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A Review on COVID-19 and HIV: Current Scenario and Challenges

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ABSTRACT

As the pandemic of Coronavirus Disease of 2019 (COVID-19) ravages countries, health systems have been taken off guard and are ill-equipped to deal with such a massive load. The COVID-19 pandemic continues to be a source of concern for people living with and affected by HIV around the world. People living with HIV, who have not achieved viral suppression through antiretroviral therapy may have a debilitated immune system, making them susceptible to infections and disease progression. A comprehensive study of previously published articles and government reports was studied. During COVID-19, key terms relating to patient safety and health system resilience were searched in online databases. Review papers were chosen based on their relation to the study's goals. The review studies mentioned the potential impact of compromised health service quality and infection prevention and control (IPC) measures, reduced access to essential health services, and patient delay in seeking care during the COVID-19 pandemic in India, but none directly reported on levels of patient harm or quantified adverse patient safety events during the pandemic. Several challenges and safety issues faced by HIV patients during the global COVID-19 pandemic and draw lessons from national and international experiences to help policymakers develop a "resilient health system."

Key-words: COVID-19, HIV, Pandemic, Policymakers, Resilient Health System

INTRODUCTION

The 2019 new coronavirus, now known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), by the World Health Organization (WHO), was initially reported in December 2019 in Wuhan, China, as unexplained pneumonia ^[1]. COVID-19 has expanded over 210 nations and territories in a short period, posing a significant threat to global health ^[1,2]. After declaration as a pandemic by the World Health Organization on March 11, 2020, about 7,514,815 confirmed cases and 420,316 deaths have been reported worldwide by COVID 19 (as of June 11, 2020) ^[2]. Because of the virus's unprecedented spread, the world has gone into virtual

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Access this article online https://iijls.com/ lockdown, with numerous countries instituting tight screening of possible cases coming into their territory ^[3]. With these worldwide lockdown and infection control efforts, the COVID-19 pandemic has imposed considerable limits on face-to-face assessments and the mobility of persons ^[4]. Other diseases, poverty, food security, economic growth, and efforts done in reaction to it will all be affected by the COVID-19 pandemic ^[5].

The very first case of COVID 19 in India was confirmed on January 30, 2020. Since then, 297,001 confirmed cases with 8321 deaths have been reported (as of June 11, 2020)^[6]. With the successive waves, COVID 19 pandemic has spread far across India, however, the risk factors and illness burden linked with COVID-19 are still unknown in India.

In terms of HIV, the potential impact of COVID 19 on HIV patients, in low-and middle-income nations, due to a possible disruption in health services is of especial concern. There is currently no therapy or vaccine that has proved to prevent COVID-19. Many aspects of this

pandemic are reminiscent of early responses to AIDS, which was first reported in the United States in 1981 and was caused by HIV, resulting in significant mortality and posing a major societal problem.

HIV and Current scenario- Before COVID-19, the most recent worldwide lethal pandemic was HIV and AIDS. The Global Fund is an international organization that is committed to boosting HIV prevention funding and improving the quality and quantity of HIV prevention programmes for these critical and vulnerable populations and has created tremendous success in the last two decades. Since the Global Fund's inception in 2002, AIDS-related mortalities have decreased by 61%, and new infections have declined by 41% in countries, where the Global Fund invests.

To combat the HIV incidence rate, prevention efforts are critical, especially for key and vulnerable populations such as sex workers, people who inject drugs, prisoners, transgender people, men who have sex with men, and young women and adolescent girls, who are disproportionately vulnerable to HIV because of genderbased violence and inequalities. The Global Fund is committed to boosting HIV prevention funding and improving the quality and quantity of HIV prevention programmes for these critical and vulnerable populations. COVID-19, on the other hand, is jeopardising the progress done thus far, undermining some of these critical HIV programmes. People cannot know their HIV status or receive treatment without prevention services such as testing, and the incidence rate of HIV in these nations is on the rise. A significant drop in the number of people who are tested could increase infection rates. HIV referrals and testing are critical techniques for preventing HIV and facilitating treatment entrance, and any disruption to these services has a significant impact on a country's ability to combat the virus and safeguard vulnerable populations.

When HIV preventive services, such as referrals, testing, and PMTCT, are disrupted, persons are more likely to not know their HIV status, and hence to not receive the treatment they require, as well as to unintentionally infect others. COVID-19's disruption patterns have the potential to reverse progress gained in the fight against HIV. Because fewer women are referred and fewer people are examined, they will not be diagnosed or treated, and they will become sick or die if they do not receive treatment. Furthermore, if PMTCT services are disrupted, more babies will be born with HIV, potentially undoing years of progress in ensuring that kids are born HIV-free. Trends show that services are gradually returning, but we need to step up our efforts to reclaim the ground we lost in 2020 and get back on pace to end the HIV pandemic by 2030.

Pandemic's effects on HIV treatment- The COVID-19 epidemic has posed unprecedented obstacles to HIV care delivery around the world, jeopardizing years of progress in HIV testing and treatment. Problems at the individual level in various countries, PLWH's concern of developing COVID-19 has resulted in decreased engagement with care ^[7-9]. The reasons behind this are understandable: persons who have been stigmatized for decades because of their HIV status and live with a chronic virus are unwilling to seek treatment when the risk of contracting another, more fatal infection is present. This worry has led some to question the safety of getting ART from pharmacies ^[8]. National lockdowns have also made it difficult to get medical help. In Uganda, nationwide public and private transportation restrictions have made it nearly impossible for many people to get to remote clinics. Migrant workers in cities have returned to their rural homes, presumably because they no longer have access to HIV treatment in the city where they worked ^[9]. Even when people can get to clinics, the financial strain of losing their jobs makes it difficult for them to pay for treatment. Finally, physical distance rules can increase the already high levels of isolation experienced by older HIV patients ^[10]. Although there is no conclusive proof that PLWH is at a higher risk of contracting COVID-19, people may fear they are, causing them to arrive late for care. Depression is the second most common mental health condition among PLWH (after substance abuse) and is a significant obstacle to treatment ^[11]. The ongoing pandemic is a major source of stress, and it is expected to exacerbate the already high prevalence of mental illness.

Challenges at the National level- The pandemic's rapid spread have put a burden on national healthcare systems around the world. HIV physicians in Eastern Europe have been called upon to care for COVID-19 patients, resulting in a staffing crisis ^[7]. As a result, several clinics have had to cease in-person appointments, postpone blood testing, and focus only on ART distribution. Simultaneously, PLWH who previously

got healthcare overseas but were unable to return home owing to travel restrictions visit these already overburdened facilities.

Clinics' capacity to detect individuals with drug resistance, diagnose opportunistic infections guickly, and perform routine blood testing is hampered by these obstacles. This delays linkage to care for high-risk patients, who want to be tested for HIV, making it impossible to "test and treat" in a timely way. Modelling studies reveal that a three-month interruption in ART delivery can result in half a million additional HIV/AIDSrelated deaths in Africa alone, wiping out years of gains ^[12]. The above-mentioned obstacles to HIV care are also affecting tuberculosis (TB) care. TB is the primary cause of death among PLWH, and modelling studies have shown that even short-term interruptions in TB diagnosis and treatment can result in increased incidence and mortality for several years ^[13]. Encouragement of "shelter in place" or "home quarantine" is one of the major strategies to combat COVID-19 spread; prolonged contact at the household level can lead to household transmission of tuberculosis, which has a long incubation period, so we may not see the impact on TB incidence for months or years ^[14]. Finally, a greater focus on COVID-19 should not divert attention away from the importance of administering annual influenza and guideline-directed pneumococcal vaccines to PLWH on a timely basis.

The difficulties of working in an outpatient situation-During the COVID-19 pandemic, the necessity to avoid face-to-face consultations to decrease the risk of viral transmission had an undeniable impact on the management of HIV patients, particularly in the outpatient setting. A provision to keep clinics open so that persons with HIV infection don't fear going to the doctor or delay getting tested because of the COVID-19 epidemic must be evaluated against the risk to health care. The use of multi-month dispensing will reduce hospital visits and reduce the risk of COVID-19 infection. Virtual communication platforms, such as e-Sanjeevani, a Government of India integrated telemedicine solution, will aid patients in reducing the strain on the facilitybased healthcare system. Telemedicine is already being used to manage chronic illnesses like diabetes mellitus from a distance ^[15,16]. Electronic medication monitors and video-assisted therapy, as recommended by the World Health Organization (WHO) can assist patients in finishing their HIV treatment ^[17].

Response through health resilient and sustainable systems- Combating infectious illnesses requires resilient and sustainable health systems, whether it's eliminating epidemics like HIV, fighting emerging pandemics like COVID-19, or preparing for and responding to future health threats.

The interplay of six 'building blocks of health systems determines their performance: governance and leadership, health financing, health workforce, health information systems, medications and medical products, and service delivery ^[18,19]. A robust health system recognizes each of these building pieces' strengths and vulnerabilities, as well as the range of hazards to which it is exposed. Resilience is defined as 'the ability of health systems to prepare for and respond effectively to health crises while preserving essential functions when a crisis occurs, and to reorganize (adapt and transform), if situations need it, based on lessons learned during the crisis ^[20].

Given the possibility of several waves of COVID-19 outbreaks as well as future pandemics in the world, it is critical to learn from this pandemic response and move toward more resilient health systems. Resilience entails not only returning to pre-crisis levels but also growing into something better for future pandemic waves ^[21].

All of our efforts are based on these systems, and COVID-19 can only be beaten and its knock-on effects on HIV halted and reversed if we continue to invest in health systems. The health workers and community health workers who provide treatment and services in both formal and informal settings are at the heart of resilient and sustainable health systems. COVID-19 has put their safety and ability to conduct their jobs in jeopardy. COVID-19 infections were found in 50 percent of facilities surveyed across Africa and 37 percent of facilities evaluated across seven Asian nations in 2020. All sorts of health care employees were affected, underscoring the importance of providing training, protection, and personal protective equipment (PPE) to all levels of health care personnel.

Solutions- Despite these enormous obstacles, the pandemic provides an opportunity to hasten muchneeded improvements in healthcare delivery. In numerous African and Eastern European countries, multi-month prescribing has become popular ^[7,22]. While this has the obvious disadvantage of limiting viral

load/CD4 monitoring, it does open the door for new point-of-care testing techniques to emerge. Moving ahead, countries should seek to ensure a consistent supply of ARVs and anti-TB medications, particularly when they are imported exclusively. Due to concerns about ART shortages, South Africa did not expand multimonth prescribing. This is vital to protect health systems from external shocks, particularly in areas where HIV/TB prevalence is high. Finally, solutions must be adapted to the needs of each area; telemedicine visits, for example, assist patients to retain constant access to their clinicians in high-resource settings ^[23]. Decentralizing HIV testing in low-resource areas can assist enhance access to care while also freeing up larger facilities to focus on sicker patients. Some non-governmental organizations in Spain collect prescriptions for persons and deliver them too their homes, which can be especially helpful for the elderly, who are already at high risk of getting COVID-19 ^[8]. The rapid spread of SARS-CoV-2 has posed unprecedented challenges to global health systems, making it inevitable that the world will fall short of the 2020 goal of fewer than 500,000 annual HIV/AIDSrelated deaths. However, a lack of focus on HIV/AIDS programmes amid the global pandemic risks erasing years of progress ^[24].

CONCLUSIONS

With over 24 million instances of COVID-19 worldwide with numbers constantly increasing, it is critical to focus on prevention methods to slow the spread of COVID-19, particularly in countries with high HIV incidence. One therapeutic lesson to be learned from the HIV epidemic is that the first randomized control study on zidovudine revealed just a minor effect, but years of building on the results of that trial led to the now-ubiquitous and highly successful ART. Similarly, additional COVID-19 clinical studies must be based on remdesivir's modest but promising outcomes, with other medicines boosting its efficacy via complementary mechanisms. The global focus on the COVID-19 pandemic, including the hunt for a feasible and effective vaccine and treatment alternatives research, has the potential to accelerate advances in HIV infection research synergistically.

Such studies would develop a high level of political commitment, effective policy direction, strategic investments in health systems, particularly in health infrastructure for safe service delivery, and a robust health information infrastructure for the national digital health mission, and reliable supply chains of essential medicines, and vaccinations.

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