



The role of professional socialisation in reducing drug-related problems during COVID-19: a new insight for future pandemics

Ahmad Z. Al Meslamani^{1,2}

Accepted: 19 October 2022

© The Author(s), under exclusive licence to Springer Nature Switzerland AG 2022

Introduction

A drug-related problem (DRP) is “an event or circumstance involving drug therapy that actually or potentially interferes with desired health outcomes” [1]. DRPs can be classified into problems in drug indication, effectiveness, safety, knowledge, or adherence [1]. The outbreak of coronavirus disease 2019 (COVID-19) has overwhelmed almost all nations, leading to millions of deaths and devastating economic losses. There were two major themes for the first wave of COVID-19: first, lockdowns and restriction measures, and, second, absence of an effective treatment for the disease. As a consequence, currently used drugs were repurposed to be used against COVID-19, sometimes, without a comprehensive assessment of their safety. There have been many reports indicating a dramatic increase in drug use during COVID-19 [2, 3].

Because of the uncertainty and vagueness that surrounded the days at the beginning of the pandemic, many people began to buy these repurposed drugs and use them without prescriptions or medical guidance [4]. The arbitrary prescribing, dispensing, and usage of drugs, including repurposed medications, could have led to increased rates of DRPs. Additionally, the unexpected increase in polypharmacy and hospitalisation during the COVID-19 pandemic could have been connected to the high rates of DRPs [5]. The use of high-alert medications, a risk factor for DRPs, was also increased after the outbreak of COVID-19 [4].

DRPs can also be triggered by poor communication between patients and healthcare providers, and between

providers themselves [6]. Poor communication was an inevitable outcome of lockdowns and visiting restriction measures during the pandemic [7]. Furthermore, poor communication has resulted from fear of contracting the infection. For example, during the first wave of COVID-19, patients visited pharmacies in a rush to the extent that they did not have adequate interaction with the pharmacists, and thus they did not receive appropriate instructions on medication dose, usage, and adverse effects. Poor communication was also a common feature of many telemedicine models that were implemented impetuously during the initial days of the pandemic. Telemedicine models with primitive or incomplete infrastructure may limit the connection between patients and their healthcare providers, and even between providers themselves, and thus increase the probability of DRPs.

Therefore, in this commentary, we discuss how socialisation can be crucial to prevent DRPs during pandemics, and how it can be implemented into preparedness plans for future pandemics.

Professional socialisation in times of pandemics

Socialisation is a crucial approach to gaining skills, values, and appropriate behaviours through regular interaction with the community. Professional socialisation in healthcare is the journey through which a health worker becomes an integral player in the healthcare society [8]. It is noteworthy that professional socialisation is different from pure education or training. In healthcare, professional socialisation does not only involve the learning of knowledge and skills, but also combines this with gaining a professional identity that can reflect on professionals' progress and records.

During the first wave of the COVID-19 pandemic, most countries issued firm regulations that restricted face-to-face interaction, movement, and hospital visitation. Further, many countries relied on telemedicine and remote pharmaceutical

✉ Ahmad Z. Al Meslamani
amaslamani1095@gmail.com;
ahmad.almeslamani@aau.ac.ae

¹ AAU Health and Biomedical Research Center, Al Ain University, Abu Dhabi, United Arab Emirates

² College of Pharmacy, Al Ain University, P.O. Box: 112612, Abu Dhabi, United Arab Emirates

services for healthcare delivery [9]. Consequently, professional socialisation was significantly impacted, for there were restrictive measures on visiting offices [10]. Given that the probability of contracting the COVID-19 infection is remarkably higher in the healthcare workplaces than in other places, the pandemic has a larger influence on professional socialisation in healthcare than in other professions. This reflects further influence on socialisation in the healthcare workplace.

Overall, we believe that the incidence and severity of DRPs have been exacerbated during the pandemic, for there has been a less effective collaboration between healthcare professionals. This can be explained in many ways. First, there was a scarcity of evidence available on clinical manifestations of COVID-19 and treatment [11]. Furthermore, healthcare professionals received conflicting reports regarding the management of COVID-19 patients. Thus, daily events experienced by professionals were considered a reliable source of information that could improve patient outcomes. For example, some physicians had noticed the adverse effects of certain repurposed drugs on COVID-19 cases before they were listed in the guidelines. However, healthcare professionals were less likely to share their daily cases and outcomes given social distance and visiting restrictions at the workplace. This varies from country to country and setting to setting; nonetheless, the absence of reliable and unified sources of information about COVID-19 treatment plans at the beginning of the pandemic should have been dealt with by improving socialisation between professionals.

Second, poor communication, which can result from a lack of professional socialisation in the healthcare workplace, may lead to life-threatening incidents, including severe DRPs [6]. For example, because of ineffective communication between physicians and nurses, a nurse may give a high-alert medication to the wrong patient. Personally, we noticed not only an increase in the rate of DRPs when healthcare personnel lacked professional socialisation, but also an increase in the proportion of severe and life-threatening DRPs.

Professional socialisation enables professionals to gain knowledge and skills from daily medical practice, which will ultimately be used for DRP prevention; however, this is not the only reason why professional socialisation is crucial for DRP prevention and reduction. Health professionals can use professional socialisation to engage themselves in the organisational culture and values of their setting, and thus create a personal commitment to their profession and make their own identity [12]. When that happens, patient safety will be prioritised and DRPs will be prevented or reduced.

Because the risk for DRPs increases during pandemics, professional socialisation of health professionals becomes more important. Herein, we suggest some strategies and

tactics that can be used to socialise health professionals in times of pandemics. First, using social media websites to share daily experiences with colleagues could replace face-to-face interaction. There is a growing body of evidence indicating that social media websites (i.e. WhatsApp) improve communication efficiency within healthcare settings [13, 14]. As mentioned before, effective communication between health professionals is a key factor in DRP management. Second, telemedicine during a pandemic is indispensable; however, telemedicine models currently in operation lack advanced communication infrastructure; hence, professional socialisation of health professionals is hampered. Therefore, telemedicine models should be equipped with tools that connect health professionals with their colleagues and patients in more interactive ways. This includes the implementation of high-resolution video conferencing software and stable audio connection tools. Third, during pandemics and changing circumstances, many health professionals are deployed to other departments based on medical urgency; additionally, in the case of emergency, retired physicians and medical students could be called for duty. Consequently, socialisation training should not be exclusive to medical students. Organisational values and culture including openness to others, reporting errors, and learning with colleagues and focusing on knowledge transfer should be conveyed to all health professionals using consistent approaches [15]. However, the strategies suggested in this paper face two categories of barrier: system and individual barriers. System barriers include absence of bylaws that specifically regulate professional socialisation in the healthcare workplace. Individual barriers include each person's goals and interests. We believe that in order to successfully implement our strategies, precise management of these barriers should be carried out.

The post-COVID-19 era is approaching, and while the future is unpredictable, global healthcare systems should be prepared for the worst scenarios. Hence, this article suggests that professional socialisation should be activated not only in times of pandemics, because that would be inefficient, but also in regular times. This calls for global collaboration on strategies that can raise people's awareness of the importance of professional socialisation.

Conclusion

Both human- and organisation-based approaches can be adopted to stimulate socialisation of health professionals during a pandemic. This includes using social media websites to share experiences with colleagues, improving telemedicine tools, and maintaining socialisation training.

Declarations

Conflicts of interest The authors declare that they have no conflict of interest.

Consent to participate Not applicable.

Consent for publication Not applicable.

Availability of data and material Not applicable.

Code availability (software application or custom code) Not applicable.

Author contribution statement Conceptualisation, literature review, and manuscript drafting were performed by AZAM.

References

1. AbuRuz SM, Bulatova NR, Yousef AM. Validation of a comprehensive classification tool for treatment-related problems. *Pharm World Sci.* 2006;28:222–32.
2. CDC. COVID-19 and People at Increased Risk [Internet]. 2021. <https://www.cdc.gov/drugoverdose/resources/covid-drugs-QA.html>. Accessed 13 Jul 2022.
3. NIH. COVID-19 & Substance Use [Internet]. 2020. <https://nida.nih.gov/research-topics/comorbidity/covid-19-substance-use>. Accessed 13 Jul 2021.
4. Skalaforis C, Samer C, Stirnemann J, Groscurin O, Eggimann F, Grauser D, et al. Electronic monitoring of potential adverse drug events related to lopinavir/ritonavir and hydroxychloroquine during the first wave of COVID-19. *Eur J Hosp Pharm Sci Pract* [Internet]. 2021. <https://ejhp.bmj.com/content/early/2021/04/07/ejpharm-2020-002667>.
5. Iloanusi S, Mgbere O, Essien EJ. Polypharmacy among COVID-19 patients: a systematic review. *J Am Pharm Assoc.* 2021;61(5):e14-25.
6. Tiwary A, Rimal A, Paudyal B, Sigdel KR, Basnyat B. Poor communication by health care professionals may lead to life-threatening complications: examples from two case reports. *Wellcome Open Res.* 2019;4:7.
7. Hugelius K, Harada N, Marutani M. Consequences of visiting restrictions during the COVID-19 pandemic: an integrative review. *Int J Nurs Stud* [Internet]. 2021;121:104000. <https://www.sciencedirect.com/science/article/pii/S0020748921001474>.
8. Sadeghi-Avval-Shahr H, Yazdani S, Afshar L. Professional socialization: an analytical definition. *J Med ethics Hist Med.* 2019;12:17.
9. Momtazmanesh S, Samieefar N, Uddin LQ, Ulrichs T, Kelishadi R, Roudenok V, et al. Socialization during the COVID-19 pandemic: the role of social and scientific networks during social distancing BT—Coronavirus disease—COVID-19. In: Rezaei N, editor. Cham: Springer International Publishing; 2021. p. 911–21. https://doi.org/10.1007/978-3-030-63761-3_51.
10. Bazett-Jones DM, Garcia MC, Taylor-Haas JA, Long JT, Rauh MJ, Paterno MV, et al. Changes in motivation, socialization, wellness and mental health in youth long-distance runners during COVID-19 social distancing restrictions. *Front Sport Act Living Internet.* 2021. <https://doi.org/10.3389/fspor.2021.696264>.
11. Davies NG, Barnard RC, Jarvis CI, Kucharski AJ, Munday J, Pearson CAB, et al. Estimated transmissibility and severity of novel SARS-CoV-2 Variant of Concern 202012/01 in England. medRxiv [Internet]. 2020. <https://www.medrxiv.org/content/early/2020/12/26/2020.12.24.20248822>.
12. Melrose SP, Caroline PB. *Creative clinical teaching in the health professions.* London: Athabasca University Press; 2021.
13. Patel B, Johnston M, Cookson N, King D, Arora S, Darzi A. Inter-professional communication of clinicians using a mobile phone app: a randomized crossover trial using simulated patients. *J Med Internet Res.* 2016;18(4): e79.
14. Ellanti P, Coughlan F. The use of whatsapp smartphone messaging improves communication efficiency within an Orthopaedic Surgery Team. *Cureus.* 2017;18:9.
15. Salisu WJ, Dehghan Nayeri N, Yakubu I, Ebrahimpour F. Challenges and facilitators of professional socialization: a systematic review. *Nurs Open* [Internet]. 2019;6(4):1289–98. <https://doi.org/10.1002/nop2.341>.