

Primary care for India's urban dwellers living in informal settlements during the COVID-19 pandemic

The experience of the Christian Medical College, Vellore, Department of Family Medicine

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THE COVID-19 PANDEMIC has affected the entire global community. By August 2020, India had seen over 2.8 million cases and 55,000 deaths.¹ COVID-19 disproportionately affects India's 81 million people living in urban informal settlements, where inadequate housing, water and sanitation increase the risk and rate of infection.² Healthcare in India is provided by a combination of public and private providers, where public insurance schemes have been historically ineffective in providing full coverage.³ Innovative ways to provide care to these vulnerable communities during the pandemic are essential.

Christian Medical College (CMC), Vellore, is a non-profit medical school, hospital and research institute in Vellore, Tamil Nadu, India.⁴ CMC's Low-Cost Effective Care Unit (LCECU) is run by CMC's Department of Family Medicine (DFM) to respond to the healthcare needs of the urban dwellers living in informal settlements. The unit is staffed by 75 employees and comprises four family physicians, two community medicine physicians, a pharmacy, a laboratory and a 48-bed ward including a labour room. In 2019–20, the LCECU saw 77,875 patients. Patients receive free consultations and are admitted for subsidised care if needed. Diagnostic tests and medications are

charged on the basis of income, with CMC absorbing the rest of the cost.

The LCECU launched the Community-Oriented Primary Care (COPC) program in 2016. This program reaches six communities in informal settlements, serving approximately 10,000 individuals. Based on the healthcare model of Brazil,⁵ the goal of the COPC program was to reach the most vulnerable populations where they live, understanding that traditional clinics and hospital-based models do not always serve them. COPC was a new concept for the unit, operationalised in collaboration with the Department of Family and Community Medicine at the University of Illinois College of Medicine, Rockford.

Prior to COVID-19, the LCECU COPC team – comprising community health workers (CHWs), a nurse, social workers and family and community medicine physicians – provided weekly primary care outreach clinics in each informal settlement to manage primarily chronic diseases such as diabetes and hypertension as well as minor acute illnesses. More complex care needs would be directed to our LCECU clinic, where inpatient admission is possible. In 2019–20, more than 6300 patients were seen in the outreach clinics. Additionally, CHWs provided home visits and educational sessions to communities.

The role of CHWs in primary care has been well documented.^{6–8} They are integral to our COPC team and have

built long-term relationships with the communities by conducting home visits to support ongoing clinical assessments, including checking blood pressure and blood glucose levels for patients with chronic disease and providing health education sessions. The CHWs are employed by the LCECU, and their work is directly supervised by the team's outreach nurse. A key to the success of the COPC model is the integration of community resident volunteers (CRVs). CRVs are individuals from the informal settlements who were trained by our team in community-based rehabilitation and chronic diseases. They do not receive remuneration.

COVID-19 drastically changed our ability to care for patients. On 24 March, the government declared a Section 144 and lockdown that prohibited gatherings of >5 people and closure of all shops and transport.⁹ Only essential services including health, groceries and essential transport (including ambulances) were allowed. Additionally, 'containment areas' in which COVID-19 was first detected – including some of our informal settlement areas – were sealed off with police restriction on entry and exit. Even after the Section 144 was lifted, we were concerned about community spread and crowding of patients in the outreach clinics. As such, we adapted our services to reach our patients through the collaborative work between the CHWs and the CRVs. Post-lockdown, patients with chronic

diseases were targeted for monitoring. Initially the CHWs visited these patients in their homes, but as COVID-19 cases increased, movement in and out of the informal settlements became particularly challenging. CRVs spontaneously took on this new role of monitoring patients within their own informal settlements with mentorship and support from the CHWs. The CRVs identified patients with chronic diseases and acute conditions and communicated them to the CHWs via their mobile phones. For example, a patient who sustained a hand injury required surgery, and through communication between the CRV, CHW, DFM and specialists, surgery was arranged. The main aim of our work was to provide ongoing care for our chronic patients. Although the focus was not on COVID-19-specific care, the team was provided with training on prevention and spread as well as appropriate personal protective equipment. Through LCECU, the CRVs received non-medical cloth masks, and we are exploring ways to supply them with surgical masks and funded smartphones.

The lockdown meant individuals had restrictions on leaving their homes for work. Most of them work for daily wages and have unstable employment at the best of times. COVID-19 left them with inadequate resources to support basic needs, let alone purchase medications. CRVs were able to identify patients who needed food. The DFM collaborated with social organisations to provide lunch to approximately 600 patients per day for more than two months.

Despite the innumerable challenges, our team has continued to provide care to the most vulnerable populations in Vellore since the onset of the COVID-19 pandemic. This was possible because of our pre-existing community engagement in the informal settlements and our COPC model of primary care. Family medicine and primary care in India, especially services for the urban dwellers living in informal settlements, cannot be only clinic- or hospital-based. It is our long-term relationships and community networks, built over time, that allow us to support vulnerable populations in a crisis such as the COVID-19 pandemic.

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