

1 **'Any and every cure for COVID-19': An imminent epidemic**  
2 **of alternative remedies amidst the pandemic?**

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4 Ejemai Amaize Eboreime<sup>1</sup>, Chinwe Juliana Iwu<sup>2</sup>, and Aduragbemi Banke-Thomas<sup>3\*</sup>

5 1. Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta,  
6 Edmonton, Canada

7 2. Department of Nursing and Midwifery, Faculty of Medicine and Health Sciences,  
8 Stellenbosch University, Cape Town, South Africa

9 3. Department of Health Policy, London School of Economics and Political Science,  
10 London, United Kingdom

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12 **Corresponding author:** Aduragbemi Banke-Thomas\*

13 Department of Health Policy, London School of Economics and  
14 Political Science, London, United Kingdom

15 Email: [a.banke-thomas@lse.ac.uk](mailto:a.banke-thomas@lse.ac.uk)

16 Phone: +44 (0)207 107 5132

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20 **Abstract**

21 The magnitude of the COVID-19 pandemic is unprecedented, causing lots of  
22 apprehension among scientists, industry actors, politicians, and the general populace.  
23 Adverse health, social and economic effects of the pandemic have triggered an urgency  
24 among policy makers to seek an effective panacea. In this commentary, we examine the  
25 covert outbreak of a demand for alternative remedies with limited scientific evidence on  
26 their effectiveness to manage COVID-19 in Africa. Similar demands have been displayed  
27 in previous epidemics, though the ubiquity of social media in this current clime fuels such  
28 demands even more. We describe the attendant consequences of this demand surge on  
29 ongoing public health efforts to mitigate the spread of COVID-19 and highlight its future  
30 repercussions which may continue to plague health systems beyond the present  
31 outbreak. Going forward, governments must be proactive in surveillance of this covert  
32 epidemic, actively engage community influencers in knowledge transfer and implement  
33 targeted health promotion interventions.

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## 42 **Background**

43 The unprecedented magnitude of the Coronavirus Disease (COVID-19) pandemic is  
44 significantly shifting the dynamics of the pharmaceutical industry, including the supply  
45 and demand for unorthodox remedies. The recent adverse health, social and economic  
46 effects of the ongoing pandemic have triggered a sense of urgency to seek an effective  
47 panacea by governments, with a ripple effect on health seeking behavior of the populace.  
48 Africa is the last continent to be affected by the outbreak. This gave ample time for the  
49 various governments, organizations like the African Union, and people to prepare ahead,  
50 learning from the experiences of other countries.

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52 Emergency operations centers were activated in various countries to coordinate response,  
53 laboratories were upgraded, public health communication strategies were designed,  
54 amongst other measures. But for a novel disease whose epidemiology and clinical  
55 characteristics are still being studied, no country can be prepared enough. Consequently,  
56 Africa has been battling to control the spread of the contagion since it arrived the  
57 continent early February 2020. However, another covert epidemic is brewing in Africa as  
58 a collateral effect of COVID-19, and the apprehension it has generated both within the  
59 leadership of African countries, and among its populace. This has to do with the abuse of  
60 untested 'cures', a ripple effect of the perceived confusion within the scientific community,  
61 and among political actors, as to which of the numerous proposed measures and  
62 therapies are truly effective. In this article, we examine the demand for alternative cures

63 in Africa. We also warn about an imminent surge in abuse of presumed alternatives  
64 resulting from the ongoing political and social dynamics of the COVID-19 pandemic.

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### 66 **Plurality of voices and alternatives from all as sundry**

67 The pressure to mitigate the morbidity and mortality of COVID-19, with the need to  
68 restore socioeconomic normalcy, has led to increased political interference in medical  
69 processes. For example, Donald Trump's political pressure on regulatory bodies to  
70 accelerate approval of hydroxychloroquine (HCQ) for the treatment of COVID-19 [1]. This  
71 action influenced policy and individual behaviors worldwide, such that cases of HCQ  
72 toxicity following abuse were reported in faraway Nigeria.

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74 Even within the scientific community, controversies have arisen with validation of  
75 proposed therapies. Conflicting studies have been published regarding various  
76 prophylactic or treatment regimens such as the Bacille Calmette Guerin (BCG) vaccine  
77 and HCQ/macrolide combinations. These conflicts have triggered strong reactions among  
78 research and policy stakeholders, leading to the retraction of some studies with  
79 implications on decisions about ongoing clinical trials [2]. This urgency has not only  
80 affected the orthodox pharmaceutical market. Significant attention has also been drawn  
81 to traditional and complementary medicines (TCM), and other postulated non-  
82 pharmaceutical remedies. It is estimated that TCM is three to four times more commonly  
83 practiced than conventional medicine [3]. But the current dynamics will likely expand the  
84 TCM market further.

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86 Recently, the president of Madagascar, Andry Rajoelina, announced a breakthrough  
87 herbal medicine for COVID-19 developed from the *Artemisia annua* by the Malagasy  
88 Institute of Applied Research [4]. COVID Organics, as the medication is branded, is said  
89 to possess prophylactic and curative properties. The announcement has been greeted by  
90 massive demand of this 'cure' by several African leaders. Heated debates across the world  
91 have also been elicited. Some argue that COVID Organics is scientifically untested for  
92 efficacy and safety. Others presume that, being herbal, the COVID organics is safe. But  
93 unknown to most herbal medicine users, this presumption is a fallacy. Public political  
94 endorsements of COVID organics has triggered market surge for TCMs. Many 'cures' are  
95 being proposed without any evidence of quality, safety, and efficacy. Cameroon for  
96 example, is experiencing shortages of herbal medicine due to high demand [5]. In Ghana,  
97 an undercover British Broadcasting Corporation video report showed conmen and quacks  
98 exploiting unsuspecting users by selling fake and toxic substances as COVID-19 cures for  
99 as much as \$25,000 [6].

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### 101 **Increasing demand for alternative remedies and its attendant consequences**

102 In Africa, this increase in demand is not a new phenomenon. Previous epidemics triggered  
103 widespread demand for speculative therapies. During the 2014 West African Ebola virus  
104 disease (EVD) crisis, there was an 'epidemic' salt toxicity occasioned by rumors that  
105 ingesting or bathing with concentrated salt solutions could prevent or cure the disease.  
106 A recent survey of survivors of the outbreak revealed that over 70% resorted to self-

107 medication, and almost half of them used TCMs for post-EVD care [7]. Also, during the  
108 1918 Spanish flu pandemic, the abuse of various speculative therapies across Africa was  
109 rife, as people resorted to inhaling eucalyptus and camphor [8]. Likewise, the current  
110 COVID-19 crisis has been associated with a covert epidemic of 'miracle cures' such as  
111 ingestion of bleach. Social media platforms have fueled the rapid propagation of  
112 misinformation about such purported cures. Attendant psychosocial and medical adverse  
113 events have also been recorded [9].

114  
115 Psychosocial untoward effects reported with the use of tested and speculative preventive  
116 therapies include a false sense of immunity. The abuse of alcohol, *cannabis sativa* and  
117 other psychoactive substances believed to prevent or cure the contagion can further  
118 aggravate this 'superhuman' grandeur, leading to deliberate exposure or undermining of  
119 public health measures, such as social distancing and the use of facemasks [4].

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121 In addition, serious medical complications could result from drug interactions or direct  
122 pharmacological actions on biological organs and systems. Effects of such interactions  
123 could be immediate, such as cardiac arrests, or delayed events like chronic renal or  
124 hepatic failures and cancers. Congenital complications could affect unborn children [10].  
125 Such cases end up requiring management by health workers, many of who are already  
126 significantly overwhelmed.

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128 Should this covert epidemic remain unaddressed, repercussions may continue to plague  
129 health systems beyond the present outbreak. While health systems irrespective of region  
130 and income status will all be vulnerable to such long-term shocks, African health systems  
131 are particularly vulnerable. Already, despite the continent's successful battles with  
132 outbreaks like Ebola, the socioeconomic impact continues to undermine efforts towards  
133 sustainable resilient and responsive health systems. It is therefore pertinent that this  
134 collateral consequence of COVID-19 is raised among priority issues as African leaders and  
135 other stakeholders continue to evolve response strategies to the pandemic.

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### 137 **Conclusion**

138 Going forward, governments must be proactive in surveillance for this covert epidemic,  
139 and other collateral effects of the pandemic. Regulatory systems must be enhanced to  
140 mitigate abuse of controlled substances. Further, clinical trials must be strongly  
141 encouraged for TCMs to provide evidence of safety and efficacy. Efforts must be  
142 intensified to bridge the gap between knowledge producers and consumers, particularly  
143 policy makers, community influencers, and the general populace. Such knowledge  
144 brokerage must be incorporated into awareness campaigns about COVID-19 through  
145 traditional public and social media platforms to dispel existing and emerging rumors.  
146 Targeted health promotion interventions that recognize the motivations of diverse sub-  
147 groups of the population to seek alternative cures will be critical in stemming the demand.  
148 This needs to be done while providing the best available evidence in a manner and  
149 language that the target populations understand and can relate with. Community and

150 religious leaders must also be involved in this process, given their strong influence and  
151 the established relationship between TCM, culture and religion. These efforts will go a  
152 long way to mitigate unintended consequences of COVID-19 and accelerate the  
153 restoration of society to post-pandemic normalcy.

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## 155 **Competing interests**

156 The authors declare no competing interest.

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