

AHEAD Newsletter

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WELCOME MESSAGE FROM THE EDITOR

Welcome to the second of our six-monthly newsletters of the AHEAD research network. AHEAD unites researchers in various research disciplines (economics, epidemiology, public health, sociology of health and environment...) from both developed and developing countries working on current topics relating to health and environmental issues.

We open the current issue with an introduction to the Covid-19 pandemic in the context of developing countries, the little we know about its likely incidence, and what we can learn from the experience of the data rich countries of the Global North. Next, Mohammad Abu-Zaineh and Sameera Awawda actively assess the preparedness of the health systems of the MENA region countries in coping with the current Covid-19 pandemic, and provide key recommendations from their findings. Following the discussion of Mohammad and Sameera, we next meet Ahcene Zehnati who has been researching the Algerian health care system. Ahcene tells us about the need to reform the Algerian health care system, and more particularly the need to address the growing pay gap between private and public sector pay, and to regulate the private delivery of health care services. From Algeria, we next travel to Europe and the USA with Kelley Sams. Kelly discusses the work she is currently undertaking on the social impact of the containment and health measures introduced to limit the transmission of the current pandemic in Italy, France and the USA, and highlights the potential of the current crisis in enacting positive change for the future.

The newsletter concludes with the usual sections reporting on recent AHEAD network news as well as an update on selected upcoming scientific events. Needless to say, I am greatly indebted, and want to thank the production team as well as the contributors in the current newsletter for their generous input.

By Ramses H. Abul Naga

RESEARCH HIGHLIGHT

THE COVID-19 PANDEMIC IN LOW-INCOME COUNTRIES: AT THE CROSSROADS BETWEEN HEALTH EQUITY AND ENVIRONMENTAL QUALITY

By Ramses H. Abul Naga

The disastrous consequences of global environmental degradation were known to scientists for decades, but the global response has been mixed, and is yet short of reversing the phenomenon of global warming originating from human activity. The pandemic the world is facing today was likewise forecast by epidemiologists and was known to be imminent in the wake of the SARS outbreak of 2003, the avian flu of 2005 and the swine flu of 2009. Yet we are only beginning to take stock of the devastating effects of having, for most nations, come unprepared to deal with this crisis.

Ramses H. Abul Naga



is a Reader in Economics at the University of Aberdeen, United Kingdom. He is the co-founder and the scientific lead of the AHEAD Research Network. He has also worked as a

consultant on projects for the World Health Organisation, the United Nations Division for Africa and the Swiss Federal Statistical Office. Prof. Abul Naga's research interests include, the measurement of social welfare and inequality in relation to ordered response data as well as Anthropometric data; the development of inferential tools for indices of welfare and inequality, especially in the context of anthropometric data, and the utilization of such methodologies to inform health policy in developing countries.

Just as in the case environmental degradation, poorer countries have the least preparedness, and the poorest of the poor will be inflicted disproportionately more than elites for a host of reasons, some of which represent areas of interest and active research by members of the AHEAD network, working particularly on health equity in countries covering the Mediterranean region, Africa and the Middle-East. While developing countries do not at the time provide detailed statistics about the incidence of the pandemic¹, we attempt to draw from the experience of statistics rich countries (mainly countries from the Global North) some inference about the likely impact of the pandemic on vulnerable socio-economic groups of developing countries.

Gender aspects

In rich countries where the under 50 populations generally does not suffer from malnutrition, and has access to affordable health care, we have observed a relatively low incidence of the virus for individuals free of other comorbidities. The situation is likely to be considerably different in the Global South. Populations there are inflicted with low quality rationed health care, have prevalent nutritional deficiencies, and are afflicted during their adult lives with the consequences of early life disease. As a result, low nutritional health, and a relatively important incidence of comorbidities are present in the under 50 populations of many low-income countries, compounded with potentially large female to male differences in ill health.

¹ Though, it is important to mention the regular updates provided by the WHO and the Johns Hopkins University Coronavirus resource center, to be found here: <https://www.afro.who.int/health-topics/coronavirus-covid-19> and also here <https://coronavirus.jhu.edu>

Contamination of health workers has been, and remains, a particular issue of concern in poorer countries, especially during the current pandemic². As women represent globally 70% of the health workforce³, they are also particularly vulnerable to contamination in the process of delivery of health and social care. The inadequacy of supplying appropriate protective equipment as well as adequate sanitation in the health care sector of developing countries will likely exacerbate the already fragile position women occupy in various communities. Of related importance, is the likely rise in domestic violence impacting on women and girls during the process of confinement imposed during the more active phases of the pandemic. As workers of developing countries suffer from the loss of income, inequalities within the household may further be exacerbated, as the traditional community level channels of protecting the dignity and livelihood of women and girls may break down.

The socioeconomic gradient – a difference of more than 70 times

Within the rich countries, there are factual accounts of the virus infecting and killing disproportionately more low skilled workers, in which ethnic minority groups are over-represented. There are several reasons at work here, and indeed these are highly relevant to the dual labor market structures of developing countries. What we know from richer countries is that, generally, low skilled workers are less likely to be able to work from home, and as a result are more exposed to contamination. For instance, official US labor statistics reveal that during the current period of lockdown, only 9.1% of workers in the bottom income quartile have had the possibility of working from home. In contrast, in the top income quartile, this figure stands at 61.5%⁴.

Second, low skills workers often live in densely populated inner cities, which are subject to high levels of air pollution. Thirdly, for a variety of reasons, ranging from occupational activity, lack of financial means, more sustained exposure to stress, to the historic roots of slavery and colonialism, many ethnic minority populations of rich countries often exhibit higher levels of heart disease, diabetes, and depression, making their immune systems less resistant to viral exposures. In this respect, the UK Office of National

Statistics has recently calculated that Black, Asian and other minority citizens are two to four times more likely to die from Covid-19 contamination than their ethnic European counterparts⁵. In an American city, it was found that 52% of Covid-19 deaths pertained to African Americans, yet this group accounted for 30% of Chicago's population⁶.

Across the world, differences in health expenditure are striking. The World Health Organization 2019 report on health spending⁷ for instances finds that "Across low-income countries, the average health spending was only US\$ 41 a person in 2017, compared with US\$ 2,937 in high income countries – a difference of more than 70 times." Within low-income countries, there exist wide differences in health spending across income groups, and in access to health coverage across income groups, but also across regions.

Countries of the Global South exhibit considerably high levels of income inequality. A general finding of the World Inequality Report of 2018, is that inequality within the world varies greatly, with Europe enjoying the lowest levels, and the Middle-East exhibiting the highest level of income disparities: "In 2016, the share of total national income accounted for by just that nation's top 10% earners (top 10% income share) was 37% in Europe, 41% in China, 46% in Russia, 47% in US-Canada, and around 55% in sub-Saharan Africa, Brazil, and India. In the Middle East, the world's most unequal region according to our estimates, the top 10% capture 61% of national income"⁸. Those who live in gated communities and those who inhabit slums experience very different existences within the same city or nation. The public health care systems of low income countries have long been abandoned in the pursuit of structural adjustment programs, fiscal consolidation and other mysterious terms simply disguising an often unequitable process of rolling back the public sector. Private health care is accessible to those with better finances, while the dis-functional and under-resourced public health system cannot accommodate the health needs of the majority during pandemics.

Low-income countries do not report high levels of COVID-19 casualties because there aren't any; rather

² Contamination of health workers has been and remains a particular issue of concern in poorer countries, especially during the current pandemic.

³ Covid-19: A Gender Lens, Technical Brief, United Nations Population Fund; UNFPA Bangladesh.

⁴ See in particular the very engaging blog post by Enrico Bergamini at the Bruegel Institute: www.bruegel.org/2020/03/how-covid-19-is-laying-bare-inequality

⁵ ONS: Coronavirus (COVID-19) related deaths by ethnic group, England and Wales: 2 March 2020 to 10 April 2020: www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/coronavirusrelateddeathsbyethnicgroupenglandandwales/2march2020to10april2020#main-points

⁶ Bhalal N., Curry G., Martineau A. Agyemang C. and Bhopal R. (2020): "Sharpening the global focus on ethnicity and race in the time of COVID-19", *The Lancet*, [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31102-8/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31102-8/fulltext)

⁷ www.who.int/health_financing/documents/health-expenditure-report-2019.pdf?ua=1

⁸ <https://wir2018.wid.world/files/download/wir2018-summary-english.pdf>

because screening is not sufficiently undertaken, and many cases of infection or mortality fail to be documented or registered. For instance, Sweden's testing rate is in the order of 17,600 per million whereas those of Bangladesh and Indonesia amount to less than 1000 per million inhabitants⁹. These two Asian countries reported fatality rates of respectively 2 and 4 in a million, whereas Sweden's death rate, at the moment of writing this article is reported to be 350 in a million. In this respect, it is possibly to indirectly infer some information about the extent of testing by examining positivity rates: according to the WHO rates of positive outcomes vary between 3% and 12% across countries. High positivity rates precisely indicate that testing is only undertaken on those with severe symptoms, and that asymptomatic cases go unreported.

Environmental impact in low-income countries

One cannot overemphasize the consequences of poor sanitary environment on the outbreak of pandemics. Just as high levels of water contamination facilitated the spread of cholera outbreaks from Bangladesh to the African continent, high levels of air pollution¹⁰, the impossibility to practice social distancing, poor hygiene, and limited access to clean water all prevent adequate protection for the inhabitants of the large metropolitan areas of low income countries.

Many nascent states in the second half of the twentieth century were inspired by the desire to end ignorance, disease and poverty. But, for a variety of reasons, the large majority of these countries did not deliver egalitarian, inclusive development records over the last six decades. Expectedly then, it is not the case that all neighborhoods of large metropolitan areas of low income countries are equally inflicted by this environmental factor. Here, there is some benefit in looking at the colonial heritage of these modern nation states. For the many, the quarters formerly inhabited by the European merchants, technocrats and civil servants alongside their local protégés, were already equipped with clean water, sewage system health facilities and the like. But the outer city slums that have resulted from rural migration along the process of demographic transition to low mortality rates often become areas of intense viral activity of pandemics that thrive on high population density.

9 www.worldometers.info/coronavirus/#countries

10 www.medrxiv.org/content/10.1101/2020.04.06.20055657v1

The forgotten ones behind the numbers

To a large part, the result of programs aimed at rolling back the state have been detrimental to health outcomes in developing countries. A recent study found that between 1990 and 2011, globally in 28% of countries inequalities in health coverage have increased, and in 24% of countries, coverage among the poorest 40% of the population has decreased¹¹. Furthermore, inequalities in health status have increased in 42% of countries, and health status among the poorest 40% of the population deteriorated in 25% of countries.

The differential impact of the current pandemic on rich and poor countries reflects to a large extent the persisting differences in levels of health care coverage and access, the structure of labor markets and extent of labor market regulation, and the differences in the provision of social insurance, safety nets income support and food security. In the short run, income redistribution from rich to poor countries may help countries of the Global South to mitigate the devastating effects of the current pandemic. In the medium term, however, as the International Labor Organization argues¹², developing countries must refocus their efforts on developing social insurance, in promoting job creation and the transition of workers from the informal sector to an environmentally safe and regulated formal sector.

Pandemics affect individuals differently in rich and poor countries. In the Global South, the Covid-19 pandemic is likely to have particularly devastating effects on the particularly vulnerable groups, such as women, the disabled population, ethnic minorities, refugees and the poorest of the poor. In rethinking the role of the public sector of poor countries, it is to be remembered that the disease environment and the inadequate formal social safety nets of these countries fail to protect, and possibly further marginalize, vulnerable groups during times of crises such as the Covid-19 pandemic. Cost benefit exercises of future public spending (and cuts) must properly take into account subtle differences in life conditions of citizens of developing countries; subtle differences that may be buried behind crude statistics such as disease incidence headcounts.

11 Wagstaff A., Bredenkamp C. and Buisman L.R.: Progress on global health goals: are the poor being left behind? *World Bank Research Observer*. 2014; 29: 137-162.

12 International Labor Organization (2020): *Social Protection Responses to the Covid-19 Pandemic in Developing Countries: Strengthening Resilience by Building Universal Social Protection*.

www.ilo.org/seccoc/information-resources/publications-and-tools/Brochures/WCMS_744612/lang-en/index.htm

RESEARCH FOCUS

ASSESSING HEALTH SYSTEMS' CAPACITY TO COPE WITH THE COVID-19 PANDEMIC: EVIDENCE FROM THE MIDDLE-EAST AND NORTH AFRICAN COUNTRIES

By Mohammad Abu-Zaineh and Sameera Awawda

Mohammad ABU-ZAINEH



is Associate Professor of Health Economics at Aix-Marseille University. He is the founder and coordinator of AHEAD Research Network (www.ahead-network.org). He

held the INSERM-AMU Chair of Excellence in Health Economics (2013-2018). His areas of expertise include health economics; public economics and microeconometrics.

Sameera Awawda



holds a PhD in Economics from Aix-Marseille University (2015-2019). She is currently Research Assistant and coordinator-responsible for Communications in the

AHEAD Research Network. She worked as a research assistant at the French Research Institute for Development (IRD) in 2018-2019 and the Institute of Community and Public Health (ICPH), Birzeit University, Palestine (2013-2015). Her research interests include health economics, microsimulation and inequality measurement.

With the spread of COVID-19 pandemic to Middle-East and North African (MENA) region, many public health experts and international organizations expressed serious concerns about the capacity of the current health systems to contain such an infectious disease. While a variety of factors may affect the spread of any infectious disease, the health systems remain ultimately responsible for the early detection, prevention and treatment. We provide a preliminary assessment of the capacity of the health systems in a set of MENA countries to respond to the current pandemic using two mashup indices – previously proposed to measure countries' detection capacity, risk of, and vulnerability to, infectious diseases. First, the SPAR index, developed by the WHO (2018) to monitor countries implementation of international health regulations. For the purpose of this study, we estimate a sub-index that focuses on the detection capacity – measured as the average score of three main capacities: laboratory, surveillance and points of entry. Secondly, the infectious disease vulnerability index (IDVI), which measures countries' abilities to contain an infectious disease based on demographic, health, political, and economic factors that may affect the spread of infectious diseases. These indices range from 0-100 with 100 indicating highest capacity of the health system and lowest vulnerability to infectious diseases. We conclude by highlighting the importance of urgently undertaking particular measures that can help halt the transmission of the pandemic and to limit its drastic impact on the most vulnerable groups of the populations.

What the data tell us?

As of May 1st 2020, the total number of confirmed cases of COVID-19 reached 213 045 while the total number of deaths stood at 4 907 in the MENA region countries. Although most of the confirmed cases (69%) and deaths (84%) are concentrated in Turkey and Iran, the fatality rates remain relatively low in these two countries (2.6% and 6.4%, respectively) as compared to other countries in the region (e.g., Algeria: 11.2% and Egypt 7.1%).

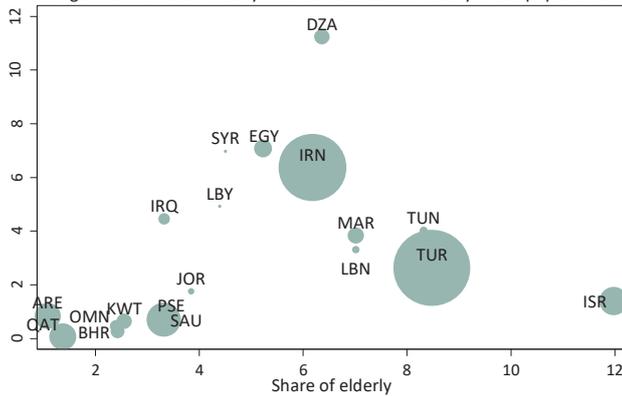
Available data from developed countries suggest that the fatality of COVID-19 depends to a large extent on the demographic structure of the population with more than 80% of fatalities being concentrated amongst the elderly. Although disaggregate data by age is hitherto not readily available in the MENA countries, reported figures suggest similar trends: with the exception of Israel and Turkey, COVID-19 fatalities appear to be higher in countries which have higher share of elderly (Figure 1). However, there are other factors that may explain the observed cross-country variations in the number of COVID-19 cases and fatalities. These may be related to the capacity of the health systems per se to cope with infectious diseases.

Figures 2 and 3 depict the COVID-19 prevalence and fatalities reported in each country against the capacity of the health systems – as measured by the SPAR index – and countries vulnerability to infectious disease – as measured by the IDVI index – respectively. As

shown in Figure 2, countries with high prevalence of COVID-19 appear to have higher capacity of the health system. Moreover, countries with high vulnerability to infectious diseases (low IDVI score) record higher fatalities (Figure 3).

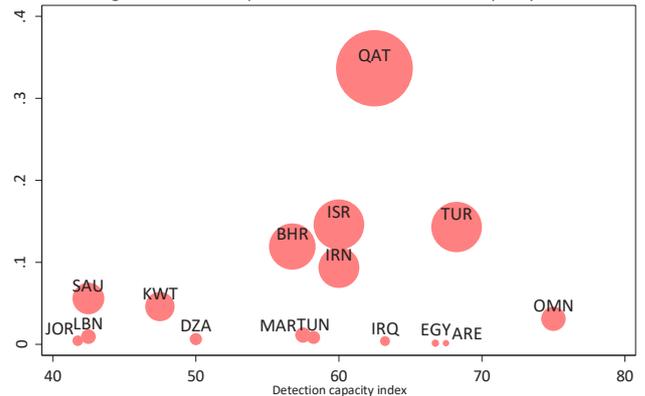
As soon as the IDVI index is broken down into its components (the risk factors), the health domain score emerges to be intimately associated with both the number of COVID-19 cases and fatalities. Figure 4 depicts the association between the health domain score and COVID-19 health outcomes in the MENA countries. As shown, countries with low health scores tend to have high fatality rates (e.g., Algeria and Egypt) indicating high vulnerability to infectious diseases. By contrast, countries with high health scores (e.g., Israel and Qatar) tend to have high number of cases (as reflected by the area of circles). This may indicate high detecting and testing capacity of the health systems.

Figure 1: COVID-19 fatality rate vs. the share of elderly in the population



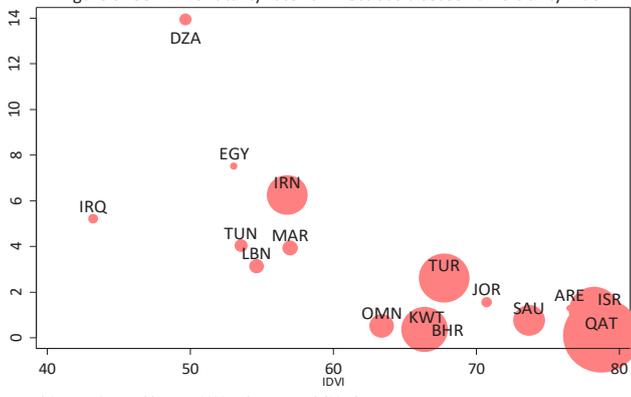
* Source: Our World in Data 2020 and World Development Indicators.
 ** Area of circles is proportional to number of COVID-19 confirmed cases as per 01/05/2020.

Figure 2: COVID-19 prevalence rate vs. detection capacity index



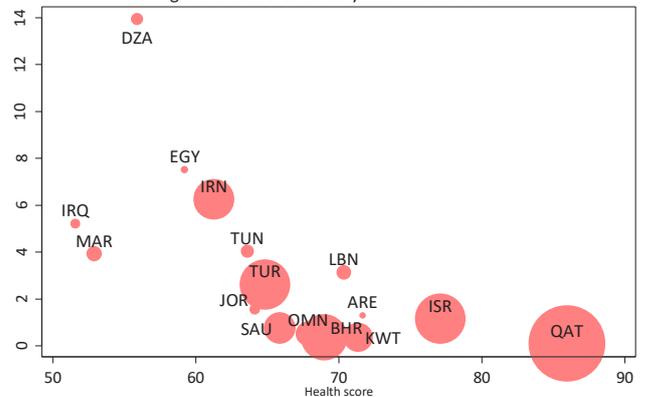
* Source: Our World in Data 2020 and WHO (2018).
 ** Area of circles is proportional to number of COVID-19 confirmed cases as per week 8.

Figure 3: COVID-19 fatality rate vs. infectious disease vulnerability index



* Source: Our World in Data 2020 and Moore et al. (2017).
 ** Area of circles is proportional to number of COVID-19 confirmed cases as per week 8.

Figure 4: COVID-19 fatality rate vs. health score



* Source: Our World in Data 2020 and Moore et al. (2017).
 ** Area of circles is proportional to number of COVID-19 confirmed cases as per week 8.

Although preliminary, reported results suggest that most of MENA countries are at moderate to high risk of the spread of COVID-19. Amongst the risk factors we study, the capacity of the health systems (as measured by the country's size of health workforce, health expenditures, health infrastructure and health status) emerge to be key in curbing the spread of the disease. All health sector stakeholders are urged to strengthen the capacity of the health systems to perform timely mass testing. This also entails implementing a set of targeted emergency responses that involve identifying, evaluating and properly addressing all risk

factors that are susceptible to be associated with the spread of COVID-19 pandemic. In parallel, a proper implementation of the means-tested benefits can help mitigate the adverse economic consequences of the pandemic on the most vulnerable groups of the populations who may incur the double disease burden (health and economic losses). Further research works are, of course, required to thoroughly comprehend the dynamics of the current pandemic, its determinants and consequences at the regional and international levels should more detailed data be available.



MEET THE AHEAD NETWORK RESEARCHERS



Ahcene Zehnati

is health economist, senior research fellow at the Centre de Recherche en Economie Appliquée pour le Développement (CREAD, Algiers) and associate researcher at the Laboratoire d'Économie de Dijon (LEDi) where he is member of the Health Economics Team (ESS). His Ph.D thesis, defended in 2014, was on the economic analysis of emergence and development of private health care in Algeria.

Interview with Ahcene Zehnati

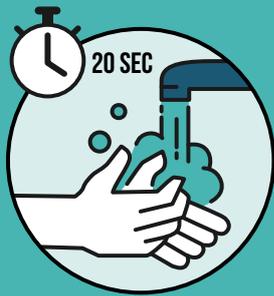
REFORMING THE HEALTH CARE SYSTEM IS KEY TO FACING THE CHALLENGES IMPOSED BY THE COVID-19 PANDEMIC

The Algerian health system has been in crisis during the last three decades. According to health sector stakeholders and users: the current health care system is obsolete. This is in addition to the absence of a national health plan that accounts for the population's health needs and the country's financial and non-financial resources. Although a significant progress in health outcomes (such as life expectancy) has been observed during the last three decades, such progress has, to a large extent, been attributed to the improvement in the living conditions rather than the performance of the health system per se.

The Algerian health system continues to rely heavily on private sources of funding mainly through direct out-of-pocket payments by households (including the insureds). The high health financial burden borne by households raises serious concerns about inequalities in health and access to health care services particularly in the public sector. Another important concern derives from the low compensations and the absence of financial and non-financial incentives of health workers in the public sector (whose salaries are 3 to 10 times lower than their counterparts in the private health sector). As in many developing countries, such deficiency has accelerated privatization, encouraged medical brain drain, dual practice in private clinics, and largely contributed to the deterioration of quality of care in the public health sector. Nonetheless, despite the notable increase in the number of doctors (15 doctors per 10,000 inhabitants in 2018), spatial inequalities in the distribution of health care services persist. For instance, physicians' density is found to be 5

times higher in the most endowed wilaya (department) than in the least endowed ones. These inequalities are even more pronounced in the distribution of private sector's clinics where about 80% of doctors are concentrated in the richest squares of wilayas.

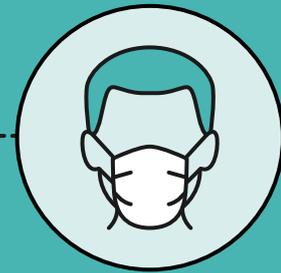
The lack of appropriate regulations of the private health sector providers laid the ground for much of the inadequate health care provision and the shortage of medical personnel in some of the country's departments. Indeed, private self-employed doctors are free to choose their practice location. The latter is often motivated by financial and personal incentives – rather than population's medical needs. Under such conditions, the outbreak of Covid-19 pandemic coupled with the sharp fall in oil prices – a main source of government revenues – pose a serious challenge to the Algerian health care system. In response to the Covid-19 pandemic, the government has promised to accelerate health sector reforms with new measures being undertaken. Among these are the revaluation of public health workers' salaries and the abolition of the civil service imposed on medical specialists prior to exercise. These measures, while decisive and welcome, may not be adequate to affect the current trends in physicians' professional choices. Financial incentives are certainly necessary to keep a motivated and productive medical staff, but remain inadequate. A national health plan is in need. Such a plan ought to address the spatial inequalities in the distribution of health care services through setting a comprehensive physician incentive program and integrating regional development policies, with the ultimate goal being the renovation of the health system overall.



**WASH YOUR HANDS
AT LEAST 20 SECONDS**



USE SOAP



WEAR MASK

RESEARCH PERSPECTIVE

CONTAINMENT AND HEALTH MEASURES TO LIMIT COVID-19 TRANSMISSION: SOCIAL EXPERIENCES IN FRANCE, ITALY AND THE USA IN THE TIME OF A PANDEMIC

By Kelley Sams

Living through this pandemic and its related containment measures is new for all of us. As a social scientist whose research examines on health, I find it particularly interesting to see the social impacts of illness emerging as a mainstream focus. Researchers are no longer the only ones discussing how health crises can change society. A few minutes spent on the internet and I see that the whole world is now involved in these reflections. Together we are witnessing how COVID-19 and its related containment measures are creating new forms of sociability, ways of mourning loss, approaches to education, recreation, and celebration.

Kelley Sams



is Visiting Research Faculty at the University of Florida's Center for Arts in Medicine. She was previously a post-doctoral researcher in social anthropology and global health at the Norbert Elias Center/CNRS/EHESS in Marseille, France and a Fulbright-Hays fellow.

I am writing this from my new home office in Gainesville, Florida, which is also my kitchen. Yesterday, the president of the country where I live announced that he is freezing the country's contribution to the World Health Organization because he does not approve of how the agency is handling the crisis. Just two months ago, he called the virus a hoax. Central Park is now home to a tent hospital as New York City struggles to provide care for many of the 1:76 residents who have tested positive for the virus. My local grocery store has been out of toilet paper and flour now for almost a month. For the past five weeks the city's mayor has advised us to stay at home as much as possible. I have already been invited to one birthday party where I sat in my kitchen/office and stared into my laptop. A friend of mine attended a funeral that took place in a similar way. Neither seemed to me to evoke the emotion they were intended to spark.

On the subject of Zoom birthday parties and funerals, this is how my professional meetings take place now too. Staring into a small screens for hours is becoming a necessity more than ever before. Working in this way, connecting through the screens of videoconferencing and WhatsApp groups, I have kept in touch with colleagues from throughout the world who are navigating this pandemic in their different contexts. We are all going through something that is the same, yet also different in many ways.

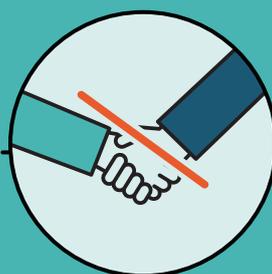
Two of these colleagues, Marc Egrot (IRD/LPED) and Sandrine Musso (AMU/CNE) recently invited me to join them and four other researchers (Chiara Alfieri, Fleur Beauvieux, Firman Kra, Francesca Mininel) in COMESCOV, a research project to empirically document and analyze social experiences related to health measures (containment, isolation, distancing, protection, etc.) related to COVID-19 in France, Italy, and the USA. This project, led by the Institute of Research for Development is funded by the ANR and REACTing. It will work closely with other social science research on the pandemic including CORAF (Anthropologie de l'Expérience du Confinement pour le Coronavirus: <https://shsebola.hypotheses.org/projets-inter-pays>) led by Alice Desclaux (IRD/CRCF), Khoudia Sow (IRD/CRCF), and Blandine Bila (IRSS/CNRST), that focuses on COVID-19 in Africa.

COMESCOV amplifies and extends a project that was originally intended to analyze the experiences of French citizens evacuated from Wuhan, China at the beginning of the COVID-19 epidemic. As members of societies living through this crisis as well as researchers shaping this project, we have adapted and expanded our protocol of investigation to fit the current context and will continue to tailor it as we move through the

evolution of the crisis. I am delighted to contribute a US perspective to this work and explore how people living in the US are reacting to the particular social landscape of the pandemic here. This will be complemented by other fieldwork done in France and Italy.

For this study, I will conduct interviews and take photographs to document and analyze: 1) Daily practices of protection against COVID-19 (behaviors-how people shop for food, stay safe when leaving their homes, etc., the substances and material objects that they use to avoid infection); 2) Conceptions of risk and construction of knowledge about the pandemic and related health measures (how trust is constructed around information, how politics influence interpretation, etc.); 3) Practices related to sociability, self-care, funerals, and childrearing during the pandemic; and 4) The evolution of the political context and health measures as well as their interpretation and application by political and social actors.

After having lived and worked in France for almost eight years, I'm happy to continue to contribute to international multi-sited research and to be reunited with some of my favorite former colleagues. This public health crisis can serve as an opportunity to identify ways to enact collective change. Since I've been living back in the US for the past two years, I am painfully aware of the political and social differences in this country that are shaping the impacts of the epidemic and its related measures of control. My goal for this research is to highlight how individuals negotiate these constraints and create resilience, with the hope that this comparative research approach can support sustainable social and political transformation.

**AVOID CROWDS****AVOID HANDSHAKE****DISINFECT CONTACT ELEMENTS**

AHEAD NETWORK NEWS

➤ AHEAD Working Papers

Awawda, S. and Abu-Zaineh, M. (2019). *An operationalizing theoretical framework for the analysis of universal health coverage reforms: First test on an archetype developing economy*. AHEAD Working Paper 01/2019.

Zehnati, AHCÈNE (2020). *Main determinants of private physicians' location in Algeria. An empirical study*. AHEAD Working Paper 01/2020.

➤ Selected Recent Publications of AHEAD Network Members

Abdulrahim, S. & Bousmah, Q-M. (2019). *Regional inequalities in maternal and neonatal health services in Iraq and Syria in the decade before ISIS*. *International Journal of Health Services Research*, 49(3): 623-641.

Abdulrahim, S., El Rafei, R., Beydoun, Z., Nakad, P., Yunis, K. (2019). *A test of the epidemiological paradox in a context of forced migration: LBW among Syrian neonates born in Lebanon*. *International Journal of Epidemiology*, 48(1): 275-286.

Abul Naga, H. R., Stapenhurst, C. and Yalonetzky, G. (2020). *Asymptotic versus Bootstrap Inference for Inequality Indices of the Cumulative Distribution Function*. *Econometrics*, 8(1).

Abu-Zaineh, M., Awawda, S. & Ventelou, B. "Who bears the burden of Universal Health Coverage? An assessment of alternative financing policies using an overlapping-generations general equilibrium model". 2020. (Forthcoming in *Health Policy and Planning*).

Bouclaous C., Alrazim A., Chababi J., Jamaledine W., Nassar E., Maalouf A., Dakour Aridy S., Naccache M., Abboud DM., Assi M., Slika M. *Association between sources of sexuality education, sexual beliefs and behaviors in Lebanese young adults: A university-based cross-sectional study*. *Sex Education*, 2020.

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The Allied Health, Environment and Development Research Network Research Network (AHEAD) unites researchers in various research disciplines (economics, epidemiology, public health, sociology of health, ecology and environment...) from both developed and developing countries on current topics relating to health, environment, and development. The network seeks to identify, in a multidisciplinary manner, the interactions between health and environmental issues and to integrate sustainable development goals into public policies in developing countries with a particular focus on the Middle East and North African Region (MENA) and Sub-Saharan Africa (SSA). The AHEAD Network aims to facilitate scientific exchange between researchers and to help pool together existing knowledge on questions relating to health, environment and development.



Allied Health, Environment and
Development Research Network

AHEAD Newsletter

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June 2020 edition

AHEAD wish to thank