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RESEARCH ETHICS CAPACITY DEVELOPMENT IN AFRICA: EXPLORING A MODEL FOR INDIVIDUAL SUCCESS

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Abstract

The Johns Hopkins-Fogarty African Bioethics Training Program (FABTP) has offered a fully-funded, one-year, non-degree training opportunity in research ethics to health professionals, ethics committee members, scholars, journalists and scientists from countries across sub-Saharan Africa. In the first 9 years of operation, 28 trainees from 13 African countries have trained with FABTP. Any capacity building investment requires periodic critical evaluation of the impact that training dollars produce. In this paper we describe and evaluate FABTP and the efforts of its trainees.

Our data show that since 2001, the 28 former FABTP trainees have authored or co-authored 105 new bioethics-related publications; were awarded 33 bioethics-related grants; played key roles on 78 bioethics-related research studies; and participated in 198 bioethics workshops or conferences. Over the past nine years, trainees have collectively taught 48 separate courses related to bioethics and have given 170 presentations on various topics in the field. Many former trainees have pursued and completed doctoral degrees in bioethics; some have become editorial board members for bioethics journals. Female trainees were, on average, less experienced at matriculation and produced fewer post-training outputs than their male counterparts. More comprehensive studies are needed to determine the relationships between age, sex, previous experience and training program outputs.

Keywords

bioethics; developing world; education; research ethics; sub-Saharan Africa

INTRODUCTION

The landscape of health research has shifted dramatically in recent years with more research conducted globally than ever before. Between 1995 and 2005 clinical trial sites outside of the US more than doubled, while the proportion of trials conducted in the US and Western Europe decreased.¹ In 2005, total global financing for health research and development exceeded \$160 billion, up from \$55.8 billion in 1992.² Investment in health research has become of interest to all financial sectors, with roughly half of the costs of health research globally coming from public sources and half from private.³ This trend is in concert with health research, including clinical trials, increasingly being performed in low- and middle-income countries (LMICs).⁴

As investment in global health research increases, it increasingly has been suggested that research funders support the training of individuals from LMICs in research methods and research ethics.⁵ Many governmental and non-governmental organizations including the US

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National Institutes of Health (NIH), US Centers for Disease Control (CDC), UK Wellcome Trust, and the European and Developing Countries Clinical Trials Partnership (EDCTP) have funded or facilitated such training activities explicitly, while many other large funders have incorporated training of local staff into research programs more broadly.⁶

Building on these efforts, more focused attention to capacity development and professional training in the ethical issues of global health research has emerged as a critical area for advanced training. Multiple organizations, including the World Health Organization (WHO), Family Health International (FHI), the African Malaria Network Trust (AMANET), the Pan-African Bioethics Initiative (PABIN), the National Institutes of Health (NIH), and Training and Resources in Research Ethics Evaluation (TRREE-for Africa) have provided shorter research ethics workshops or modules. Other groups, including the EDCTP and Wellcome have begun to invest in longer term training. The Fogarty International Center (FIC), a component of the US NIH, has made the most significant investment in long-term research ethics training in LMICs with over 10 years of financial support for training programs around the globe.⁷

The willingness of the U.S. NIH to support LMIC ethics training recognizes a strong link between a national commitment to global health research and the need to promote host-country research oversight capacity. Indeed, as a condition of engaging in research funded by the US government, researchers, regardless of their location, must seek review from a local Institutional Review Board (IRB) that is registered with the U.S. government and that has assured the U.S. Office for Human Research Protections (OHRP) that it will comply with federal regulations for the protection of human subjects.⁸ While the increase in international funding for research ethics capacity improvement in LMICs has been met with acclaim, any large investment demands critical evaluation of the impact such training dollars produce as well as identification of best strategies for varying training goals.

Various challenges to sound evaluation exist.⁹ First, there are challenges in measuring research ethics capacity development; for example, mixed methods are often required;¹⁰ it is difficult to identify the right outcome measures; and baselines tend not to be available. Also, trainees do not always self-track contributions to the research ethics landscape. This is especially magnified in LMICs where trainees are in high demand for other valuable research or professional skills. In many countries, building a career in research ethics is not a viable option; hence, there is little incentive for trainees to maintain detailed records of ethics accomplishments. However, despite difficulties associated with measuring the impact of research ethics training, many major indicators of outputs and outcomes can and must be measured to demonstrate the value of investments.

In this paper we describe efforts to evaluate one NIH-funded research ethics training program that serves individuals from sub-Saharan Africa. We explain techniques used to collect indicator data from program trainees who participated in the first nine years of this program, and apply a previously developed framework to evaluate the training program's impact, assessing the strengths and limitations of the chosen training model. We hope that this analysis will not only help inform the development of future research ethics capacity development programs but also contributes to the discourse around methods for evaluation of capacity development investments, including those made in global bioethics.

The Johns Hopkins-Fogarty African Bioethics Training Program

The Johns Hopkins-Fogarty African Bioethics Training Program (FABTP) has been previously described.¹¹ In brief, this program was first funded by the FIC in 2000. A fully-funded, one-year, non-degree training opportunity in research ethics was provided from 2001–2009 to health professionals, ethics committee members, scholars, journalists and

scientists from countries across sub-Saharan Africa. During this period, FABTP's primary aim was to contribute to the development of African leaders in the field of research ethics by identifying, training, networking, and supporting promising and committed individual trainees. From 2001–2009, 28 trainees from 13 African countries completed research ethics training through the program. Trainees spent six months in residence at the Johns Hopkins Berman Institute of Bioethics and Johns Hopkins Bloomberg School of Public Health (JHU) completing graduate coursework in research ethics, bioethics, and research methods. They also observed IRB meetings, attended ethics seminars at JHU and the NIH, and met regularly with JHU mentors. The program emphasizes training in four core competencies: theory and principles of bioethics, training and teaching in research ethics, research ethics committees, and empirical research on research ethics.

The last six months of the one-year training program through this period was devoted to completion of an independent practicum project related to research ethics. Specifically, while at JHU, each trainee, working closely with a JHU mentor, wrote a highly detailed proposal for a practicum project. The proposal included objectives, literature review, methods, budget, and timeline. After completion of six months of JHU-based training, trainees returned to their home countries to implement their practicum projects using seed grants provided by the program. Mentorship during the practicum and for several years following is provided by both JHU and African faculty. The program has two directors, six advisory faculty, ten affiliated faculty, and two part-time staff.

Since 2004, FABTP has also organized and staffed an annual one-month research ethics program in June, based at Johns Hopkins and cost-shared with other Fogarty international bioethics training programs that send trainees to JHU for intensive courses, seminars, and visits to local institutions and governmental agencies conducting work related to research ethics. In addition to providing these training opportunities, FABTP maintains a network of alumni who remain actively connected through mentorship, reunions, newsletters, a collaborative web portal and independent efforts.

EVALUATIVE FRAMEWORK

This training program assessment utilizes an evaluation framework that applies a matrix of indicators demonstrating training program inputs, processes, outputs and outcomes (Figure 1).

The framework is based on other approaches in health systems, human resources and public health.¹² We have described previously how our program was organized and preliminary outputs; here we present longitudinal data, after nearly a decade of training, focusing specifically on key pre-training inputs, intra-training processes and post-training outputs. The selected indicators provide objective measures that can be used to evaluate the productivity, accomplishments, and impact of a research ethics training program.

Data sources for this paper included trainees' initial program applications, practicum proposals, informal progress reports, annual trainee professional activity reports, trainee resumes, and trainee program evaluations. On a rolling basis, data were entered into a Microsoft Access® database developed for the FABTP. Program staff annually review the information contained in the database for accuracy and comprehensiveness. Data were transferred to Microsoft Excel for further tabulation and analysis. Summary statistics and percentages were calculated by year of enrollment, sex and types of activities. The analysis focused on selected aspects of the FABTP evaluation framework.

APPLICATION OF FRAMEWORK

Pre-training

In the spring of each year, a call for applications was posted on FABTP's website, through email listservs, and in newsletter and other print materials. Applications were reviewed after a July 1st application deadline. From 2001–2006, the number of applications received increased each year, with the exception of 2005, and reached a peak of 128 individual applicants in 2006. From 2007–2009 the number of applicants decreased and leveled out around a nine-year average of 76 applications per year. A combined total of 682 applications were received from 2001–2009.

Applications were scored independently by two faculty for seven selection criteria including previous academic performance, previous research experience, previous IRB and/or research ethics experience, quality of personal statement, demonstrated future commitment to ethics, likely future impact, and institutional support. Those with the highest cumulative scores were again reviewed, references were checked, and up to 6 finalists were reviewed and discussed by all program faculty and then ranked. Offers were made to the top three candidates, and if a candidate was no longer able to participate, the next ranked finalist was invited. In nine years, one candidate was not able to participate due to a visa-related issue, but was invited to participate the following year.

At matriculation, of the 28 trainees selected for training from 2001–2009 (19 male), half (14) originated from countries in Eastern Africa; the average age was 36 years (39 male/32 female); the average number of years of previous employment was 11 (13 male/9 female); and the average number of published articles per-trainee before entering the program was four (8 male/<1 female) (Table 1). In addition, over three-quarters of the applicants selected for training held at least one graduate degree (89% male/56% female).

Intra-training

In each year, during the six months in residence at Johns Hopkins, trainees engaged in multiple training activities. In addition to participating in five rigorous graduate courses at Johns Hopkins, they also observed IRB meetings and discussed IRB operations with IRB directors; attended a special seminar series on current issues in bioethics; participated in library orientations; attended seminars and presented their work at the NIH Department of Bioethics; met with FDA, OHRP, and NIAID officials; conducted mock IRB reviews; presented at research retreats; participated in an intensive bioethics course at Georgetown University; served as discussion leaders for an intensive international research ethics course at JHU; interacted with trainees from two other Fogarty bioethics training programs; and developed and implemented practicum proposals, which often required submission of IRB proposals at JHU and home institutions.

One of the five graduate courses completed by trainees was a seminar, organized and directed by FABTP faculty and open only to FABTP trainees, focusing on major events and topics in international research ethics. The seminar also provided a forum for trainees to develop and present practicum project proposals in front of mentors and peers. Trainees then refined their proposals by meeting individually, at least twice each month, with an assigned faculty advisor. By the end of their six-month program at JHU, trainees' fully developed proposals were submitted (as necessary) for IRB review. Project topics fell within one or more of the four FABTP core competencies. Projects were implemented upon return to the trainees' home countries with support from small incremental grants and sustained mentorship from JHU and African faculty. In order to receive a certificate of completion, trainees were required to produce a manuscript of publishable quality related to their practicum.

Trainees have conducted practicum projects ranging from a theoretical exploration of the universality of biomedical ethics guidelines, to the creation of an IRB, to a situational analysis of a national human subjects protection system, to original research on how well dental patients understand HIV research in which they are participating. Projects also frequently involved more than one topic or activity, for example, some trainees both organized workshops and empirically evaluated the impact. A significant majority (89%) of practicum projects involved the conduct of empirical research on research ethics (Table 2). Male trainees generally favored pursuing topics that involved teaching research ethics, determining researcher and research participant decision-making/perceptions, or evaluating ethics committees. Female trainees preferred designing projects that evaluated research participant and community member decision-making/perceptions (Table 2).

Post-training

Analysis of trainees' post-training activities over the past decade reveals significant productivity in research ethics in sub-Saharan Africa. Since 2001, the 28 former FABTP trainees have authored or co-authored 105 new bioethics-related publications; were awarded 33 grants; played key roles (as investigators) on 78 research studies; and participated in 198 bioethics workshops or conferences (Figure 2).

Over the past nine years, trainees have collectively taught 48 separate courses related to bioethics and have given 170 presentations on various topics in the field. Notably, all trainees returned to their home countries after their training, not only to pursue their own research activities, but also to teach and contribute to research oversight and other types of research ethics capacity locally.

We also examined the number of trainees participating in various post-training activities of interest. Over 80% of former trainees have given presentations on research ethics, participated in workshops or conferences on research ethics, or conducted research studies on research ethics topics. Additionally, over 60% of former trainees have served as members or administrators on 24 IRBs, and over 55% have authored ethics-related publications or taught courses on ethics topics (Table 3).

Additional notable trainee outputs include: becoming editorial board members for several scholarly ethics journals, being recruited as visiting scholars in other bioethics programs, being awarded funding to hold international ethics conferences, receiving funds to build the capacity of local ethics committees, and leading Africa-based research ethics training initiatives. Of the 20 trainees who, at matriculation, did not already have PhDs, 12 (60%) have since enrolled in Doctoral programs – eight of which (66%) focus specifically on topics in bioethics. Two PhDs were successfully defended in 2011, and several others are nearing completion.

When data were analyzed by sex, female trainees, on average, engaged in 41% fewer professional activities, post-training, compared to male trainees (3.8 vs. 2.4 activities per trainee) (Table 3). Female trainees were also less likely to participate in post-training activities with an average of 78% of male trainees participating vs. 57% of female trainees (Table 3). As discussed below, these correlations appear to exist irrespective of the fact that female trainees were, on average, younger and less experienced at matriculation.

DISCUSSION

Investments in global research ethics capacity development have been increasing over the last decade. Evaluation of these programs is becoming critical to demonstrate returns and to justify future funding. Exploring how these programs enable a stronger research ethics

component in the lives of African health professionals is important to document for programs like FABTP.

Our nine-year review of selected training program inputs, processes and outputs from one long term training program illustrates that a combination of US-based and in-country training and practical experience in research ethics, coupled with ongoing mentorship, can lead trainees to seek and create opportunities in the field for themselves and for a growing network of others in their home countries and institutions. An important component of any training program is the careful *selection* of trainees who demonstrate strong previous academic performance; have some prior experience with research, IRBs and research ethics; are capable of demonstrating a strong future commitment to research ethics; and are likely to make an impact on the field, with the support of home institutions and mentors. Identifying strategies for what is important in some of these areas, such as likelihood of making an impact on the field, especially within Africa, requires subjective evaluation based on what comes across in applications as dynamism, leadership, and some understanding, through responses to application questions, of aptitude and sensitivity to issues of bioethics.

The *pre-training* (matriculation) data indicate that, compared to their male counterparts, many female trainees selected for training entered the program with fewer years of professional experience (13 yrs vs. 9 yrs), fewer publications (8 vs. <1), and fewer graduate or doctoral degrees (17 vs. 5). While we are not able to identify the precise factors that account for these variations, they may, in part, reflect that female trainees on average were 7 years younger than their male counterparts at matriculation (39 yrs vs. 32 yrs). They may also reflect, in part, long-standing sociocultural norms and patterns of gender inequity in educational and professional life, which others have identified as present in several sub-Saharan African countries.¹³

It is our belief that a successful research ethics training program will provide trainees with exposure to a variety of activities and processes that equally develop knowledge, skills and networks in research ethics. All of the *intra-training* activities described above – courses, seminars, visits, experiences – provide exposure to multiple aspects of research ethics such that when trainees return home they are capable of participating more fully in the strengthening – or creation – of research ethics systems and capacities in their local environments. The practicum project in particular provides the opportunity for holistic training in all aspects of the research cycle – from thinking through appropriate research questions to writing a specific proposal, submitting it to an IRB, and conducting and reporting independent work. This process provides not only a vehicle for learning, but also for self-assessment and confidence building around the skills required to produce new knowledge.

Our *post-training* data provide clear evidence of significant engagement with research ethics by program alumni, both in terms of the diversity of products and quantity of outputs over the years since training. Trainees have developed portfolios in research ethics and have gone on to become well recognized scholars and policy leaders in Africa. Their scholarship, research, and teaching have made way for international partnerships and academic programs in research ethics. The degree of participation in research ethics professional activities by the majority of alumni is important. All former trainees have been involved in research ethics activities of some sort after training; and the 100% return home rate strengthens the impact of the program on host countries.¹⁴ Nine countries had more than one trainee each, and while this might make it easier for those trainees to interact for the benefit of their countries, the compound effect was not measured in this assessment.

The data collected also suggest a gender imbalance in post-training professional activities. When adjusted for the difference in the number of male and female trainees; female trainees, on average, engage in 41% fewer professional activities, post-training, than males. Most notable differences between male and female post-training outputs are observed in the number of courses taught (68% fewer), IRB member/administratorships (64% fewer), and publications authored (61% fewer). Female trainees were also, on average, less likely to participate in professional activities (21% less likely).

Though our data are limited, a trainee's age, degrees, number of past publications, and previous years of professional experience, at matriculation, do not appear to be strong predictors of his or her future measurable contribution to the field of research ethics. Of the nine female trainees, two of the youngest and least experienced trainees at matriculation (25 and 27 yrs old, BA degrees, 0 publications) were responsible for nearly half (49%) of total post-training female professional activities. The remaining 51% were shared across the seven other female trainees. Similarly, of the 19 male trainees, one of the youngest and least experienced trainees at matriculation (31 yrs old, MSc, 0 publications) is alone responsible for nearly a fifth (19%) of total post-training male professional activities. We further compared the post-training publications of male and female trainees to determine if a sex-based differences in post-training publications corresponded with sex-based differences in pre-training publications. In doing so we examined data of those trainees who entered the program with 0 previous publications. Of the six males who entered the program with 0 publications, four had published post-training. Similarly, of the seven females who entered with 0 publications, four had also published post-training. However, the average number of publications per trainee, post training, of this subset of trainees remained higher among male trainees. Males who started with 0 publications had an average of five publications post training, while females who entered with 0 had an average of 2.4 publications post training.

This evaluation has limitations. It is an evaluation of one program and 28 trainees; moreover, a number of factors that could explain sex-related differences, including potential links between sex and propensity to self-report, were not examined. More comprehensive studies are needed to determine the relationships between age, sex, previous experience and training program outputs. While this case study provides an indication of correlation between sex and post-training activity, future studies should include multiple training programs and larger samples to determine the extent of the noted difference.

“Capacity development” is an evolving concept that changes as civil systems and relationships grow. For nine years, FABTP has implemented a model of capacity development that focuses on developing individual knowledge-leaders who can make significant contributions to research ethics in their home environments. A key component of this type of capacity development is ongoing mentorship, which can increase trainees' social capital and enlarge their professional abilities and networks. However, given our findings, a challenge for FABTP (and perhaps other training programs) lies in determining strategies to help ensure that both women and men are given the necessary support to pursue academic and professional development, post-training. A strong alumni network with enabling affiliated and advisory faculty is one step towards fostering greater opportunities for both sexes, but this alone may be insufficient. Greater institutional engagement on behalf of trainees may be warranted.

In addition to finding better means to support gender equality, there are other areas for improvement in international research ethics capacity development.¹⁵ More attention can be given to supporting professional networks and alternative communication pathways to improve intra- and inter-program collaboration. Second, training programs like FABTP can do more to enhance trainees' ability to design interventions that engage with policymakers

and institutional leaders, targeting specific research ethics needs proactively (before research misconduct occurs). Third, and related, the research ethics goals, not just of individuals, but of institutions in LMICs, should be more widely incorporated into capacity development blueprints.¹⁶ In a traditional ‘trainee-focused’ model of capacity development where multiple individuals from multiple countries are trained, the trainer’s ability to engage with the environments from which trainees come is limited. As a result, trainees return to the same environments they left and there is no change to the local prioritization of research ethics. The post-training demand on trainees (both for their bioethics and non-bioethics capacities) is so high that unless they receive strong institutional support and have colleagues to share the burdens, they will struggle to advance bioethics at home. This is especially true as trainees attempt both to return to professional life and complete practicum projects.

At the same time, as African institutions become more invested in research ethics, and in well-trained individuals, there develops a parallel increased need for institutions to coordinate their policies, offerings and infrastructures with their human capital and demand. Effective institutional management of these coordinating activities is often facilitated by regular consultation with international experts, something that again is not typically a function of the ‘trainee-focused’ model, but perhaps should be a more significant component of research ethics capacity building efforts. Research ethics is not simply about individuals, but about policies, committees, structures, operations, relationships, and the like.

CONCLUSION

While it is still too early to confidently assess global outcomes of research ethics training, research ethics has become a subject of global attention. As international collaborative research continues to grow, so too does the need for awareness about ethical conduct in research. Research ethics training can lead to improved engagement with research collaborators, research participants, ethics committees, funders, and policymakers. Indeed, many have stated that research ethics is an integral component of any functioning health system.¹⁷ Capacity development programs in the future may be well advised to try to further several but complementary goals of training individuals, changing environments to recognize the importance of research ethics, and working with local institutions that operationalize research ethics. Frameworks for evaluating the impact of such “multi-target” training models will need to be adopted.

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References

1. Glickman SW, McHutchison JG, Peterson ED, et al. Ethical and scientific implications of the globalization of clinical research. *N Engl J Med.* 2009; 360:816–23. [PubMed: 19228627]
2. Burke, MA.; Matlin, SA., editors. *Global Forum for Health Research.* 2008. Monitoring financial flows for health research 2008: Prioritizing research for health equity.
3. Ibid.
4. Glickman et al., op. cit. note 1; Rehnquist J. The Globalization of Clinical Trials: A Growing Challenge in Protecting Human Subjects. Department of Health and Human Services office of Inspector General 2001 Thiers FA, Sinskey AJ, Berndt ER. Trends in the globalization of clinical trials. *Nat Rev Drug Discov.* 2008; 7:13–14.

5. National Bioethics Advisory Commission. Ethical and policy issues in international research: clinical trials in developing countries. Bethesda, Maryland: National Bioethics Advisory Commission; 2001. World Health Organization. Operational guidelines for ethics committees that review biomedical research. Geneva, Switzerland: World Health Organization; 2001. Nuffield Council on Bioethics. The ethics of research related to healthcare in developing countries. Nuffield Council on Bioethics. 2002
6. Kass, N.; DeLuca, AD.; Coetzee, L., et al. Applying ethical principles to international community-based research: Lessons from the consortium to respond effectively to the AIDS/TB epidemic (CREATE). Under Review
7. Fogarty International Center. [Accessed 9 April 2012] Awards for the International Research Ethics Education and Curriculum Development Award. 2011. Available at: <http://www.fic.nih.gov/Grants/Search/Pages/Awards-Program-Bioethics.aspx>
8. 45 CFR 46. Federal policy for the protection of human subjects. Fed Reg. 1991; 56:28003–18.
9. Hyder AA, Akhter T, Qayyum A. Capacity development for health research in Pakistan: The effects of doctoral training. Health Policy Plan. 2003; 18:338–43. [PubMed: 12917275] Hyder AA, Harrison RA, Kass N, et al. A case study of research ethics capacity development in Africa. Acad Med. 2007; 82:675–83. [PubMed: 17595564] Brown KH, McLachlan M, Cardosa P, et al. Strengthening public health nutrition research and training capacities in West Africa: Report of a planning workshop convened in Dakar, Senegal, 26–28 March 2009. Glob Public Health. 2010; 5:S1–19. [PubMed: 21113828]
10. Malek JI, Geller G, Sugarman J. Talking about cases in bioethics: The effect of an intensive course on health care professionals. J Med Ethics. 2000; 26:131–36. [PubMed: 10786325]
11. Hyder, Harrison, Kass et al., *op. cit.* note 9.
12. Hyder et al., *op. cit.* note 9; Hyder, Harrison, Kass et al., *op. cit.* note 9.
13. Ampofo AA, Beoku-Betts J, Njambi WN, et al. Women's and gender studies in English-speaking sub-Saharan Africa. A Review of Research in the Social Sciences. Gender & Society. 2004; 18:685–714.
14. Kupfer L, Hofman K, Jarawan R, et al. Strategies to discourage brain drain. Bull World Health Organ. 2004; 82:616–19. [PubMed: 15375452]
15. Hyder AA, Dawson L, Bachani AM, et al. Moving from research ethics review to research ethics systems in low-income and middle-income countries. Lancet. 2009; 373:862–65. [PubMed: 19269523]
16. Ibid; Kilama W. From research to control: Translating research findings into health policies, operational guidelines and health products. Acta Trop. 2009; 112:S91–101. [PubMed: 19686696]
17. Hyder et al., *op. cit.* note 15; World Health Organization. The world health report 2000 - Health systems: improving performance. Geneva, Switzerland World Health Organization 2000

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	Pre-training	Intra-training	Post-training
Inputs	• Applications	• Trainees • Faculty • Courses	• Trained professionals • Opportunities
Process	• Review	• Teaching • Mentoring	• Teaching • Networking • Mentoring
Outputs	• Trainees selected	• Enhanced knowledge • New skills	• Publications • Research grants • Students
Outcomes	• Successful arrival of trainees	• Trained professional	• Research ethics capacity in Africa

Figure 1. FABTP Evaluation Framework*

* Originally published in Hyder AA, Harrison RA, Kass N, et al. A case study of research ethics capacity development in Africa. Acad Med 2007;82:675-83.

Figure 2.
Post-Training Bioethics Activities of Johns Hopkins-Fogarty African Bioethics Training Program Trainees, 2001–2009 (n = 28)

Table 1

Pre-Training Matriculation Profiles of Johns Hopkins-Fogarty African Bioethics Training Program Trainees, 2001–2009 (n = 28)

African regions* # of trainees	Male	Female	Total
Northern Africa	1	0	1
Western Africa	4	3	7
Central Africa	4	0	4
Eastern Africa	10	4	14
Southern Africa	0	2	2
<i>Total</i>	<i>19</i>	<i>9</i>	<i>28</i>
Age mean (range)	39 (29–49)	32 (25–42)	36 (25–49)
Number of years of professional experience mean (range)	13 (4–25)	9 (3–18)	11 (3–25)
Number of publications mean (range)	8 (0–33)	<1 (0–3)	4 (0–33)
Highest degree # of trainees			
Doctoral	7	1	8
Graduate	10	4	14
Bachelors/Diploma	2	4	6
<i>Total</i>	<i>19</i>	<i>9</i>	<i>28</i>

* United Nations Sub-regions of Africa

Table 2

Practicum Concentrations of the Johns Hopkins-Fogarty African Bioethics Training Program Trainees, 2001–2009 (n = 28)

Core Competency # of trainees [*]	Male	Female	Total
Empirical research on research ethics	17	8	25
Teaching of research ethics	5	1	6
Research ethics committees	3	1	4
Ethics theory and principles	1	0	1
Topic # of trainees[*]			
Participant decision-making/perceptions	4	4	8
Community decision-making/perceptions	3	5	8
Education/teaching ^{**}	5	2	7
Researcher decision-making/perceptions	4	1	5
National situational analysis	3	1	4
Ethics committee evaluation	4	0	4
Informed consent	2	2	4
Ethics committee development	3	1	4
Ethics guidelines	2	1	3
Moral philosophy	1	0	1

* Values reflect practicum projects that address more than one competency or topic.

** Includes teaching of researchers, research participants, IRB members, educators, and/or community members.

Table 3

Sex Differences in Post-Training Bioethics Activities of Johns Hopkins-Fogarty African Bioethics Training Program Trainees, 2001–2009 (n = 28)

Type of activity	Tot. # of activities		Ave. # of activities per trainee			% of trainees participating in activity			
	Male (n=19)	Female (n=9)	Male	Female	Difference (%)	Male(%)	Female (%)	Average (%)	Difference (%)
Wkshp./Conf. Attended	150	48	7.9	5.3	2.6 (33)	95	66	81	29
Presentations Given	120	50	6.3	5.5	0.8 (13)	95	77	86	18
Courses Taught	42	6	2.2	0.7	1.5 (68)	68	44	56	24
IRB Member/Admin.	20	4	1.1	0.4	0.7 (64)	84	44	64	40
Studies Conducted	56	22	2.9	2.4	0.5 (17)	89	88	89	1
Grants Awarded	25	8	1.3	0.9	0.4 (31)	47	33	40	14
Publications Authored	88	17	4.6	1.8	2.8 (61)	68	44	56	24
<i>Average</i>	<i>72</i>	<i>22</i>	<i>3.8</i>	<i>2.4</i>	<i>1.3 (41)</i>	<i>78</i>	<i>57</i>	<i>67</i>	<i>21</i>