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# IMPROVING LINKAGES AND REFERRALS TO THE BROADER HEALTH SYSTEM... FOR EQUITABLE CARE AMIDST RAPID GROWTH AND URBANIZATION



## THE CHALLENGE

**In the fragmented care systems** of rapidly growing cities, patients can get lost in the shuffle. A cornucopia of providers is spread across the public, private, and nonprofit sectors, making it difficult to track patients and ensure referral completion. Health systems may also lack human and infrastructure resources to meet demand for higher levels of care; where resources are constrained, the few available specialists and underdeveloped emergency medical services may mostly cater to the wealthy, fuelling health inequities. At the same time, perceptions of low-quality in primary care services can lead patients to go directly to hospitals for minor maladies or injuries. Functional referral systems in urban areas of low- and middle-income countries (LMICs) will need to ensure prompt and appropriate transfer to higher-level care, supplemented by primary care strengthening to prevent costly and inefficient self-referrals.

## FRAGMENTED CARE SYSTEMS AND SUPPLY-SIDE CONSTRAINTS DEPRESS REFERRAL COMPLETION

In the disorganized health systems that characterize some emerging urban areas, many patients fail to complete referrals, even for priority diseases like tuberculosis (TB) and HIV. In LMIC settings, between 4% and 38% of patients with smear-positive tuberculosis diagnoses are lost to follow-up before they even start treatment; studies have found case fatality rates among those lost to follow-up run as high as 30% to 55% in India; 34% to 82% in Malawi; and 44% in South Africa.<sup>i</sup> Even where patients try to complete a referral, they may not be able to find appropriate specialist services—particularly if they cannot afford the services of elite private hospitals. Estimates suggest 90% of people in LMICs lack access to basic surgical care,<sup>ii</sup> while the number of psychiatrists is severely limited across Africa and Southeast Asia (though adequate or even excessive in many Latin American upper-middle-income countries).<sup>iii</sup>



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Many patients don't complete referrals, even for TB and HIV. Others cannot find or afford follow-on services; an estimated 90% of people in LMICs lack access to basic surgical care.  
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Patients bypass primary care facilities that they believe offer poor care. In Lilongwe, about 66% of patients presenting at tertiary hospitals were self-referred.  
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Leveraging frontline workers using technologies can help, but CHW programs have had mixed results and patients often don't complete referrals.  
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## Unnecessary Referrals and Bypassing of Primary Care Leads to Overuse of Hospitals

Where primary care services are underdeveloped or perceived to be of poor quality, patients may seek care directly from secondary or tertiary facilities such as hospitals—even when lower-tiered care providers should theoretically be able to meet their health needs.<sup>iv</sup> Among women giving birth in facilities in rural Tanzania, more than 40% bypassed their local health clinic to seek care in hospitals despite substantially higher costs; they were more likely to do so if they were relatively wealthy, the local facility was in poor physical condition, or if the perceived (and actual) quality of care was low.<sup>v</sup> In urban Ghana, about 33% of patients in a tertiary facility had bypassed primary care—and many had previously sought care at the same hospital;<sup>vi</sup> in Lilongwe, Malawi, about two-thirds of patients presenting at a tertiary hospital were self-referred.<sup>vii</sup> Unnecessary referrals from primary care to higher level facilities can also create imbalances in the distribution of patients and inappropriate use of health care facilities. In Mexico, a study in 28 facilities determined that over 50% of maternal health referrals from primary care were not clinically inappropriate.<sup>viii</sup> Inappropriate use of secondary and tertiary facilities undermines their performance. As one group of researchers noted: “Simple conditions are unnecessarily treated in a high-cost environment; outpatient departments are congested by patients requiring primary care, thus causing long waiting times; scarce staff time is diverted from specialized areas and into inappropriate care; and more complex cases requiring specialized care are crowded out by more urgent but less technically demanding cases that could be cared for at lower levels.”<sup>ix</sup>

## THE PATH FORWARD: STRENGTHENING CONNECTIONS

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### Offering and Completing Referral from Community to Facilities

Mixed strategies—levering frontline health workers and emerging technologies—can potentially help improve rates of disease detection and appropriate referral among disadvantaged populations. However, community health worker programs have yielded mixed results generally (see Briefs 6a and 7a), and studies specifically focusing on referral outcomes show that referrals by community health workers (CHWs) often go incomplete. In a South African peri-urban township, a CHW program for maternal health achieved high rates of referral completion to primary health centers for newborns with danger signs of health complications.<sup>x</sup> Elsewhere, however, only a small proportion (37%) of individuals with high cardiovascular risk factors completed referrals from community health workers to local clinics.<sup>xi</sup> In India, a tablet-based decision support enabled lay health workers to accurately identify patients with elevated risk of cardiovascular disease for referral to primary health centers; however just 35% of referred patients attended a clinic within a month of their referrals—and less than 50% of that subgroup were still on treatment three months later.<sup>xii</sup> In Zambia, community health workers used mobile phones to create and transmit referral records to local clinics; yet just 20 % of patients completed the referrals, including among patients with “life-threatening” medical conditions.<sup>xiii</sup> Increasingly, the body of evidence suggests a role for CHWs in conducting screening and generating referrals, but the need for further research on how patients can actually link with health services.

## Telemedicine for Specialist Care at a Distance

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Telemedicine hold  
promise in LMICs for  
uses such as remote  
ECGs, screening, oral  
health, and  
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An alternative approach to referral completion uses telemedicine to remotely access medical services—particularly specialist services that may not otherwise be locally accessible. These initiatives are still largely underdeveloped within LMICs, with many nascent (and often donor-funded) efforts but few sustained programs.<sup>xiv</sup> A rare scaled and sustained use of telemedicine is in Brazil, where some states have routinized remote ECG testing, chest x-ray analysis, and ultrasounds as part of the national Family Health Program (see Brief 7b);<sup>xv</sup> by end-2015, just one Brazilian state had performed almost 2.5 million remote ECGs and 74,000 teleconsultations, and over a 5-year period the state reported net \$11 million in cost savings.<sup>xvi</sup> In addition, a handful of LMIC telehealth networks for humanitarian purposes have been sustained at least 5 years, in some cases offering general remote consultation for all specialties and in others offering targeted support for dermatology, HIV, or trauma; however, evidence in support of these initiatives is limited.<sup>xvii</sup> Elsewhere, feasibility studies suggest potential, though not scale or sustainability.<sup>xviii</sup> In Zimbabwe, a proof-of-concept study trained nurses at a Harare diabetes clinic to photograph and transmit retina images for remote analysis by a U.S.-based retinal ophthalmologist.<sup>xix</sup> In an Egyptian teaching hospital, difficult-to-diagnose pathology cases were electronically transmitted to partner centers in Italy, the United Kingdom, and United States for further evaluation, reportedly generating cost savings.<sup>xx</sup> Feasibility studies also suggest potential remote diagnosis for common skin conditions,<sup>xxi</sup> oral health,<sup>xxii</sup> and cervical cancer screening,<sup>xxiii</sup> as well as telepsychiatry.<sup>xxiv</sup>

## Preventing Inappropriate Bypassing

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One Thai program  
uses monetary  
incentives to reduce  
self-referrals: patients  
following set referral  
pathways have no co-  
pay; those who  
bypass are liable for  
the entire cost of  
treatment.  
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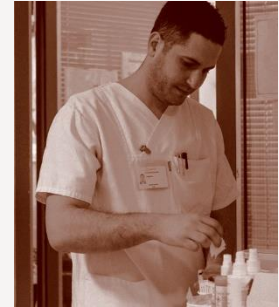
Preventing self-referral requires a functional primary care and health worker-led referral process—one that patients will trust to provide high-quality frontline care and move them to higher care levels when appropriate. General primary care strengthening models—featuring multidisciplinary care teams and designated frontline providers (empanelment; see Brief 6b)—can help strengthen the gatekeeping function and reinforce appropriate referral pathways. In Thailand, patients register with a designated primary care provider network, paid on a capitation basis; the in-network providers can write referrals for specialist outpatient services to out-of-network secondary and tertiary facilities if appropriate, but the cost of doing so is deducted from their capitation payments, deterring unnecessary referrals. Patients receive copayment-free services so long as they follow appropriate referral pathways, but patients who bypass their designated providers (for outpatient services) are liable for the entire cost of treatment. Although this aspect of Thailand's universal health coverage system was not individually evaluated, it was perceived as helping to cut costs and improve quality of care for chronic diseases.<sup>xxv</sup> As in Thailand, fees or other penalties (e.g., longer wait times) for bypassing can incentivize use of appropriate referral channels, but must be accompanied by strong frontline networks to prevent referral procedures from choking access to essential health services.<sup>xxvi</sup> Albania, for example, addressed high levels of bypassing through a comprehensive primary care strengthening and community sensitization program (see Spotlight).



## SPOTLIGHT

### Albania Strengthens Frontline Networks, Reduces Bypassing<sup>xxvii</sup>

- In post-communist Albania, primary care networks were unprepared to meet the population's needs. A 2001 situational analysis identified pervasive problems in primary care facilities—clinics were under-resourced, disconnected from the broader health system, and lacked supervision and management, among many other issues. In turn, the population did not trust primary care facilities to meet their health needs; instead, they often opted to self-refer directly to hospitals, even for relatively minor conditions.



Responding to these entrenched challenges, the U.S. Agency for International Development launched a strengthening program in 2002 to reform primary health care services in two pilot districts. The 2-year demonstration project offered a comprehensive set of facility and community interventions, including improved health information management systems; purchase of some basic equipment; development and deployment of clinical practice guidelines; retraining for doctors and nurses; improving and auditing medical charts; management training; and community outreach targeted to adolescents, reproductive-age women, and chronic disease patients. The original project design also included health financing reform, but political constraints prevented implementation within the project period.

Baseline and follow-up surveys of individuals, facilities, and providers revealed stark reductions in unnecessary bypassing. For simple acute conditions—a cold or the flu—the percent of patients first seeking care from a higher-level facility was roughly cut in half (from 43% to 23%) but remained high (48%) in control areas. Reductions in bypassing were accompanied by corresponding increases in the use of primary care; among individuals with chronic conditions in the intervention areas, visits to primary care facilities (within the previous month) rose from 50% to 64%. The intervention was also associated with increases in modern contraception usage, improvements in perceived quality of care, and physician use of protocols and clinical practice guidelines. However, the study was underpowered and many of the changes between intervention and control areas were not statistically insignificant despite large nominal effect sizes.

## ENDNOTES

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