



# The effects of COVID-19 on the health and socio-economic security of sex workers in Nairobi, Kenya: Emerging intersections with HIV

Joshua Kimani , Joyce Adhiambo , Rosemary Kasiba , Peninah Mwangi , Veronica Were , John Mathenge , Pascal Macharia , Francois Cholette , Samantha Moore , Souradet Shaw , Marissa Becker , Helgar Musyoki , Parinita Bhattacharjee , Stephen Moses , Keith R. Fowke , Lyle R. McKinnon & Robert Lorway

To cite this article: Joshua Kimani , Joyce Adhiambo , Rosemary Kasiba , Peninah Mwangi , Veronica Were , John Mathenge , Pascal Macharia , Francois Cholette , Samantha Moore , Souradet Shaw , Marissa Becker , Helgar Musyoki , Parinita Bhattacharjee , Stephen Moses , Keith R. Fowke , Lyle R. McKinnon & Robert Lorway (2020) The effects of COVID-19 on the health and socio-economic security of sex workers in Nairobi, Kenya: Emerging intersections with HIV, *Global Public Health*, 15:7, 1073-1082, DOI: [10.1080/17441692.2020.1770831](https://doi.org/10.1080/17441692.2020.1770831)

To link to this article: <https://doi.org/10.1080/17441692.2020.1770831>



Published online: 27 May 2020.



Submit your article to this journal [↗](#)



Article views: 3898



View related articles [↗](#)



View Crossmark data [↗](#)




Citing articles: 8 View citing articles [↗](#)

COMMENTARY



## The effects of COVID-19 on the health and socio-economic security of sex workers in Nairobi, Kenya: Emerging intersections with HIV

Joshua Kimani<sup>a,b,c,i</sup>, Joyce Adhiambo<sup>c</sup>, Rosemary Kasiba<sup>c</sup>, Peninah Mwangi<sup>d</sup>, Veronica Were<sup>c</sup>, John Mathenge<sup>e</sup>, Pascal Macharia<sup>e</sup>, Francois Cholette<sup>a</sup>, Samantha Moore<sup>f</sup>, Souradet Shaw<sup>f</sup>, Marissa Becker <sup>a,f,h</sup>, Helgar Musyoki<sup>h</sup>, Parinita Bhattacharjee<sup>f,i</sup>, Stephen Moses<sup>a,f</sup>, Keith R. Fowke<sup>a,b,g,i</sup>, Lyle R. McKinnon<sup>a,b,g,j\*</sup> and Robert Lorway<sup>f,g\*</sup>

<sup>a</sup>Department of Medical Microbiology and Infectious Diseases, University of Manitoba, Winnipeg, Canada;

<sup>b</sup>Department of Medical Microbiology, University of Nairobi, Nairobi, Kenya; <sup>c</sup>Sex Worker Outreach Program (SWOP), Nairobi, Kenya; <sup>d</sup>Bar Hostess Empowerment and Support Programme (BHESP), Nairobi, Kenya; <sup>e</sup>Health Options for Young Men on HIV/AIDS/STI (HOYMAS), Nairobi, Kenya; <sup>f</sup>Institute for Global Public Health (IGPH), University of Manitoba, Winnipeg, Canada; <sup>g</sup>Department of Community Health Sciences, University of Manitoba, Winnipeg, Canada; <sup>h</sup>National AIDS and STI Control Programme (NASCOP), Ministry of Health, Nairobi, Kenya; <sup>i</sup>Partners for Health and Development in Africa (PHDA), Nairobi, Kenya; <sup>j</sup>Centre for the AIDS Programme of Research in South Africa (CAPRISA)

### ABSTRACT

The COVID-19 pandemic, and its attendant responses, has led to massive health, social, and economic challenges on a global scale. While, so far, having a relatively low burden of COVID-19 infection, it is the response in lower- and middle- income countries that has had particularly dire consequences for impoverished populations such as sex workers, many of whom rely on regular income in the informal economic sector to survive. This commentary captures the challenges in Kenya posed by daily curfews and lost economic income, coupled with further changes to sex work that increase potential exposure to infection, stigmatisation, violence, and various health concerns. It also highlights the ways in which communities and programmes have demonstrated resourcefulness in responding to this unprecedented disruption in order to emerge healthy when COVID-19, and the measures to contain it, subside.

### KEYWORDS

COVID-19; sex workers; Africa; public health response; stigma

### Introduction: the COVID-19 pandemic

Since its emergence in late 2019 and rapid spread to more than 210 countries and territories, COVID-19 (caused by SARS-CoV-2 virus) has been diagnosed in ~ 4.4 million and killed >295,000 individuals (as of 13 May 2020, <https://www.worldometers.info/coronavirus/>). In addition to the health complications, the relatively high reproductive number ( $R_0$ ) of the virus (Zhang et al., 2020), driven in part by the infectiousness of pre-symptomatic and asymptomatic individuals, is contributing to the efficient person-to-person spread of the infection. This has caused unparalleled health systems and economic disruptions across the globe. To counter the rapid transmission of COVID-19 in populations, governments across the world have responded at varying speeds by introducing public health interventions such as international and domestic travel restrictions accompanied by increased border controls; massive scale up of testing and contact tracing;

**CONTACT** Lyle R. McKinnon  [lyle.mckinnon@umanitoba.ca](mailto:lyle.mckinnon@umanitoba.ca)  Department of Medical Microbiology and Infectious Diseases, University of Manitoba, 504-745 Bannatyne Ave, Winnipeg, MB, Canada R3M 1N4

\*Contributed equally to the development of the manuscript

promotion of regular hand washing or sanitising, physical and/or social distancing; and in some cases, the declaration of states of emergency followed by curfews and complete lockdowns. Unemployment rates in economically advantaged countries have soared to unprecedented levels as non-essential businesses have been forced to shut down or severely limit their operations in many jurisdictions. To cover this period of recession, the Kenyan government has rolled-out massive social and economic welfare programmes, however there is growing criticism that these programmes are limited in scope—both in terms of eligibility and geographic coverage.

As members of a research and intervention team whose delivery of sexual health programs to Kenyan sex workers traces back to the days of fighting chancroid<sup>1</sup> outbreaks in the early 1980s (Booth, 2004; Krotz, 2012), we raise concern around the profound immediate effects that state-imposed restrictions are beginning to have, in the era of COVID-19, on a group that already endures considerable barriers to health and wellbeing. Stories have begun to emerge in our ongoing virtual group discussions (driven by sex worker leaders in dialogue with allied health officials, programme implementers and scientific experts who comprise our team) that help bring to light the less visible lived-realities of sex workers that tend to be overlooked in this time of crisis.

## COVID-19 in Africa

At the time of writing, the COVID-19 pandemic has yet to firmly take hold in Africa, although numbers have recently begun to increase, with ~72,000 cases (as of 13 May 2020). However, some mathematical models forecast more than 300,000 cases by the end of the year (with some estimates suggesting over 1 million deaths on the continent) (United Nations, 2020). Indeed, there has been much speculation about how the COVID-19 epidemic will unfold in Africa, ranging from better than expected (i.e. that the epidemic will likely remain smaller in scale given younger age demographics, more drastic interventions undertaken and/or warmer weather) to worse (i.e. it poses a major public health threat, given the inadequacies in health care infrastructures and the large proportion of people living in conditions of poverty and overcrowding, especially in urban settings). This is compounded by the fact that many health care systems in Africa (and elsewhere) were poorly prepared for COVID-19, with critical care wards and protective gear that were insufficient to deal with an influx of serious cases. To mitigate worst-case scenarios, many African countries such as Kenya have implemented aggressive measures recommended by the World Health Organisation to proactively limit the expansion of COVID-19. These include rigid and abrupt stay-at-home measures enforced through curfews and lockdowns, disrupting the social and economic lives of many communities. Most severely affected by the movement cessations are the urban poor who reside in the informal settlements. For them, food insecurity is emerging as a major struggle, leading many to seek casual labour in the streets to feed their families, which has culminated in violent altercations, riots, and police brutality as officers enforce the curfew and lockdown. Although ‘flattening the curve’ has become a major clarion call globally, in Kenya and most African countries a full lock-down, even in the short term, holds limited feasibility, as a high proportion of Kenyans are employed in the informal sector (Corburn et al., 2020). Most are daily wage earners, have no savings, and therefore need to work regularly to meet their basic needs.

Sex workers represent an important group that exemplifies the vulnerability of workers in the informal labour sector. Most female and male sex workers run their business at night and, therefore, face the stark realities of entertainment hotspots closures, strict curfew hours, cessation of movements, and promotion of physical distancing with fines and police violence for those who violate the new regulations—all of which have been accompanied by a general financial downturn. The understandably stringent public health measures taken to limit the COVID-19 epidemic in Kenya have gravely impacted sex workers’ livelihoods, leading to unintended fallout including a series of interrelated negative socio-economic and health-related outcomes.

## Changes in the operation of the sex work industry

Although increasingly moving to online platforms (especially for younger sex workers), sex work in Kenya largely operates in public ‘hot spots’ such as bars, hotels, brothels, sex dens and night clubs where clients and sex workers can meet, usually at night (Lorway et al., 2018; NASCOP, 2019). However, on 27 March 2020, Kenya implemented a strict daily curfew from 7pm until 5am, which closed these hotspots and prohibited gathering in groups. On 6 April 2020, a cessation of movement order was imposed in Nairobi, Mombasa, Kilifi and Kwale, requiring special approval to travel within and between county boundaries. The curfew hours, closure of hot spots, and restriction of movement and assembly, coupled with general physical distancing, dealt a devastating blow to the sex industry.

Sex workers have attempted to adapt to these changing conditions, but with many challenges to overcome. Due to the curfew, some sex workers have attempted to bring clients to their homes. However, given the crowded contexts of informal settlements where little privacy is afforded, and when neighbours notice new people entering and exiting, sex workers have been openly chastised for breaking physical distancing rules and placing their communities at further risk for COVID-19. The alternative strategy of sex workers going to the clients’ homes has also posed major problems. Sex workers have less control over their environment in a client’s home and also do not benefit from any protection provided by other sex workers, bartenders, bouncers, etc., who can act as ‘sisters’ keepers’ in hotspots (Lorway et al., 2018). When they visit clients’ homes, sex workers are vulnerable to physical and sexual violence and not being paid as agreed. Some male clients keep them past curfew hours, which effectively forces them to stay for the night. The men then try to factor in ‘providing a place to sleep’, food, etc., and attempt to deduct it from the cost of sex. This has led to disagreements, fights, and even sexual violence.

The curfew also has led sex workers to solicit clients at challenging times, either in the early morning (prior to the formal workday), or during the day, in the hours leading up to the curfew at 7pm. As sex workers generally must work around the schedule of clients, they often miss curfew timelines and, therefore, become susceptible to police violence and harassment while in transit. In recent weeks, this has worsened. At the beginning of the curfew, anyone who violated the curfew hours were taken to quarantine centres at their own expense (the Kenyan government is now apparently covering these expenses). Some sex workers have reported during the initial period being forced to secure their freedom from curfew-related persecution through unprotected sex as demanded by law enforcement agents. Sex workers who live in brothels have been arrested and taken into quarantine centres (Maundu, 2020), even when police find them in bed alone. In the case of migrant sex workers, many have been deserted by their ‘minders’ (employers), which exposes them to further violence. Unfortunately, peer sex workers trained as paralegals to protect the human rights of sex workers have a limited ability to combat the abuses surrounding the curfew, as the quarantine system bypasses and supersedes any judicial procedures or due process.

In general, sex workers, like other daily wage earners, have suffered major losses in income. Many have reported that their long-time, regular clients now refuse to buy sex from them, thereby cutting the flow of a once stable source of revenue. Because sex work in Kenya continues to be both criminalised and highly stigmatised, sex workers have so far faced severe difficulties in accessing financial support offered through government social protection schemes. This is in part due to fear of disclosing sex work as a profession. Moreover, alternative sources of income such as hair dressing in salons, working in massage parlours, and serving in nightclubs and restaurants have dried up amid government shutdowns of non-essential businesses. Lesser paying labour such as working as domestic help has also taken a major hit; many upper- and middle-class Kenyans have let go of their daytime domestic workers for fear that they would bring COVID-19 into their homes. Because many female sex workers are young single parents with children to feed, they are now living under particularly dire economic circumstances. Male sex workers, many of whom have female partners and children, similarly suffer the brunt of the economic downturn due to their lack of access to clients. Street-based sex workers and houseless sex workers, because of the curfew, can no longer sleep in public places like

parks and, because of the relative collapse of their industry, are unable to afford rent or alternative forms of shelter. This makes them further vulnerable to harassment and exploitation at the hands of law enforcement officers.

### **COVID-HIV intersectional stigma**

In the era of COVID-19, we are beginning to see new forms of social stigmatisation that build on older portrayals of sex workers as vectors of contagion. The literature is awash with examples of socially embedded forms of stigma and discrimination that sex workers have historically endured (see for example: Pfeiffer & Maithya, 2018; White, 2009), which became even more heightened in the era of HIV. Although sex work in Kenya has been, since the colonial period, a relatively normalised way in which some African women earn a living, accumulate property, and evade poverty and enforced marriage (White, 2009), the HIV epidemic has sparked forms of stigma and moral panic directed towards women selling sex, especially among religious leaders. Combatting stigma comprises a major part of the HIV response led by health officials, civil society leaders, health scientists and frontline workers. Anti-stigma work is certainly crucial for connecting marginalised sex workers to vital health services, including antiretroviral therapy for those living with HIV (Nyblade et al., 2017). This prior history of HIV stigma has made sex workers in the time of COVID-19 the ready-made scapegoats for the spread of the virus, with accusations of blame as drivers of the epidemic being hurled at them by their neighbours in the crowded contexts of informal settlements. In this way, COVID-19 reinforces and deepens pre-existing stigmas that sex workers already suffer, while also undermining the effectiveness of current HIV anti-stigma campaigns that are crucial for improving and maintaining access to sexual health services. These forms of intersecting stigmas, coupled with the fear of having to pay for state-mandated accommodations in COVID-19 quarantine facilities (in the initial stages of the curfew), not only inhibit sex workers from accessing sexual health services, but may also intensify reluctance to seek COVID-19 testing, in the event of manifesting symptoms. Further research is required to more fully understand the immediate effects of stigmatisation on sex workers' health seeking practices.

### **Health services challenges and responses**

Shouldering the burden of the HIV epidemic in Kenya, sex workers living with HIV are greatly concerned that their prior condition, with its negative effects on their immune system, will make them especially vulnerable to contracting COVID-19 and, as a result, will suffer more progressive illness. While a negative COVID-19-HIV interaction has yet to appear in the initial case reports from other countries (Richardson et al., 2020; Blanco et al., 2020; Zhu et al., 2020), the plausibility of this concern is clearly warranted. As such, clinics and community-based organisations (CBOs) have remained open and are providing ART to all sex workers undergoing treatment, with some reports that COVID-related worries have actually improved adherence. However, it remains critical at this time to continue to monitor sex workers' access to health and social services that address the underlying conditions that make them susceptible to HIV infection. There is an emerging concern that while HIV treatment is more readily covered, HIV prevention services may be more difficult to access because of its dependence upon hotspot-based outreach, which is no longer possible to execute with the closures. Combined with changing sexual network patterns, this could lead to increases in HIV incidence during this crisis.

Since the 1980s, HIV interventions in Nairobi have integrated peer-based educational components that are tied to the combined research-service delivery approaches led by Kenyan and North American scientists and health promotion specialists (Booth, 2004; Ngugi et al., 1996). The intimate collaborations that formed between sex worker leaders, HIV experts and health officials furnished the space in which community-based organisations and activist collectives run by and for sex workers could take control over the distribution of safer sex resources (i.e. condoms and

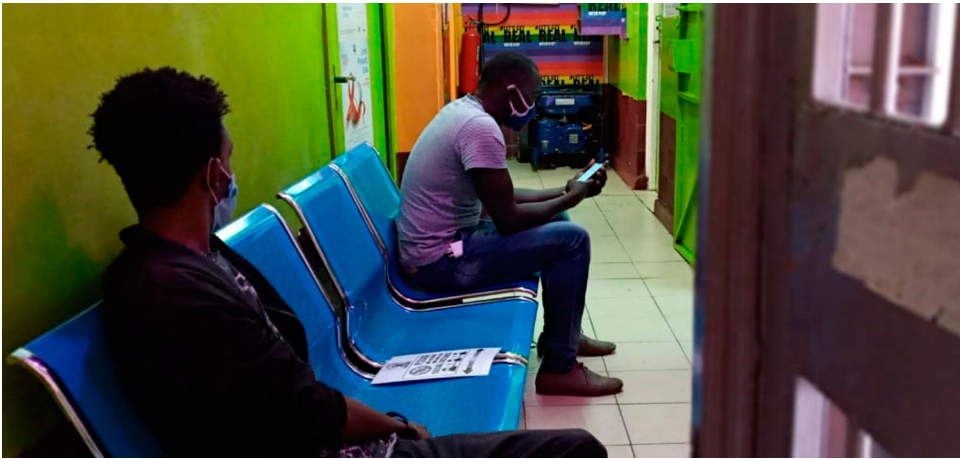
lubricants) and the process of linking peers to STI/HIV testing, education, counselling, and treatment services (Lorway, *in press*). Although sex worker programmes based in Nairobi continue to maintain their delivery of sexual health services, staff and peer health workers have had to make a number of modifications to their health service delivery procedures. First, while sex worker clinics normally operate as community drop-in centres, they now currently run their services primarily by appointment, placing limits on the number of people permitted inside the clinic at any given time to maintain physical distancing guidelines. Furthermore, the staff have been supplied with PPE, sanitisers, or hand washing centres and temperature checks at the entry. Peer outreach work, which has been instrumental to linking marginalised sex workers to HIV prevention and care services, has also been modified to minimise physical contact. Instead of direct face-to-face meetings with members, peer outreach workers regularly communicate with community members by cell phone or by WhatsApp groups, the latter of which provides an effective knowledge sharing forum for updating the community on COVID-related information and for hearing and addressing members' emergent needs. Furthermore, community health workers have taken the lead in training staff in new protective procedures, setting up washing stations, and establishing new norms around maintaining physical distance in waiting areas (see [Figures 1 and 2](#)).

Sex worker programmes have also begun to address the growing need expressed by sex workers around violence. Globally, we are witnessing rising reports of intimate partner violence (IPV) that accompany the confinement of people to their living quarters (Bradbury-Jones & Isham, 2020)—the incidents of which may be amplified in overcrowded informal settlements. Although IPV is not a new phenomenon for sex workers (see, e.g. for Pack et al., 2014; Winter et al., 2020), and Kenya possesses well-established networks of NGOs that specifically respond to gender-based violence, including IPV (Ondicho, 2018), the state has closed many of the faith-based rescue centres, leading excess case-management burden to fall on sex worker-led organisations. Such organisations do not possess the specialized training and resources to effectively respond to the increased urgency of members around IPV.

Given the myriad social and economic challenges, disruptions, and forms of violence facing sex workers in era of COVID-19, the demand for mental health services has grown dramatically. Accordingly, sex worker programmes have re-organised their counselling services to operate by phone. The greatest source of distress that counsellors, peer educators and other frontline health workers are hearing from sex workers relates to food insecurity. After receiving funding from UHAI-EASHRI,<sup>2</sup> sex work leaders organised the purchase and distribution of food vouchers valued at 1,500 Ksh (\$14 US) per member for the purchase groceries (see [Figures 3 and 4](#)).



**Figure 1a and b.** HOYMAS (Health Options for Young Men against STIs) staff training session practice physical distancing while learning about protective procedures and the proper use of a handwashing station in a CBO.



**Figure 2.** Members following new physical distancing measures in clinic.



**Figure 3.** BHESP (Bar Hostess Empowerment and Support Programme) peer educators prepare food packages for distribution to members.

Another strategy adopted by the peer leaders is taking part in the distribution and selling of personal protective equipment (PPE). Sex workers in the community who have skills as tailors have begun to make masks, which they, and other members, then sell to the general public. Sex workers have also started purchasing sanitiser in bulk, filling small bottles normally used to store pills before giving them to members to use or to sell to the public (see [Figure 5](#)). Given the hit that the sex work industry has taken, these sales generate much-needed income.

Our governmental partners working in the Kenyan Ministry of Health through the National AIDS and STI Control Programme (NASCOP), which governs the key population HIV response for Kenya, has also demonstrated leadership in responding to the emergent needs of sex workers



**Figure 4.** Gift vouchers for community members to purchase groceries.

in the time of COVID-19. They are currently working to maintain the supply chain of prevention commodities; ensuring that medically-assisted therapy (MAT) (i.e. methadone) for people using substances and ART programmes are operational and adherent to COVID-19 protocols; advocating for the greater recognition of needs and inclusion of sex workers in social protection plans; and setting up virtual communication forums for partners to share their concerns and exchange strategies. Given that global funders expect sex worker clinical staff to still maintain their regular targets during the COVID-19 crisis—even amid the various resource constraints and other challenges our implementing partners are facing—NASCOP is an important advocate with funders to permit flexibility in funding reallocation toward setting standards for service delivery, the purchase of PPE, additional cell phone airtime for staff, and resources for mobiles health services during these unprecedented times.

## Conclusion

Globally, the COVID-19 pandemic and the deployment of state-administered public health responses have generated profound disruptions to the economic and social lives of people. Although African nations so far have been fortunate enough to avoid the heavy burden of disease as compared to economically-privileged regions in the world; they have, however, imposed what some might consider to be more Draconian public health responses that severely restrict the social and economic freedoms of its citizens—a reality that is disproportionately shouldered by the urban poor (Corburn





**Figure 5.** Peer educators prepare small bottles of sanitiser to give to members and sell to the general public.

et al., 2020). Although sex workers are already socially and economically marginalised, the pre-existence of mature HIV programmes in Kenya provides an important foundation on which sex workers are resilient and have been able to swiftly identify and respond to their community's health needs, which include HIV as well as COVID-19-related concerns. Innovative strategies launched by sex worker leaders and peer health workers, who worked tirelessly to implement new health protective guidelines within CBO and clinical spaces, sometimes under extremely challenging conditions, are especially instructive with respect to how we can handle future epidemics (UNAIDS, 2020; Hargreaves et al., 2020).

## Notes

1. Chancroid is a type of genital ulcerative disease.
2. This entity is an activist-led and managed fund for African sex workers and sexual and gender minorities, sponsored by the Astraea Lesbian Foundation for Justice based in the US.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

This work was supported by U.S. President's Emergency Plan for AIDS Relief: [Grant Number 3U62PS024510-03W1].

## ORCID

Marissa Becker  <http://orcid.org/0000-0002-9235-0547>

## References

- Blanco, J. L., Ambrosioni, J., Garcia, F., Martínez, E., Soriano, A., Mallolas, J., & Miro, J. M. (2020). COVID-19 in patients with HIV: Clinical case series. *The Lancet HIV*, published online April 15. [https://doi.org/10.1016/S2352-3018\(20\)30111-9](https://doi.org/10.1016/S2352-3018(20)30111-9).
- Booth, K. M. (2004). *Local women, global science: Fighting AIDS in Kenya*. Indiana University Press.
- Bradbury-Jones, C., & Isham, L. (2020). The pandemic paradox: The consequences of COVID-19 on domestic violence. *Journal of Clinical Nursing*, published online April 12. <https://doi.org/10.1111/jocn.15296>.
- Corburn, J., Vlahov, D., Mberu, B., Riley, L., Caiiaffa, W. T., Rashid, S. F., Ko, A., Patel, S., Jukur, S., Martínez-Herrera, E., Jayasinghe, S., Agarwal, S., Nguendo-Yongsi, B., Weru, J., Ouma, S., Edmundo, K., Oni, T., & Ayad, H. (2020). Slum health: Arresting COVID-19 and improving well-being in urban informal settlements. *Journal of Urban Health*, published online April 23. <https://doi.org/10.1007/s11524-020-00438-6>.
- Hargreaves, J., Davey, C., Auerbach, J., Blanchard, J., Bond, V., Bonell, C., Burgess, R., Busza, J., Colbourn, T., Cowan, F., Doyle, A., Hakim, J., Hensen, B., Hosseinipour, M., Lin, L., Johnson, S., Masuka, N., Mavhu, W., Mugurungi, O., ... Yekeye, R. (2020). Three lessons for the COVID-19 response from pandemic HIV. *The Lancet HIV*, published online April 13. [https://doi.org/10.1016/S2352-3018\(20\)30110-7](https://doi.org/10.1016/S2352-3018(20)30110-7).
- Krotz, L. (2012). *Piecing the puzzle: The genesis of AIDS research in Africa*. Univ. of Manitoba Press.
- Lorway, R. (in press). Experimental Entanglements: Surveillance science, sex worker activism, and evidentiary politics in Kenya. *Medical Anthropology Quarterly*.
- Lorway, R., Lazarus, L., Chevriér, C., Khan, S., Musyoki, H. K., Mathenge, J., Mwangi, P., Macharia, P., Bhattacharjee, P., Isac, S., Kimani, J., Gaaki, G., Becker, M., Moses, S., & Blanchard, J. (2018). Ecologies of security: On the everyday security tactics of female sex workers in Nairobi, Kenya. *Global Public Health*, 13(12), 1767–1780. <https://doi.org/10.1080/17441692.2018.1442487>
- Maundu, P. (2020, April 21). COVID-19: 24 sex workers arrested, to be quarantined. *The Daily Nation*, <https://www.nation.co.ke/counties/makueni/Covid-19-24-sex-workers-to-be-quarantined/1183294-5530086-9sjiqz/index.html>.
- National AIDS and STI Control Programme (NASCOPI). (2019). *Key population size estimation report*. Kenyan Ministry of Health.
- Ngugi, E. N., Wilson, D., Sebstad, J., Plummer, F. A., & Moses, S. (1996). Focused peer-mediated educational programs among female sex workers to reduce sexually transmitted disease and human immunodeficiency virus transmission in Kenya and Zimbabwe. *Journal of Infectious Diseases*, 174(S2), S240–S247. [https://doi.org/10.1093/infdis/174.Supplement\\_2.S240](https://doi.org/10.1093/infdis/174.Supplement_2.S240)
- Nyblade, L., Reddy, A., Mbot, D., Kraemer, J., Stockton, M., Kemunto, C., Krotki, K., Morla, J., Njuguna, S., Dutta, A., & Barker, C. (2017). The relationship between health worker stigma and uptake of HIV counseling and testing and utilization of non-HIV health services: The experience of male and female sex workers in Kenya. *AIDS Care*, 29(11), 1364–1372. <https://doi.org/10.1080/09540121.2017.1307922>
- Ondicho, T. G. (2018). Violence against women in Kenya: A public health problem. *International Journal of Development and Sustainability*, 7(6), 2030, 2047.
- Pack, A. P., L'Engle, K., Mwarogo, P., & Kingola, N. (2014). Intimate partner violence against female sex workers in Mombasa, Kenya. *Culture, Health & Sexuality*, 16(3), 217–230. <https://doi.org/10.1080/13691058.2013.857046>
- Pfeiffer, E. J., & Maithya, H. M. (2018). Bewitching sex workers, blaming wives: HIV/AIDS, stigma, and the gender politics of panic in western Kenya. *Global Public Health*, 13(2), 234–248. <https://doi.org/10.1080/17441692.2016.1215484>
- Richardson, S., Hirsch, J. S., Narasimhan, M., Crawford, J. M., McGinn, T., Davidson, K. W., Barnaby, D. P., Becker, L. B., Chelico, J. D., Cohen, S. L., Cookingham, J., Coppa, K., Diefenbach, M. A., Dominello, A. J., Duer-Hefele, J., Falzon, L., Gitlin, J., Hajizadeh, N., Harvin, T. G., ... Zanos, T. P. (2020). Presenting characteristics, comorbidities, and outcomes among 5700 patients hospitalized with COVID-19 in the New York City area. *JAMA*, published online April 22. <https://doi.org/10.1001/jama.2020.6775>.
- UNAIDS. (2020). *Rights in the time of COVID-19 — Lessons from HIV for an effective, community-led response*. [https://www.unaids.org/sites/default/files/media\\_asset/human-rights-and-covid-19\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/human-rights-and-covid-19_en.pdf).
- United Nations, Economic Commission for Africa. (2020). *COVID-19 in Africa: Protecting lives and economies*. [https://www.uneca.org/sites/default/files/PublicationFiles/eca\\_covid\\_report\\_en\\_rev16april\\_5web.pdf](https://www.uneca.org/sites/default/files/PublicationFiles/eca_covid_report_en_rev16april_5web.pdf).
- White, L. (2009). *The comforts of home: Prostitution in colonial Nairobi*. University of Chicago Press.
- Winter, S. C., Obara, L. M., & McMahan, S. (2020). Intimate partner violence: A key correlate of women's physical and mental health in informal settlements in Nairobi, Kenya. *PLoS One*, 15(4), published April 2. <https://doi.org/10.1371/journal.pone.0230894>.

- Zhang, S., Diao, M., Yu, W., Pei, L., Lin, Z., & Chen, D. (2020). Estimation of the reproductive number of novel coronavirus (COVID-19) and the probable outbreak size on the diamond princess cruise ship: A data-driven analysis. *International Journal of Infectious Diseases*, 93, 201–204. <https://doi.org/10.1016/j.ijid.2020.02.033>
- Zhu, F., Cao, Y., Xu, S., & Zhou, M. (2020). Reply to comments on 'co-infection of SARS-CoV-2 and HIV in a patient in Wuhan city, China'. *Journal of Medical Virology*, published online April 08. <https://doi.org/10.1002/jmv.25838>.