


# 'Quaranta giorni' leadership test: time to transform healthcare

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In March 2020, the WHO declared the COVID-19 outbreak a global pandemic. As of 26 June 2020, there have been 9.6 million confirmed COVID-19 cases, causing about 490 000 fatalities. In the midst of this unprecedented global health crisis, extraordinary containment measures have been implemented. The WHO has emphasised the importance of specific regional estimates to enact proportional control measures and to guarantee adequate public health intervention funding.<sup>1</sup> The widely different responses of healthcare systems to this pandemic have been interesting and of varied effectiveness. Draconian measures in China and Singapore resulted in good control of pathogen transmission,<sup>2,3</sup> while the slightly more relaxed but still highly restrictive measures in Italy, Germany and the USA seem to have had different levels of effectiveness.<sup>4-6</sup>

In Saudi Arabia, the COVID-19 pandemic has fostered the same tensions and fears that arose in healthcare staff and the public during the 2015 Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak.<sup>7</sup> The difficult lessons learnt by leadership during that time now constitute a 'silver lining', given that early mobilisation and specific strategies and plans established during the MERS-CoV outbreak were rapidly implemented nationally prior to confirmation of the first COVID-19 cases in the country. Specifically, at King Abdulaziz Medical City, Riyadh, the staff were vigilant and able to identify the first COVID-19 case at the drive-through respiratory/influenza screening station, rapidly admitting the patient to the existing respiratory isolation ward. The patient was well cared for as per standard infection control practices, and there were no healthcare-derived secondary cases.

The COVID-19 pandemic has not only quarantined people but entire countries. 'Social distancing', 'self-quarantine' and 'flattening the curve' are now everyday expressions used to describe the deliberate increasing of physical space between people to avoid spreading the virus.<sup>8</sup> The word quarantine comes from *quarantena*, a 14th-century Venetian variant of the Italian *quaranta giorni*, meaning 'forty days', the period that all ships were required to be isolated before passengers and crew could go ashore during the Black Death plague epidemic.<sup>9</sup>

The pandemic has also become a stress-test case for healthcare leadership. While the public health justification for isolation or quarantine is undisputed, the past 3 months have seen the implementation of travel bans, cancellations of major international events and sporting activities, the

suspension of religious activities, lockdowns in cities, the suspension of education, the indefinite closure of malls, restaurants and businesses, and a consequent far-reaching financial impact. Here we discuss the impact of the COVID-19 pandemic on leadership and its catalytic role in healthcare transformation.

## COVID-19: REDEFINING LEADERSHIP

Times of acute crisis prompt the simultaneous emergence of uncertainty, complexity and ambiguity. In response, rapid, high-impact decisions must be taken and implemented in a limited information setting. Leaders have to manage these elements, be able to adapt, learn new lessons as the crisis evolves and help develop medium-term strategies in order to maintain an effective operational level until such a time when longer-term planning is possible. The speed at which COVID-19 affected many countries has tested global health security and the political skills of national and international leaders. The pandemic has amplified the need for good leadership as countries battled with the dual need to coordinate efforts on a global scale and the exposure of their local public healthcare systems to sustained levels of pressure.<sup>10</sup>

In this respect, the implementation of social distancing measures, even quarantine orders, has served as an interesting case study on how leadership can communicate and enact unprecedented measures. In order to act within a short time frame, the individual and public interests had to be aligned through the perception of risk, which was then clearly communicated through positions of leadership.<sup>11</sup> The core message of the non-zero sum nature of the pandemic, where someone's infection is a threat not only to oneself but everyone else,<sup>12</sup> was even more persuasive when spoken by trusted experts, as in previous infectious disease outbreaks.<sup>13,14</sup>

Uncertainty produces anxiety, especially during times of crises, so leadership communication throughout 'quarantine periods' is both visible and regular, with a number of countries providing daily updates.<sup>15</sup> It is likely that high awareness about the complex and hazardous situation allowed people to accept uncertainty as well as strict mitigation measures.<sup>16</sup> The message was further reinforced and trusted through the independent and international lens of the WHO, who provided regular aggregated reports.<sup>17</sup> Interestingly, the participation of medical experts and scientists in governmental briefings has led to the perception of a flattening of the leadership structure, with decisions taken collectively



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rather than individually. Whether this was a calculated attempt to establish a more transparent and/or agile leadership approach to the crisis will require further scrutiny.<sup>18</sup>

### TRANSFORMING HEALTHCARE FOR THE FUTURE

The ‘viral war’ against the pandemic that began in December 2019 from the first cases emerging from Wuhan, China, has highlighted frailties in the structure and competence of global healthcare systems.<sup>19,20</sup> Transformation after the pandemic seems inevitable. While countries are still focusing on the emergency phase of handling this pandemic and lifting quarantine measures, it is equally important to immediately establish mechanisms and processes for the recovery phase and plan for the future health of nations. The global healthcare system is now ripe for a paradigm shift, with public health and digital innovations such as delivery of clinical care through telehealth emerging at the forefront.<sup>21,22</sup>

At an international level, organisations must now be further supported and take the lead in driving, coordinating and strengthening institutions at the regional and international levels through this path of anticipated healthcare transformation as part of sustainable development plans.<sup>23</sup> The WHO needs to ensure and oversee the prioritisation of established preparedness plans for public health, considering that it is no longer a local or national but a global issue. For example, the WHO infection prevention and control minimum requirements<sup>24</sup> are standards that should be in place across resource-restricted settings at both national and local health facility levels to provide minimum ongoing protection. The mandate must be international to ensure its progress, with advanced national healthcare systems further improving capacity in low-income and middle-income settings, including for public health.<sup>25</sup> New public health measures should be instated for public transportation, aviation, cruise liners and rail systems to boost travel while ensuring health security.

Furthermore, part of the recovery phase from this pandemic will be to consider robust assessment and plans to reverse the pandemic’s major impact on social life and the economy. City and country lockdowns and social distancing have had a major impact on general psychological well-being, especially in those with ingrained multigenerational occupancy per residence. Inter-city healthcare systems and national healthcare systems should provide appropriate, carefully designed support to individuals, families and communities so that they regain their mental well-being, and an intertwined mental healthcare programme should be a high priority in the return to the new normal.<sup>26,27</sup>

It is expected that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) will continue to be a major threat to national healthcare systems and international public health in the years to come, with entry into the general circulation and recurrent wintertime outbreaks and seasonal transmissions similar to influenza.<sup>28</sup> Therefore, long-lasting changes to the healthcare infrastructure and clinical practice are required, perhaps through the design of dedicated, fully-equipped COVID-19 hospitals, emergency departments or primary care centres, such that a potential surge capacity can be satisfied.<sup>29,30</sup> Social distancing and wearing of face masks are already forming part of our new norm, embedded in our daily interactions, and regular public screening strategies, such as drive-through screening, will be introduced to minimise further outbreaks.<sup>31,32</sup>

Until recently, it was unimaginable that a single virus could wreak so much devastation despite many countries boasting world-class healthcare. There needs to be greater use of smart technologies with early warning systems.<sup>33</sup> State-of-the-art tracing of exposed individuals through smart phones, GPS

applications and artificial intelligence, entrenching *digital epidemiology* principles, is a necessity.<sup>34</sup> These technologies must and can be built while protecting privacy concerns so that public trust becomes the foundation of their adoption.<sup>35,36</sup>

Every dark cloud has a silver lining. As COVID-19 eclipses, medical leadership is being redefined and refined through this time of crisis. This redefinition is a necessary prerequisite for the inevitable transformation of healthcare, for the improvement of public health interventions in order to prevent prolonged and universal quarantine measures, and for creating more effective, technologically assisted systems for the next pandemic(s). 31 December 2019 will be remembered for bringing quaranta giorni to life.

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### REFERENCES

- World Health Organization. Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19), 2020. Available: [https://apps.who.int/iris/bitstream/handle/10665/331497/WHO-2019-nCoV-IHR\\_Quarantine-2020.2-eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/331497/WHO-2019-nCoV-IHR_Quarantine-2020.2-eng.pdf)
- Maier BF, Brockmann D. Effective containment explains subexponential growth in recent confirmed COVID-19 cases in China. *Science* 2020;368:742–6.
- Lee VJ, Chiew CJ, Khong WX. Interrupting transmission of COVID-19: lessons from containment efforts in Singapore. *J Travel Med* 2020;27:taaa039.
- Gatto M, Bertuzzo E, Mari L, et al. Spread and dynamics of the COVID-19 epidemic in Italy: effects of emergency containment measures. *Proc Natl Acad Sci U S A* 2020;117:10484–91.
- Parodi SM, Liu VX. From containment to mitigation of COVID-19 in the US. *JAMA* 2020;323:1441–2.
- Wilder-Smith A, Freedman DO. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *J Travel Med* 2020;27.
- AlKaway B. Leadership in times of crisis. *BMJ Leader* 2019;3:1–5.
- Cetron M, Simone P. Battling 21st-century scourges with a 14th-century toolbox. *Emerg Infect Dis* 2004;10:2053–4.
- Tognotti E. Lessons from the history of quarantine, from plague to influenza A. *Emerg Infect Dis* 2013;19:254–9.
- The Lancet. COVID-19: learning from experience. *Lancet* 2020;395:1011.
- Bavel JJV, Baicker K, Boggio PS, et al. Using social and behavioural science to support COVID-19 pandemic response. *Nat Hum Behav* 2020;4:1–2.
- Folch E, Hernandez I, Barragan M, et al. Infectious diseases, non-zero-sum thinking, and the developing world. *Am J Med Sci* 2003;326:66–72.
- Trevena LJ, Zikmund-Fisher BJ, Edwards A, et al. Presenting quantitative information about decision outcomes: a risk communication primer for patient decision aid developers. *BMC Med Inform Decis Mak* 2013;13:1–5.
- Briñol P, Petty RE. Source factors in persuasion: a self-validation approach. *Eur Rev Soc Psychol* 2009;20:49–96.
- Kaul V, Shah VH, El-Serag H. Leadership during crisis: lessons and applications from the COVID-19 pandemic. *Gastroenterology* 2020. doi:10.1053/j.gastro.2020.04.076. [Epub ahead of print: 18 May 2020].
- Motta Zanin G, Gentile E, Parisi A, et al. A preliminary evaluation of the public risk perception related to the COVID-19 health emergency in Italy. *Int J Environ Res Public Health* 2020;17:3024.

- 17 World Health Organization. Coronavirus disease (COVID-19) situation reports. Available: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
- 18 De Smet A, Lurie M, St George A. Leading agile transformation: the new capabilities leaders need to build 21st-century organizations, 2018. Available: <https://ukznextendedlearning.com/wp-content/uploads/2019/10/Leading-agile-transformation-The-new-capabilities-leaders-need-to-build-21st-century-organizations.pdf>
- 19 Phelan AL, Katz R, Gostin LO. The novel coronavirus originating in Wuhan, China: challenges for global health governance. *JAMA* 2020;323:709–10.
- 20 Tanne JH, Hayasaki E, Zastrow M, *et al.* Covid-19: how doctors and healthcare systems are tackling coronavirus worldwide. *BMJ* 2020;368:m1090.
- 21 Tarantola D, Parmet WE, Costanza MC, *et al.* A public health perspective in the times of COVID-19. *Am J Public Health* 2020;110:925–6.
- 22 Ahmed S, Sanghvi K, Yeo D. Telemedicine takes centre stage during COVID-19 pandemic. *BMJ Innov* 2020;bmjinnov-2020-000440.
- 23 Dietler D, Leuenberger A, Bempong N-E, *et al.* Health in the 2030 agenda for sustainable development: from framework to action, transforming challenges into opportunities. *J Glob Health* 2019;9:020201.
- 24 World Health Organization. Minimum requirements for infection prevention and control (IPC) programmes, 2019. Available: <https://www.who.int/infection-prevention/publications/core-components/en/>
- 25 Hopman J, Allegranzi B, Mehtar S. Managing COVID-19 in low- and middle-income countries. *JAMA* 2020;323:1549–50.
- 26 Pfefferbaum B, North CS. Mental health and the Covid-19 pandemic. *N Engl J Med* 2020. doi:10.1056/NEJMp2008017. [Epub ahead of print: 13 Apr 2020].
- 27 Greenberg N, Docherty M, Gnanapragasam S, *et al.* Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ* 2020;368:m1211.
- 28 Kissler SM, Tedijanto C, Goldstein E, *et al.* Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. *Science* 2020;368:860–8.
- 29 Carenzo L, Costantini E, Greco M, *et al.* Hospital surge capacity in a tertiary emergency referral centre during the COVID -19 outbreak in Italy. *Anaesthesia* 2020;75:928–34.
- 30 MacKechnie MC, Nadeau M, Deering E, *et al.* Orthopaedic walk-in clinics: a model to lessen the burden on emergency departments during the COVID-19 pandemic. *J Orthop* 2020;20:293–6.
- 31 Kwon KT, Ko JH, Shin H, *et al.* Drive-Through screening center for COVID-19: a safe and efficient screening system against massive community outbreak. *J Korean Med Sci* 2020;35:e123.
- 32 Caswell A, Hijazi R. The impact of MERS-CoV: service and systems Re-design: the creation of the Caswell – Hijazi model. *Am J Nurs* 2019;8:200–15.
- 33 Menni C, Valdes AM, Freidin MB, *et al.* Real-Time tracking of self-reported symptoms to predict potential COVID-19. *Nat Med* 2020;1038/s41591-020-0916-2. [Epub ahead of print: 11 May 2020].
- 34 Makri A. Robert Koch Institut: towards digital epidemiology. *Lancet* 2017;390:833.
- 35 Park S, Choi GJ, Ko H. Information Technology–Based tracing strategy in response to COVID-19 in South Korea—Privacy controversies. *JAMA* 2020;323:2129–30.
- 36 Jung G, Lee H, Kim A, *et al.* Too much information: assessing privacy risks of contact trace data disclosure on people with COVID-19 in South Korea. *Front Pub Health* 2020;8:305.