Children and alternative service delivery models: a case for inclusion

The global commitment to reach the United Nations 90-90-90 targets will require a tremendous effort to almost double the number of HIV-infected individuals receiving antiretroviral treatment (ART), from 15.8 to 29.9 million, in the next 4 years [1]. In sub-Saharan Africa alone, ART initiation for an additional 6.2 million persons will be needed to reach this target. Given the infrastructure constraints and healthcare worker shortages in many resource-limited settings, there is increasing recognition that traditional facility-based models of clinician-led HIV service delivery will not be feasible with the increase in patient volume. In response, multiple proposed alternative service delivery models have been developed that center on transitioning at least some aspects of care out of health facilities into the community to decongest clinics and maximize the use of limited healthcare worker resources [2].

Several commonly employed service delivery modifications have documented success in improving patient outcomes. One of the most common focuses on multi-month prescribing in which pharmacies dispense more than a month’s supply of ART, requiring fewer patient visits to collect medications [2]. Another employs alternative ART delivery points; for example, HIV-infected patients can collect their ART at a community pharmacy/drug delivery site or have ART delivered to their homes by a cadre of lay workers [3]. A third model reduces the number of required follow-up visits for certain patients, most often those considered ‘stable’ by criteria such as time on ART and/or viral load suppression. These patients are seen at the facility by medical staff only once or twice per year [4]. Other models employ community adherence clubs, where groups of HIV-infected individuals receive all of their medication and care in the community on a particular day [5]. Finally, community ART groups rely on the member of the group to collect monthly antiretrovirals (ARVs) for all members while visiting the health facility for their yearly/biyearly visit [6]. This list is not exhaustive, and new strategies ideally suited for specific populations are continuing to be implemented. However, one commonality among most alternative models of ART service delivery is that children have almost uniformly been excluded.

Despite this focus on adults, there are some exceptions in which alternative models of HIV service delivery have successfully included children and resulted in favorable outcomes. In Tete, Mozambique, HIV-infected children of community ART group members were included in the group. Members of the six-person group would travel monthly to collect ART for all members while receiving their biyearly appointment. The group members elected for a given month would accompany the children of the group to the clinic for their appointments. Between 2008 and 2011, 276 children were included in this model with 0 children lost to follow-up, and only four deaths per 100 patient-years were reported [7]. In a second model, 84 children aged 2–14 years in Kenya and Uganda received a streamlined care model, in which nurse-only clinic visits coupled with ART distribution were conducted at 0, 4, 12, and every 12 weeks thereafter. At 48 weeks, 89% of children were retained, of whom 92% had a viral load less than 500 copies/ml [8]. Other undocumented models of care for children include 3-month ARV distribution and ‘fast-tracked’ clinic visits for stable patients. Likewise, because school-aged children may have difficulty attending clinical visits on traditional schedules, some may receive ART through ‘care-giver only’ visits for ARV collection, reducing school absenteeism.

Alternative models of HIV service delivery not only improve patient outcomes, but also, in almost all cases, reduce the burden of accessing HIV services for patients. This is most often through less-frequent visits to health facilities, shorter transportation distances, or reduced wait times. In group-based models, enhanced adherence support among members may also be an added benefit. Although there are unique characteristics associated with the care of HIV-infected children, omitting them from these alternative models of service delivery may actually increase the burden for families. For example, if an HIV-infected parent/caregiver collects his or her ART at a community delivery point on a bimonthly basis, but must still travel to a facility on a monthly basis to collect ART for their HIV-infected child, the benefits of the alternative models are diminished for the family as a whole, putting adherence and retention in care at risk. Alternative models of service delivery should be designed to include children and families. In doing so, models of service delivery will not only serve individual adult patients, but also provide family-centered and community-centered care to increase efficiency and improve outcomes for all people living with HIV.

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