan while engaging in achieving indicators set forth by the "Agenda 2030" also needs to work on policy measures for sustainable infrastructure development.[8]

Sustainable policy drafting, regulations, and national codes of waste managements and bioethical concerns should be explicit and implemented in true spirit. Within the

hospitals the usability of consumables should be patterned in a manner to minimize the greenhouse gas emission. Reusage and recycling being the essence of conservation for the future should be reflected using reverse osmosis units in dialysis and recycling of all plastic waste.[10] Waste management pertaining to pathological waste, sharps, trace chemotherapy should be regulated and established national codes should be implemented in the true spirit. Telehealth should be relied upon tremendously for minimizing the footfall to the hospitals thus being a significant contributor in carbon-negative drive. Telehealth solutions are multifaceted in terms of decreasing usage of fossil fuel and other energy sources. Thus, the entire spectrum of decarbonization steps and sustainability solutions must be overseen by the "sustainability-oriented" healthcare leadership of the currently yielding generation of professionals.[5]

University of Health Sciences, Lahore, while in the process of revamping the undergraduate curricula, is ensuring inculcation of elements of sustainability into these curricula. The sustainability related core competencies and its related content, as evidenced by the globally in-vogue curricula, will be a part of the public health syllabus. The course content will be designed in an integrated pattern which would increase through the training years in terms of applicability, relevance, and complexity.[7] The current vision at the university level for the revamping of the undergraduate curriculum is to potentiate core ethical values with "environmental ethical concepts" for an overarching affective training of the "sustainability-oriented" healthcare leaders of the next generation.

Equitable resource allocation for upholding the prescribed health standards while conserving for the future generations require a multifaceted approach directed towards all stakeholders. A "sustainability-oriented" healthcare leader once equipped with the traits of advocacy can act as change agent for all levels of the society. Initiatives regarding climate needs change agents to build the capacity in masses while advocating the same concerns, to be backed by policies at the higher echelons. So, a well-trained "sustainability-oriented" healthcare leader could have focused approach to generate specific outcomes for the planetary health.[5]

Living in the times of Agenda 2030, our focus of commitment should be to alleviate the environment related detriments, be sustainability savvy and have political outreach for sustainable solutions, for today and tomorrow. As health care faculties, our professional obligation should be to yield "sustainability-oriented" healthcare leaders, having a sense of eco-accountability, environmental justice, and intergenerational resource equity. For this multipronged diverse approach, the most cardinal contribution, for a sustainability continuum, by the current generation of professionals is to develop a "sustainability mindset" for the healthcare leaders of tomorrow. The ripple effect of the "sustainability mindset," thus created will be the key factor, to traverse through generations to come, for individual health, healthcare systems, and most importantly for the planetary health.

List of Abbreviations

SDGs Sustainable developmental goals

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