# 'Triangulating' AMPATH: Demonstration of a multi-perspective strategic programme evaluation method

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## Abstract

Clinical programmes are typically evaluated on operational performance metrics of cost, quality and outcomes. Measures of patient satisfaction are used to assess the experience of receiving care, but other perspectives, including those of staff and communities, are not often sought or used to assess and improve programmes. For strategic planning, the Kenyan HIV/AIDS programme AMPATH (Academic Model Providing Access to Healthcare) sought to evaluate its performance in 2006. The method used for this evaluation was termed 'triangulation,' because it used information from three different sources – patients, communities, and programme staff. From January to August 2006, Indiana University external evaluators and AMPATH staff gathered information on strengths, weaknesses and suggestions for improvement of AMPATH. Activities included in-depth key-informant semi-structured interviews of 26 AMPATH clinical and support staff, 56 patients at eight clinic sites, and seven village health dialogues (*mabaraza*) at five sublocations within the AMPATH catchment area. Data sources included field notes and transcripts of translated audio recordings, which were subjected to qualitative content analysis. Eighteen recommendations for programme improvement emerged, including ten from *all three* respondent perspectives. Three recommendations were cited by patients and in *mabaraza,* but not by staff. Triangulation uncovered improvement emphases that an internal assessment would miss. AMPATH and Kenyan Ministry of Health leadership have deliberated these recommendations and accelerated strategic change actions, including rural satellite programmes, collaboration with village-based workers, and door-to-door village-based screening and counselling.

***Keywords:*** *HIV/AIDS, programme evaluation, AMPATH.*

## Résumé

Les programmes cliniques sont généralement évalués en fonction des mesures de performance opérationnelle du coût, de la qualité et des résultats. Les mesures de satisfaction du patient sont utilisées afin d'évaluer l'expérience associée à l'administration des soins, mais d'autres perspectives, comme celles du personnel et des communautés, ne sont pas souvent recherchées ou utilisées à des fins d'évaluation et d'amélioration des programmes. A des fins de planification stratégique, l'AMPATH (Modèle académique pour la Provision d'Accès aux Services de Santé), un programme kenyan consacré au VIH/Sida, a cherché à évaluer sa performance en 2006. La méthode utilisée pour cette évaluation a été appelée « triangulation » du fait qu'elle utilisait des informations provenant de trois sources différentes : les patients, les communautés et le personnel du programme. De janvier à août 2006, des évaluateurs externes de l'université d'Indiana et le personnel d'AMPATH ont rassemblé des informations sur les forces, les faiblesses et les suggestions en vue d'améliorer l'AMPATH. Les activités ont inclus des entretiens semi-structurés approfondis avec des informateurs clés de 26 membres du personnel clinique et de soutien d'AMPATH, 56 patients dans 8 cliniques et 7 dialogues de santé de village (*mabaraza*) dans cinq sous-locations de la zone concernée par l'AMPATH. Les sources de données incluaient des notes de terrain et les transcriptions des enregistrements audio traduits. Les transcriptions ont fait l'objet d'une analyse du contenu qualitatif par des analystes kenyans et non-kenyans indépendants au moyen de méthodes de codage de contenu standard. Dix-huit recommandations en vue de l'amélioration du programme ont émergé de cet exercice, dont dix issues des perspectives *des trois* répondants. Trois recommandations (accès supérieur aux centres médicaux, travail de proximité et services basés dans le village) ont été citées par les patients et par les *mabaraza,* mais non par le personnel.

La triangulation a permis de mettre l'accent sur des améliorations ayant émergé qu'une évaluation interne n'aurait pu mettre à jour. L'AMPATH et la direction du Ministère de la Santé kenyan ont délibéré sur ces recommandations et ont accéléré les actions de changement stratégique, dont les programmes satellites en zone rurale, la collaboration avec les travailleurs dans les villages, et le dépistage et le conseil en porte à porte dans les villages.

***Mots clés:*** *VIH/SIDA, évaluation de programme, AMPATH.*

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## Introduction

From a global health perspective, the advent of HIV/AIDS has added a crushing burden to some of the world's most vulnerable populations (Merson, 2006). Already afflicted by poverty, malnutrition, malaria, social conflict and periodic drought, sub-Saharan Africa has also been the epicentre of global HIV/AIDS. Nearly two-thirds of all HIV-infected individuals in the world reside in sub-Saharan Africa, where in some countries nearly 30% of all individuals in various subpopulations are HIV-seropositive (UNAIDS, 2006). Only a decade ago, it was speculated that some countries' entire social orders and economic infrastructures might destabilise and buckle under the weight of HIV/AIDS.

Faced with this catastrophic future vision, many sectors in the developed world responded. Acting together, government, international aid agencies and philanthropies made major commitments of finances and other resources (Sepkowitz, 2006). Fortunately, these resources became available at about the same time as the discovery of highly active antiretroviral therapy (HAART). With HAART it was theoretically possible to convert AIDS from a uniformly lethal disease to a medically managed chronic condition (Palella, Delaney, Moorman, Loveless, Fuhrer, & Satten *et al.*, 1998). The commitment of the United States government – particularly the Presidential Emergency Programme for AIDS Relief (PEPFAR) – made subsidised or free HAART available, and converted a looming catastrophe to a potentially manageable, albeit immense, challenge for healthcare delivery systems in sub-Saharan Africa (El-Sadr & Hoos, 2008). With PEPFAR funding for drugs, controlling HIV/AIDS hinged on whether there were programmes 'on the ground' that could organise themselves into effective care delivery systems (World Health Organization, 2005).

Kenya has a significant burden of HIV/AIDS. With a national prevalence of 7.8%, over 1.4 million persons are estimated to be living with HIV (2007 Kenya AIDS Indicatory Survey, 2008). Since 2001, Indiana University School of Medicine, Moi University School of Medicine, and Moi Teaching and Referral Hospital have partnered to create a model HIV care system in western Kenya, called the USAID-Academic Model Providing Access to Healthcare (AMPATH). Since 2001 AMPATH has enrolled over 100 000 patients in western Kenya, and currently follows approximately 70 000 active patients at 18 urban and rural clinic locations. For its patients AMPATH has provided access to free HAART, as well as comprehensive nutrition services, psychosocial support, and economic development training (Mamlin, Kimaiyo, Nyandiko, Tierney, & Einterz, 2004).

The early success of AMPATH in responding to the availability of PEPFAR-funded drugs (beginning in April 2004) was striking. The programme grew from a single patient seen in the tuberculosis clinic of the Moi Teaching and Referral Hospital to more than 37 000 HIV-positive adults and children over the next five years (Fig. 1) (Einterz, Kimaiyo, Mengech *et al.*, 2007).

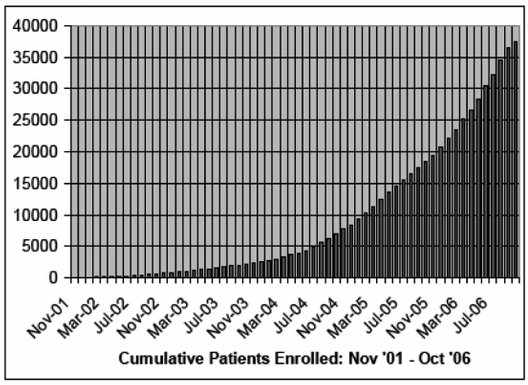



***Fig. 1. USAID-AMPATH Partnership Programme growth November 2001 - October 2006.***

AMPATH serves a geographic area in the Western Highlands of Kenya and operates in Kenyan Ministry of Health clinics that are the designated source of medical care for a residential population of approximately two million inhabitants (Fig. 2).

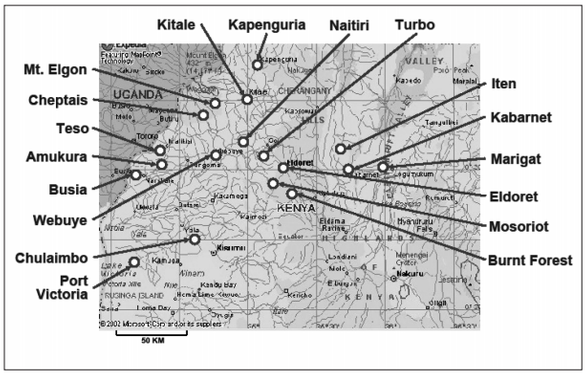



***Fig. 2. USAID-AMPATH Partnership Programme sites, 2007.***

The USAID Kenya Country Coordinator has suggested that AMPATH's rapid 'ramping up' was unique among sub-Saharan programmes (Buckingham, 2007). The growth was fueled by many factors, including a significant HIV seropositivity prevalence of the general population in its catchment area (estimated at 6.1%), the provision of free services, superbly trained and dedicated staff, active collaboration of Moi University School of Medicine with the Ministry of Health and North American academics, the provision of food supplements when needed for families with an enrolled AMPATH patient (Mamlin, Kimaiyo, Lewis *et al.*, 2009), philanthropic resources

beyond PEPFAR funding, and passionate/strategic leadership. By 2005, AMPATH was the largest HIV/AIDS programme in the whole of East Africa, perhaps the largest in sub-Saharan Africa overall.

In 2006, and with the support of the Canadian Purpleville Foundation (PVF), AMPATH set out to evaluate its programmes as a part of a strategic planning process. PVF provided support for this evaluation, because the principals of that family foundation believed that a multi-perspective evaluation of the AMPATH programme would be useful both internally (formative impact) and externally (to other HIV/AIDS programmes in resource-scarce environments). A collaborative group of Kenyan and US-based investigators designed and implemented the evaluation, using methodological triangulation, an approach designed to solicit the perspectives of AMPATH staff, patients and service-area communities. Methodological triangulation is a term that has been used in social science research for the past three decades (Denzin, 1970; Risjord, Moloney, & Dunbar, 2001). It refers to the use of multiple methods and multiple perspectives to provide a holistic view of a social phenomenon. In the current context we referred to 'triangulating' AMPATH because we intended to use three different perspectives to bring the programme's opportunities for improvement into focus. While the inquiry methods we used differed by group, one question was explored by all three sources of information: *'How can AMPATH improve?'* The purpose of this report is to describe the measurement approaches, information acquired, early use of this information, and likely AMPATH future developments.

## Methods and results

This report summarises information derived from three sources: (1) AMPATH staff interviews conducted in January 2006; (2) individual patient interviews conducted at AMPATH sites in July and August 2006; and (3) seven village dialogues (*mabaraza*) convened at AMPATH sites in July and August 2006. All procedures were approved by the institutional human subjects research review boards at Moi University, Eldoret, Kenya, and Indiana University School of Medicine, USA. All interviews were conducted by study authors following interview guides (available from the corresponding author) that included a close variant on the following inquiry: *'As well as AMPATH may have been performing, every programme can do better. How can AMPATH improve? How can it do better?'*

Staff interviews were conducted in English, but *mabaraza* and patient interviews took place in a mixture of English, Kiswahili, and tribal languages (at the discretion of the participants). Field notes by *mabaraza* facilitators and interviews were available for all analyses contributing to this report. *Mabaraza* dialogues were translated into English and transcribed for analysis. Field notes and transcripts were analysed for content by an analyst group that included US and Kenyan-based investigators (TI, JS, VY, RF). In the analyses, field notes and transcripts were subjected to repeat close reading by independent observers. Categories for coding the content of the written material were identified, negotiated among the analysts, standardised, and subsequently used to code the content of all sources. This method, a form of grounded analysis for text data, is widely used in qualitative research (Crabtree & Miller, 1999) and is used here as a method for describing the extent of concurrence on improvement suggestions among stakeholders. In the reporting sequence that follows we consider programme improvement suggestions from: (1) AMPATH staff, (2) AMPATH patients, and finally (3) *mabaraza* participants.

### AMPATH staff interviews

Twenty-six AMPATH staff interviews were conducted in January 2006. The interview participants included clinicians (physicians, nurses, a pharmacist, a nutritionist, clinical officers), administrators, programme managers, support staff, academic leaders, technicians, and data managers (Inui, Nyandiko, Kimaiyo *et al.*, 2007). The interview query on how AMPATH could improve (*'What can AMPATH do better? How do you think it can be even more effective in its work with patients, families, their villages, Moi University School of Medicine, Eldoret?'*) was explored in an open-ended format, permitting respondents to make suggestions without any constraints on content, feasibility or affordability. Qualitative analysis of the responses (on multiple reviews by independent observers of audio recordings and field notes) produced a taxonomy that adequately captured and summarised the suggestions. This taxonomy included 17 content categories cited in Table 1 (right-hand column). The two most frequent suggestions entailed strengthening staff numbers and training (#13), and extending services to rural areas (#1).

### AMPATH patient interviews

In July and August 2006, 56 patients attending AMPATH clinics at six sites (Amukura, Burnt Forest, Chulaimbo, Mosoriot, Naitiri and Turbo) participated in individual interviews. Convenience samples of consecutive patients willing to prolong their clinic visits were interviewed on days on which evaluators could be present at these clinic sites, often on days when a *baraza* was also going to be convened. In these interviews, patients were generally very pleased with their services, but did have some suggestions for programme improvement. Field notes from one of the queries to which these patients responded (*'What can this clinic do better? How do you think it can be even more effective in its work with patients, families, and their villages?'*) permitted

coding and counting of patient suggestions for AMPATH improvement. Analysts coded suggestions after review of English-language field notes taken at the time of the interviews, compiling them in the 17-category taxonomy derived from AMPATH staff (Table 1) and adding categories when needed.

As Table 1 reveals, patient suggestions fell into 12 of the 17 suggestion categories proposed by staff. One category was added – 'improving outreach to enrolled patients' (e.g. home visits, follow-up for missed visits). Patients did not make suggestions in some staff categories – 'strengthening institutional partnerships, improving records, better performance measurement, and strengthening the roles of Kenyan programme leadership'. The lack of suggestions focused on care for children may represent the relatively small proportion of children among AMPATH patients (18%). Among suggestions that were made, the relative frequency of patient suggestions differed substantially from those proposed by staff. In particular, patients emphasised 'assuring programme sustainability and economic development' (#2), 'more individual and village education' (#4), and 'improving visit process efficiency and enlarging capacity at sites' (#6).

## *Mabaraza* dialogues

In July 2006, facilitators from AMPATH clinics and Indiana University School of Medicine, in collaboration with local leadership, convened two types of *mabaraza*: (1) gatherings of chiefs, elders, and community leaders; and (2) gatherings of traditional birth attendants. Seven *mabaraza* were held: two in Burnt Forest, two in Mosoriot, one each in Chulaimbo, Amukura and Turbo communities. Invitations to key community members were issued, with a general description of the discussion topic, by the clinical officers in charge of the AMPATH clinics at each site. Key participants were invited to extend additional invitations by word-of-mouth to other members of the community. Meetings were convened at a specified time and date. They were held in open-air bandas on farms, meeting rooms at the local health facilities or, in one case, under a tree near the health centre. Facilitators included members of the research team, along with local clinical officers or staff from the health centre sites. Interpreters facilitated communication in English, Swahili and tribal languages. The meetings ranged from two to four hours in length, and participant numbers ranged from 25 to 50. An exact count of participants at each dialogue was not taken, since some participants at all sites were present for only a portion of the event, even coming, leaving, and returning.

This 'health *baraza*' was a variant of a traditional community gathering practice in Kenya (Kenyatta, 1965; Saberwal, 1970). Today, most Kenyans associate *mabaraza* with official public gatherings convened by a chief, sub-chief or the district officer (Haugerud, 1995). It was not without precedent in the AMPATH catchment area. Moi University School of Medicine Community-Based Education and Service (COBES) programme had routinely given students an opportunity to explore community health, illness and health care issues in selected sub-locations using *mabaraza* (Einterz, Kelley, Mamlin & Van Reken, 1995). This educational activity format was chosen by the school because it built on the community tradition of using the *baraza* as a forum for health information

**Table 1. Suggestions from patients and staff for AMPATH improvement**

| Suggestion domains | Patient suggestions (from 56 interviews) | Staff suggestions (from 26 interviews) |
|---|---|---|
| 1. Expand service, especially to remote rural areas | 7 | 7 (15.9%) |
| 2. Emphasise sustainability and economic development | 25 (22.1%) | 3 |
| 3. More HIV prevention, screening | 3 | 3 |
| 4. More individual and village education | 25 (22.1%) | 2 |
| 5. Stronger institutional partnerships | 0 | 4 |
| 6. Improve visit process efficiency and capacity at sites | 19 (16.8%) | 2 |
| 7. Better record system | 0 | 2 |
| 8. Treat all conditions, not just HIV | 1 | 1 |
| 9. Better programmes for children | 0 | 3 |
| 10. Better programme transportation among sites | 1 | 1 |
| 11. Focus on at-risk populations | 5 | 3 |
| 12. Stronger role for Kenyan leadership | 0 | 1 |
| 13. Strengthen staff | 6 | 6 (13.6%) |
| 14. More performance measurement and evaluation | 0 | 1 |
| 15. Strengthen community engagement, mobilisation | 9 | 2 |
| 16. Improve access to clinics | 6 | 2 |
| 17. Improve outreach | 5 | 0 |
| 18. Introduce village-based services | 1 | 1 |
| Total suggestions | 113 (100%) | 44 (100%) |

**Table 2. Suggestions from *baraza* sites* for AMPATH improvement**

| Suggestion domains | A (2)** | B (1) | C (2) | D (1) | E (1) | Total suggestions |
|---|---|---|---|---|---|---|
| 1. Expand service, especially to remote rural areas | 1 | 3 | 6 | 1 | 2 | 13 |
| 2. Emphasise sustainability and economic development | 0 | 3 | 6 | 1 | 1 | 11 |
| 3. More HIV prevention, screening | 1 | 2 | 2 | 2 | 2 | 9 |
| 4. More individual and village education | 9 (31%)*** | 3 | 13 (24.5%) | 4 | 4 (15.4%) | 33 (20.6%) |
| 5. Stronger institutional partnerships | 0 | 0 | 1 | 2 | 1 | 4 |
| 6. Improve visit process efficiency and capacity at sites | 3 | 4 (17.4%) | 11 | 2 | 2 | 22 (13.8%) |
| 7. Better record system | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. Treat all conditions, not just HIV | 0 | 0 | 0 | 0 | 1 | 1 |
| 9. Better programmes for children | 0 | 0 | 1 | 0 | 1 | 2 |
| 10. Better programme transportation among sites | 0 | 0 | 1 | 2 | 0 | 3 |
| 11. Focus on at-risk populations | 1 | 0 | 3 | 5 (17.3%) | 1 | 10 |
| 12. Stronger role for Kenyan leadership | 0 | 0 | 0 | 0 | 0 | 0 |
| 13. Strengthen staff | 0 | 0 | 1 | 5 (17.3%) | 2 | 8 |
| 14. More performance measurement and evaluation | 0 | 1 | 0 | 0 | 0 | 1 |
| 15. Strengthen community engagement, mobilisation | 0 | 4 (17.4%) | 2 | 0 | 4 (15.4%) | 10 |
| 16. Improve access to clinics | 3 | 2 | 2 | 0 | 1 | 8 |
| 17. Improve outreach | 7 | 0 | 2 | 1 | 2 | 12 |
| 18. Introduce village-based services | 4 | 1 | 2 | 4 | 2 | 13 |
| Total suggestions | 29 | 23 | 53 | 29 | 26 | 160 |

* Sites designated by letters to preserve anonymity.

** = # *mabaraza*

*** = per cent of column total.

acquisition and dissemination. To our knowledge, the health *baraza* had never before been used for evaluation of a specific programme. A richer description of the history of *mabaraza*, their socio-cultural-political context, and the broader content of these *mabaraza* is to be found in a forthcoming publication (Yebei, Sidle, Frankel, Ayuku, Nyandiko & Inui, in press 2009).

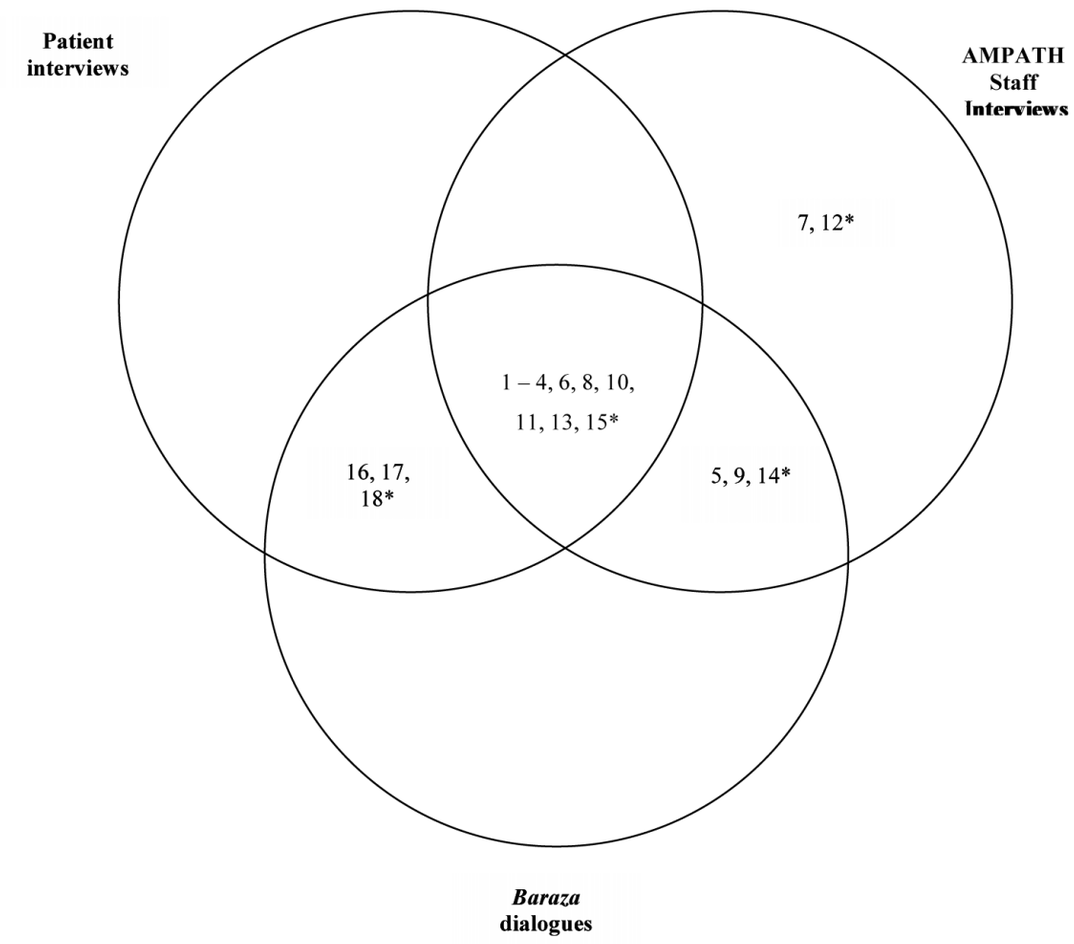
In the AMPATH health *mabaraza*, facilitators followed a structured discussion guide, although topics were allowed to deviate widely from the guide, as the community members identified additional priority issues for discussion. One uniform query (*'Please discuss the (HIV) clinic that serves this place. How can it be improved?'*) permitted analysis of *mabaraza* suggestions for AMPATH programme improvement. All proceedings were digitally audio-recorded. Audio recordings were transcribed, and a team of four researchers (TI, RF, VY, JS) analysed transcripts for themes (see Table 2).

Each member of the analysis team independently read each transcript. From these readings, the team developed consensus taxonomy for transcript content that was used to classify all *baraza* statements. One category beyond the initial 17 derived from staff suggestions was needed to capture *baraza* content adequately – 'outreach' (#17). At the same time, it may be noted that three of the staff interview-derived categories were not needed to capture *baraza*-derived content: 'better record system' (#7), 'better programme transportation among sites' (#10), and 'stronger role for Kenyan leadership' (#12).

Table 2 reveals substantial variation in the frequency of suggestions, within categories and across sites. Suggestions for 'more individual and village education' (#4) were the most frequent, but a total of five categories were the most frequent suggestion at (at least) one site (#4, #6, #11, #13, #15). Table 3 provides exemplar extracts from *mabaraza* transcripts to illustrate how these suggestions were articulated in village dialogues.

## All sources

Fig. 3 illustrates the overlap and non-overlap of recommendations for AMPATH improvement from staff, patients and village dialogues. All sources concurred on the need for improvement in 10 of the 18 recommendation categories (domain #s 1 - 4, 6, 8, 10, 11, 13, 15). There was not universal recognition, however, of all the domains in which AMPATH could improve. Staff recommendations included two domains that neither patients nor villages produced (#7 'better record system', and #12 'stronger roles for Kenyan leadership'). Village dialogues and patient interviews both produced three recommendations (#16, #17, and #18 – 'improving access to clinics, outreach, and village-based services') that staff did not cite. Interviewing patients without village dialogues might have missed recognising #5, #9, and #14 ('stronger institutional partnerships, better programmes for children, and more performance measurement and evaluation') as domains in which staff and villages concurred that AMPATH should improve. It appeared that including all three sources of




**----------Suggestion domains*----------**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AMPATH Staff interviews:** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 0 | 0 | 0 | |
| ***Baraza* dialogues:** | 1 | 2 | 3 | 4 | 5 | 6 | 0 | 8 | 9 | 10 | 11 | 0 | 13 | 14 | 15 | 16 | 17 | 18 | |
| **Patient interviews:** | 1 | 2 | 3 | 4 | | 6 | 0 | 8 | 0 | 10 | 11 | 0 | 13 | 0 | 15 | 16 | 17 | 18 | |

*Suggestion domains: See Table I.

***Fig. 3. How Can AMPATH improve? Suggestions from all perspectives.***

recommendation was necessary to comprehensively identify suggestions for AMPATH improvement (in the metaphor of our title – to 'triangulate' the improvement territory).

## Presentation of findings to stakeholders

Presentation of these combined perspectives on AMPATH's potential for improvement to various stakeholders has proceeded stepwise. Initially, technical reports with suggestions for improvement and interview text quotes were submitted (in early 2007) to AMPATH programme leadership, for their internal consideration. Next, presentations of the same data were made to AMPATH general staff meetings for discussion. In a third step, full technical reports were circulated to top-level PEPFAR, USAID, and key Kenyan Ministry of Health leaders. Finally, a 'summit meeting' of district and regional-level Ministry of Health officials, AMPATH staff (clinical, administrative, research and programme personnel), leadership from Moi University School of Medicine, School of Public Health, and Moi Teaching and Referral Hospital was convened in Eldoret, Kenya in early December 2007. At this meeting, the data in this manuscript, together with the reactions and suggestions of key government of Kenyan officials and relevant international agency country co-ordinators were presented and discussed.

**Table 3. Exemplar suggestions for AMPATH improvement from *mabaraza***

| Suggestion domains | Exemplar suggestions (site) |
|---|---|
| 4. More individual and village education | • 'More education about needs to shift risky culture-driven behaviors like engaging in sexual relationships with widows or widowers innocently.' (A)<br>• 'In a given *baraza,* in one of our locations if men and women attended that *baraza*, I am considering that they should be separated. Men alone they should go aside, with the facilitators of the same. And then women or youth they be taken somewhere else because of this issues of stigma, and because of the culture...' (C)<br>• 'In such a meeting now like this one that we are have now, I would want...those who are [HIV] positive to be among us so that they give us the living reality about this.' (C)<br>• 'The people in the urban areas are more aware of the programme than in rural areas.' (C)<br>• 'Many preachers do not talk about HIV in their gatherings. If AMPATH can use churches to reach people I think it can also bring an impact.' (E)<br>• 'I want to request AMPATH to organise more seminars for the men because we have found that men are not ready to come for VCT.' (B) |
| 6. Improve visit process efficiency and capacity at sites | • 'A big problem we have with counselling, [is that] there are so many people with few counsellors. They overwhelm the staff as there is only one person to work and that is not very effective.' (B)<br>• 'AMPATH said that they have a maximum number for which they would cater for. When it started, the people from around were not coming out...they are asking that this maximum number should be abolished so that the local people can benefit.'(B)<br>• 'A bigger building. Right now there is a lot of congestion. A spacious building wills encourage more clients to come to the clinic and the health workers to work well.' (A) |
| 11. Focus on at-risk populations | • '...that the parents are dying leaving young children un-catered for. Productive people are dying and hence exposing the community to famine in future.' (D)<br>• 'On discordant couples, when they come to know their status some ask for divorce and end spreading the HIV/AIDS diseases.' (D)<br>• 'Actually a big problem occurs in the young especially secondary school children, they are mostly at risk... I would urge your cooperation because AIDS may sweep this generation.' (A)<br>• 'More education needs to shift to risky culture-driven behaviours like engaging in sexual relationships with widows or widowers innocently.' (A)<br>• 'The other thing making it difficult for us to eradicate HIV is alcoholism in the area and the drugs.' (C) |
| 13. Strengthen staff | • 'The staffing problem is countrywide and not [D] only in AMPATH. Suggest that to motivate the AMPATH staff some incentive be introduced to enable them work extra hard on weekends and nights.' (D)<br>• 'The person in charge should be strict and make sure that resources are used properly. Also the project be people-driven. Some AMPATH officers use rough language and hence discourage people from willingly coming for testing due to fear that they could easily disclose their status.' (D)<br>• 'So when you are recruiting these counsellors, also look at the age, because the old men are more at home when they talk to their fellow old men...I think it will be better than when a young man was to do it.' (E)<br>• 'HIV patients have preferred that one of their own be recruited to assist in the VCT after being given the required training. That they will be more committed and helpful to the community.' (D) |
| 15. Strengthen community engagement, mobilisation | • 'I want to appreciate the direction you have already taken by targeting the leaders. When a chief says something, the people take it more seriously.' (E)<br>• 'If we as chiefs and AMPATH join hands and fight this disease, I think it will make some impact. Because it is mandatory for us, as we go for *barazas*, we at least teach people about AIDS.' (E)<br>• 'We want more of AMPATH in the villages. The way somebody has said, to penetrate into [the communities] and to get to know people' (C)<br>• 'There is a need to do sensitisation in public *barazas*. There is ignorance on the work of AMPATH from village to divisional level. The AMPATH officers should assist in sensitisation' (D)<br>• '...and also in those village meetings, films could be taken there, films on HIV and whatever, because I remember one time when somebody saw a film, he totally changed his life.' (C) |

At this summit, the remarkable confluence of suggestions emphasising concrete approaches to enhancing access to AMPATH services by extending them to villages was noted. These recommendations were, in effect, a strategy that was concordant with the Government of Kenya Ministry of Health's emerging policies that emphasised the need to restrict provision of HIV-related services to individuals residing only within a programme's geographic catchment area. Patients who travelled long distances to seek care had, in fact, become a challenge to AMPATH, because the 'package' of AMPATH services rendered without charge had become attractive to many individuals who lived outside the programme's service area. While these individuals could be served by AMPATH, to the extent that AMPATH enrolled individuals outside its service areas, PEPFAR drug funds for Kenya flowed disproportionately to AMPATH, raising concerns about programme-to-programme and area-to-area equity at the top levels of Kenyan Ministry of Health. Moving AMPATH services progressively down to the village level, employing community-owned resource persons who lived in those villages, and enhancing access through better communication and transportation that linked rural satellites to AMPATH sites emerged as a strategy that would promote Government of Kenya new programme policy, enhance access to services for individuals within AMPATH catchment areas, and respond to the preferences of staff, patients and villagers alike.

At present the AMPATH programme is engaged in early experiments with just such a transition from centres to villages, including implementation in trial districts of village-based, door-to-door HIV screening and counselling, and immediate enrollment in AMPATH care for those who are discovered to be seropositive. To everyone's relief and delight, these approaches, even in the face of potential for misunderstanding, stigmatisation, and resistance by village populations, are being received positively. Approximately 95% of households within the first district in which this door-to-door programme has been available have welcomed AMPATH personnel into their homes. In the long run, it is hoped that this kind of outreach, education and screening activity will stimulate and support community mobilisation, prevention, and additional outreach activities.

## Discussion

To the extent that programme growth is a valid indicator of success, the USAID-Academic Model Providing Access to Healthcare Partnership's response to the need and demand for HIV-related care in western Kenya has been extraordinary. While many programmes in sub-Saharan Africa continued to struggle to increase in size and scope between 2001 and 2006, AMPATH rapidly expanded the number of patients and communities served, without apparently diminishing the quality or effectiveness of its services. In allocating scarce and critical resources to populations in great need, however, no programme should rest on its laurels.

The information we uncovered in a multi-perspective assessment of AMPATH suggests that there are unsatisfied demands within the AMPATH service area for operational enhancement – an appetite for more of the special services that AMPATH has been able to extend to its target populations, a desire for greater access to services, requests for more screening and counselling, hopes for more community education and outreach, room for improvement in some of the ways programme personnel communicate with their communities and patients, and other suggestions for improvement from all engaged parties – staff, patients and communities. Bringing the whole landscape of AMPATH's performance into view required input from all these perspectives, and an analytical method that was both qualitative and quantitative, in order to understand the critical, core improvement messages, their relative frequency, as well as the group-to-group and site-to-site variations in those messages. To our knowledge, this evaluation was the first recorded use of village *mabaraza* in combination with patient and staff interviews in the assessment of a health care programme. Using methodological triangulation to generate and present programme evaluation data was important to the perceived validity and authenticity of the improvement recommendations, since some stakeholders wanted numerical and epidemiological data, others responded to the 'voices' of the community, and still others had responsibilities that related primarily and variously to staff, patients and villages. In these leadership councils, staff meetings and programme-policy 'summit' the strengths of the evaluation method was apparent.

Some additional observations on the evaluation data deserve highlighting:

- Major suggestions for programme improvement were ones in which staff, patients and communities largely concurred.
- Village and patient perspectives seemed to place greater emphasis, however, on certain improvement suggestions than would be apparent from staff suggestions. Community participants not only expressed a stronger preference for village-based care and education, but also confidence in their ability to mount such services themselves, given AMPATH's assistance.
- Community members' emphasis in *mabaraza* on outreach, education, and 'community engagement' might add up to a 'recipe' for 'social mobilisation'.

- Significant site-to-site variations in the tone and content of the interviews and *mabaraza* dialogues were apparent. These differences might be due to local differences in dominant tribal culture (e.g. in wife inheritance, cleansing, polygamy, land inheritance and other traditions that condition HIV risk, social support or poverty), dominant area economy (e.g. agriculture, truck stops, or shop-keeping – all with different relationships to HIV risk, poverty, and AMPATH services), politics (differences from place to place in the engagement of AMPATH with district administration and/or chiefs), AMPATH programme maturation at a site (familiarity with programme procedures, personnel, and resources), or all of the above. Improvement initiatives may need to be tailored to localities.

- Vulnerable sub-populations may be an important consideration in strategies for improving programme services. In addition to an abiding concern with the well being of widows and orphans, communities urged AMPATH to do more to reach and educate men of all ages and school-age youth of both genders.

The limitations of this initiative's approach to programme evaluation should also be noted. First, the interviews and analysis reported here are restricted to a directly engaged stakeholder focus on strategic options for programme improvement, and other critical issues such as cost-effectiveness considerations, changes in clinical case-mix, patient adherence to medical regimens, mortality rates, loss of patients to programme follow-up, and policy-makers' perspectives are represented only implicitly in recommendations for improvement. It is possible that these aspects of AMPATH's performance in its complex socio-medico-political environment might have been more prominently discussed if a standard 'SWOT' (Strengths-Weaknesses-Opportunities-Threats) approach had been taken and presented here. In fact, these important components of a strategic planning process are all specifically part of the larger AMPATH programme evaluation, which has become a continuous assessment and improvement process.

Next, the evaluators for this portion of the evaluation included non-Kenyan personnel who are not based in AMPATH operations or western Kenya (TI, RF). While the presence of foreigners can be a stimulus to explicit discourse among all involved in an activity and uncover otherwise tacit assumptions, attitudes or beliefs, such individuals lack otherwise common understandings of language, customs, standard operating policies, and opportunities. While the AMPATH staff is multilingual, only English was used to open a query in patient interviews and village dialogues, and the discussion then quickly shifted to Kiswahili and tribal languages. Again, when the facilitation of an interview or a *baraza* was primarily the responsibility of a non-Kenyan, simultaneous and consecutive translation, with all of its limitations and opportunities for misinterpretation, limited the extent to which discerning field notes could be taken. Clearly, the depth of understanding of what was being said and implied, particularly in the *mabaraza*, was limited. Finally, while systematic sampling of AMPATH personnel was possible in the conduct of staff interviews, only convenience sampling of AMPATH patients at sites was feasible, and village-level key informant social networking influenced participation in *mabaraza*. Unmeasured selection biases could have influenced the content of patient interviews and *mabaraza* dialogues.

We conclude by expressing the hope that this description of a programme evaluation method will be helpful to HIV programme managers in other settings with responsibilities and questions of their own. After this multi-method, multi-perspective triangulation, strategies for enhancing AMPATH's performance were highlighted – recommendations for operational changes that might further improve the performance of an already successful programme. Finding consensus on improvement strategies in the complex socio-cultural-political environments in which HIV/AIDS programmes operate is no simple matter. Such strategies need to be understandable, salient and feasible from the perspective of multiple stakeholders, all of whom need to be an important part of the work going forward. Our triangulation method may have the potential to bring such strategies into focus.

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### References

Buckingham, W. (January 26, 2007). Personal interview (with Inui, T.S. Sidle, J.E., Nyandiko W.M.).

Crabtree, B., & Miller, W. (Eds). (1999). *Doing qualitative research* (2nd edition, Vol. 3). London: Sage.

Denzin, N. (1970). *The research act: A theoretical introduction to sociological methods.* Chicago: Aldine Publishers.

Einterz, R.M., Kelley, C.R., Mamlin, J.J., & Van Reken, D.E. (1995). Partnerships in international health: The Indiana University-Moi University experience. *Infectious Disease Clinics of North America,* 9(2), 453-455.

Einterz, R.M., Kimaiyo, S., Mengech, H.N., Khwa-Otsyula, B.O., Esamai, F., Quigley, F., & Mamlin J.J. (2007). Responding to the HIV pandemic: the power of an academic medical partnership. *Academic Medicine,* 82 (8), 812-818.

El-Sadr, W.M., & Hoos, D. (2008). The President's Emergency Plan for AIDS Relief – Is the emergency over? *New England Journal of Medicine,* 359, 553-559.

Haugerud, A. (1995). *The culture of politics in modern Kenya.* New York: Cambridge University Press.

Inui, T.S., Nyandiko, W.M., Kimaiyo, S.N., Frankel, R.M., Muriuki, T., Mamlin, J.J., Einterz, R.M. & Sidle, J.E. (2007). AMPATH: Living proof that no one has to die from HIV. *Journal of General Internal Medicine,* 22, 1745-1750.

2007 Kenya AIDS Indicatory Survey (2008). Nairobi, Kenya: Kenya Ministry of Health.

Kenyatta, J. (1965). *Facing Mt. Kenya: The tribal life of the Gikuyu.* New York: Vintage.

Mamlin, J., Kimaiyo, S., Nyandiko, W., Tierney, W., & Einterz, R. (2004). Academic institutions linking access to treatment and prevention: Case study. In: *Perspectives and Practice in Antiretroviral Treatment.* Geneva: World Health Organisation.

Mamlin, J., Kimaiyo, S., Lewis, S., Tadao, H., Jerop, F.K., Gichunge, C., Petersen, T., Yih, Y., Braitstein, P., & Einterz, R. (2009). Integrating nutrition support for food-insecure patients and their dependents into an HIV care and treatment programme in Western Kenya. *American Journal of Public Health,* 99(2), 215-221.

Merson, M.H. (2006). The HIV-AIDS pandemic at 25 – The global perspective. *New England Journal of Medicine,* 354 (23), 2414-2417.

Palella, F.J., Jr, Delaney, K.M., Moorman, A.C., Loveless, M.O., Fuhrer, J. Satten, G.A., *et al.* (1998). Declining morbidity and mortality among patients with advanced human immunodeficiency virus infection. *New England Journal of Medicine,* 338, 853-860.

Risjord, M., Moloney, M., & Dunbar, S. (2001). Methodological triangulation in nursing research. *Philosophy of the Social Sciences*, 31(1), 40-59.

Saberwal, S. (1970). *The traditional political system of the Embu of central Kenya.* Nairobi: East African Publishing House.

Sepkowitz, K.A. (2006). One disease, two epidemics – AIDS at 25. *New England Journal of Medicine,* 354 (23), 2411-2414.

UNAIDS (2006). *2006 Report on the Global AIDS Epidemic.* Geneva: UNAIDS.

World Health Organisation. (2005). *Progress on Global Access to HIV Antiretroviral Therapy: an Update on "3 by 5".* World Health Organisation: Geneva.

Yebei, V.N., Sidle, J.E., Frankel, R.M., Ayuku, D., Nyandiko, W.M., & Inui, T.S. (2009). Rooting inquiry in tradition: The health *baraza* as a tool for social research in Kenya. *Qualitative Health Research* (in press).