

Radiologist's profile—yesterday, today, and tomorrow

This is with reference to an editorial by Editor-in-Chief, Indian Journal of Radiology and Imaging (IJRI); Dr. Anirudh Kohli; entitled “Can imaging impact the Coronavirus pandemic?”; published in Jan–Mar 2020 issue of IJRI. There is no doubt that imaging will have a significant impact on coronavirus pandemic. In addition, the reverse also holds true. Coronavirus disease (COVID-19) pandemic will also have an impact over imaging and the profile of radiologists will change yet again.

With the rapid growth in imaging technology and changing health care scenarios, the roles and responsibilities of radiologist have evolved much beyond their conventional roles as medical imaging gatekeeper who was only expected to ensure the appropriateness of imaging study and promptly generate reports. Radiologist has evolved from “gatekeeper” to “steward” of medical imaging infrastructure to ensure efficiency and quality of imaging services.^[1,2] As the dust settles over the COVID-19 crisis, the world would certainly be a different place and health care will not be an exception. The radiologists' profile will change as the health care in the post-COVID era will evolve and expand new horizons for Radiology.^[3]

Mindless application of principles of “McDonaldization” in health care may cause devastating effects, due to complexities involved in human physiology, disease manifestations, and response to treatment.^[4] There is a recent hype about the potential impact of artificial intelligence (AI) in radiology practice and AI has become the latest buzzword in medicine.^[5] The overenthusiastic claims of the initial success of AI seem to be another attempt toward McDonaldization of medicine. This does not validate the role of AI in imaging diagnosis and certainly does not raise concerns about replacing the clinical radiologists. With the advent of AI tools, the roles of radiologists will expand further as a comprehensive service provider across clinical disciplines. I have huge doubts about whether AI will ever be able to replace radiologists, but I am sure that “AI-enabled radiologists” will soon replace radiologists of the past.

The specialist-driven health care is now standard in global medical practice, which at times, raises concerns about the problems of overspecialization in medicine.^[6] Apart from the increase in the cost, inappropriate specialist referrals often lead to treatment delays, mismanagement, and confusion for the patients. Specialization is necessary to delve deep into the vast sea of medical knowledge, but a working

knowledge of the wide specialty is crucial. In a close approach to the tree, one should not lose view of the forest.^[7]

As the human body is a complex anatomical and functional entity with integration of different organ systems, efficient disease management always requires a comprehensive multi-specialty approach. Clinical radiologists are in the best position to perform primary care triaging and clinical decision-making, as they are usually good at image interpretation across multiple systems. Clinical radiologists who “specialize in not specializing” may emerge as keys to the future of medicine.

With the advent of the corporate sector, health care has entered a new era across the globe.^[8] The corporate entities apply the principles of McDonaldization to health care and encourage practices where a patient is simply a number. The practice of commission for patient referrals is deeply rooted in health care.^[9] The practice of performing the unnecessary surgical or invasive procedure to generate higher revenues is an important cause of concern. The clinical radiologist may also serve as the “ethical watchdog” for the medical community. Direct patient consultations with the Radiologists [Radiology consultations] with due emphasis on the need for conservative treatment in appropriate clinical settings will certainly avoid any attempts for an overzealous treatment option.

Clinical radiologists of today are well-positioned to serve as a comprehensive health care service provider. This will include medical imaging gate-keeping, primary care triaging, clinical decision-making, providing surgical roadmaps, assisting policy decisions, and potential role as an ethical watchdog. “Patient-centric approach” and “problem-solving attitude” are the most important traits of a clinical radiologist to serve these roles.^[10]

The pandemonium of the COVID-19 pandemic is likely to have a significant long-term impact on the future evolution of health care. Health care solutions would aim to establish sync with the laws of nature. “Evidence-based lifestyle medicine” may acquire center stage with radiology as its backbone. Multidisciplinary “diagnosis-based” clinical triage may become a norm. The integration of precision medicine and AI into clinical practice will find pace in the post-COVID era. Future health care is likely to move from a “volume-based” to a “value-based” model for radiology.^[11]

With the rise of the clinical radiologist in present times,^[12] the radiologist's profile in the healthcare system is gradually changing from "Doctor's doctor of yesterday to Patient's doctor of tomorrow." This transition becomes more meaningful and mandatory following the crisis of COVID-19 pandemic and is likely to gain significant momentum after the dust settles over the ongoing pandemic.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

Nitin P Ghonge

Department of Radiology, Indraprastha Apollo Hospitals,
New Delhi, India.
E-mail: drnitinpghonge@gmail.com

References

1. Joshi MS. Radiology-yesterday, today and tomorrow. *J Indian Med Assoc* 1995;93:417-8.
2. Knechtges PM, Carlos RC. The evolving role of the radiologist within the health care system *J Am Coll Radiol* 2007;4:626-35.
3. Ghonge NP. Health care blog in Express Health care. Available from: <https://www.expresshealthcare.in/blogs/guest-blogs-healthcare/future-of-healthcare-after-the-fury-of-covid-19-new-horizons-for-radiology/420393/>. [Last accessed date on 2020 May 15].
4. Dorsey E Ray, Ritzer G. The McDonaldization of medicine. *JAMA Neurol* 2016;73:15-6.
5. Pakdemirli E. Artificial intelligence in radiology: Friend or foe? Where are we now and where are we heading? *Acta Radiol Open* 2019;8:058460119830222. doi: 10.1177/2058460119830222.
6. Dr. Sandeep Jauhar. Opinion Healthcare. One Patient, Too Many Doctors: The Terrible Expense of Overspecialization. *TIME*

Magazine August 19, 2014.

7. Doina G, Roxana B. Overspecialisation in medicine, Or what about not seeing the forest because of the trees? *Eur Sci J* 2013;9. No. 36 ISSN: 1857-7881 (Print) e - ISSN 1857-7431.
8. Poduval M, Poduval J. Medicine as a corporate enterprise: A welcome step? *Medicine, Mental Health, Science, Religion, and Well-being MSM*, 6, Jan - Dec 2008. p. 157-74.
9. Asher R. The seven sins of medicine. *Lancet* 1949;254:358-60.
10. Ghonge NP. Being a "Clinical Radiologist" "Patient-centric approach" and "problem-solving attitude" in radiology. *Indian J Radiol Imaging* 2019;29:336-7.
11. Levin DC. Transitioning from volume-based to value-based practice-A meaningful goal for all radiologists or a meaningless platitude? *Radiology* 2015;275:314-20.
12. Ghonge NP. Opinions; *European Radiology* August 2019. Available from: <https://www.european-radiology.org/opinions/rise-of-the-clinical-radiologist/>. [Last accessed on 2020 May 25].

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code:	Website: www.ijri.org
	DOI: 10.4103/ijri.IJRI_352_20

Cite this article as: Ghonge NP. Radiologist's profile—yesterday, today, and tomorrow. *Indian J Radiol Imaging* 2021;31:S217-8.

Received: 09-May-2020

Revised: 13-May-2020

Accepted: 13-May-2020

Published: 23-Jan-2021

© 2021 Indian Journal of Radiology and Imaging | Published by Wolters Kluwer - Medknow