AFRICAN CENTERS OF EXCELLENCE IN HEALTH

Report from September 2011 Summit

ACCORDIA
GLOBAL HEALTH FOUNDATION

Accordia Global Health Foundation is a non-profit organization dedicated to the vision of a healthy, vibrant Africa where every individual can thrive. We work in partnership with individuals, corporations, foundations, nongovernmental organizations, and governments from around the world - bringing private sector discipline and academic rigor to our global health programming. Accordia builds and validates innovative healthcare programs and models, strengthens African academic medical institutions, and is committed to establishing a network of African Centers of Excellence for health research, training, care and prevention.

In 2001, Accordia, Pfizer Inc, and an Academic Alliance of some of the world's most accomplished infectious disease doctors and scientists structured a transformative investment in African healthcare. The mission was to create a center of excellence for infectious diseases located in Africa which could attract, develop and retain the best and brightest from the region.

Together we achieved this through the establishment of the Infectious Diseases Institute (IDI) in Kampala, Uganda. Operating at the intersection of training, research and advanced clinical care, this world-class center enables continuous innovation and responsiveness to the most pressing health concerns. Strong and secure multi-year funding enabled rapid scale-up to achieve this vision, with strategies to promote long-term sustainability implemented from the start. Governance and management structures were established to ensure long-term focus and locally appropriate solutions. Perhaps most importantly, the center was gifted to Makerere University to ensure complete integration into the national and regional health system.

Today, IDI is a sustainable center of excellence that is transforming healthcare across Africa and ensuring that African men, women, and children can live longer and more productive lives. Accordia is working to replicate this proven model throughout Africa, to create a network of similar and complementary centers, and fundamentally transform the health landscape in Africa.

MESSAGE FROM THE PRESIDENT

Warner C. Greene, MD, PhD

Africa is at a critical juncture. With new signs of economic progress, it is possible to envision a much different Africa than the one that has suffered from decades of poverty, disease, and instability. Health is an essential component of sustained development momentum. Great innovation and strong African leadership will be required to overcome the devastating impact of HIV/AIDS and other pressures on already weak health systems. Centers of Excellence in Health are helping to lead these efforts.

Institutes like those included in the research presented in this report are making outstanding contributions to the future health of Africa; not only providing high-quality care to those who need it now, but ensuring a strong African healthcare environment for the future – by educating new and existing African health professionals, by bringing cutting edge medical research to Africa, and by using the findings of that research to influence policy and practice in their communities, in their countries, and for all of Africa.

Based on our success with the Infectious Diseases Institute, Makerere University, Accordia set an ambitious goal for ourselves: to create and sustain a network of such Centers, throughout sub-Saharan Africa. Each with its own focus and specialization, but all driven locally, and with the mission to build permanent capacity for improved health in Africa, through excellence in research and medical education.

This year we resolved to ask ourselves tough questions and share the answers with our peers - What are the critical success factors in developing and sustaining a true center of excellence? How can we guarantee that standards are not compromised as international funding streams shift? Which elements of a business plan will ensure a stable platform, long term leadership and commitment to local needs? Which aspects of our operating model have helped, and which have hindered? How can we navigate this critical period of growth and development for Africa's healthcare environment – now, when resources are scarce but the essential foundation is being laid for a not-so-distant future when Africa's health sectors are as successful and rewarding as any in the world?

Accordia's survey of other Centers of Excellence, and the African Centers of Excellence Summit in Health, represent a strong first step toward answering those questions. Accordia thanks those who participated as pioneers in this early work – your contribution was invaluable.

Warner C. Greene, MD, PhD

ACKNOWLEDGEMENTS

The work presented in this report was made possible in part by the financial and in-kind contributions of the following partners, and the African Centers of Excellence who participated in our survey and Summit:

- Wellcome Trust
- U.S. National Institutes of Health, Office of AIDS Research
- Katherine and Robert Burke

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EXECUTIVE SUMMARY

The establishment and support of Centers of Excellence in Health is an effective, long-term strategy to build permanent health capacity in Africa and other parts of the developing world. Centers of Excellence conduct original and translational research, save lives through the provision of high quality clinical and laboratory services, and strengthen the health workforce through training and medical education. They help strengthen national and regional health systems by setting higher standards in all program areas, and working with peers to improve the widely available quality of care. They are a primary source of future leaders in research, education, policy and management, and provide an example of good governance and financial transparency for others to emulate. Centers of Excellence can transform a nation's healthcare system from within.

The research and other scientific accomplishments of Centers of Excellence have been well documented, but today there is a clear need to better understand the business models and operational structures that ultimately determine their sustainability.

Over the course of 2011, Accordia Global Health Foundation conducted substantial outreach to arrive at a shared definition of Centers of Excellence and identify a sample of organizations in Africa meeting that definition. An open-ended questionnaire and survey of their history, size, funding, operating model, and strategies for sustainability was returned by 21 Centers from 12 African countries.

Response to the survey and the critical issues it surfaced shaped the agenda for the Centers of Excellence Summit, held 12 – 13 September 2011 in Uganda. That meeting convened the leaders of 18 among the most successful Centers from 12 African countries and presented an unprecedented opportunity for Centers of Excellence to reflect on their diverse operating models and business plans for sustainability, candidly exchange insights, share lessons learned, and to discuss future challenges to the continued success and growth of their Centers.

Select findings and insights from our survey and the Summit are presented in this report, and represent an important first step in acknowledging the challenges faced by Centers of Excellence, and enabling more effective support of these transformative institutions in the future.

Optimal legal, governance and financial models are not well understood. There is no clear consensus on the optimal legal and governance structure for Centers of Excellence, but an acknowledged need for balance between the autonomy and efficiency of complete independence, and the credibility and access provided when embedded within an established host institution.

Core Funding is essential to ensure long-term success and to maintain intended standards of quality. Today, the "core costs of excellence" may exceed what can be recuperated through conventional programmatic funding. Funders must support the full costs of operating at this level, including appropriate investment in infrastructure, systems, and staffing.

The tendency to expand – or shift – programmatic focus may not support the goals of a Center of Excellence. Accordia's survey showed that most Centers substantially broaden their scope of research or programming over time. Expansion of programmatic scope is sometimes deliberate, and ranges in rationale from the need to manage risk to a desire to build new national capacity, but is often purely a function of international funding trends – and may be inherently at odds with a Center of Excellence's stated goals.

This report also calls for the creation of an Association of African Centers of Excellence, as a forum for future exchange and unified advocacy. In 2012, this Association will pilot initiatives demonstrating value to member Centers, convene a second meeting on strategic themes of agreed priority, and begin advocacy on key issues of common concern.

FOREWORD

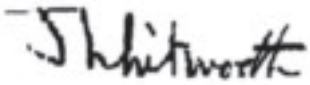
Professor James Whitworth, MD, *Head of International Activities*, Wellcome Trust

Sub-Saharan Africa remains the poorest continent in the world, with the least financial and trained manpower resources and the highest mortality and morbidity burdens anywhere on the globe. In many places infrastructure is poor, institutions not well equipped or staffed, and health workers and researchers are not valued and do not have credible or attractive career pathways.

However, this is not the case everywhere. There a number of Centres of Excellence in Health on the continent, many of which have been in existence for decades, which are making outstanding contributions to health in Africa and are critical to the long term strength and sustainability of Africa's health sector. These Centres often demonstrate just what can be achieved in terms of patient care and saving lives, while also acting as beacons, stimulating improvements in health services and systems elsewhere and inspiring young health workers and researchers to embark on careers, training and education. These young people will become the future leaders in health services and research and it is crucial that they are taught and learn from the very best sources.

In today's financial and fiscal climate, it is imperative that resources are used as efficiently and effectively as possible. Many of these Centres have developed good governance and financial transparency models in order to become successful. This report starts the process of analysing what makes a successful centre, how best can it be structured, and the strengths and challenges of particular models. This is an area of interest for a number of research and development funding agencies, including the Wellcome Trust, which has been supporting Centres of Excellence in Africa for over 50 years. We can see clearly that research priorities need to be tailored to their country's environment, and that this drives their ability to answer policy-relevant questions that can be framed within an appropriate context. This requires a well-embedded institution, that has deep roots within the national scientific culture but that is also able to reach out to expertise around the world and to engage in equitable partnerships.

The Accordia Global Health Foundation must be thanked for leading this initiative to identify some of the issues of greatest concern to these Centres of Excellence, and to ask hard questions about ways in which funders and supporters can best help, and not hinder, these Centres, allowing them to grow, become sustainable and to remain excellent in the future in the face of competition, challenges and emergencies.



Professor James Whitworth, MD

CONTEXT

Global Health

The past decade has witnessed an unprecedented global response to the health challenges of the developing world. Programs like the Global Fund to Fight AIDS, Tuberculosis and Malaria; and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) have scaled up quickly to save millions of lives, and have had a positive impact on the broader health systems in the countries where they work. There is evidence of a growing international interest in contributing to the health of disadvantaged populations around the world. For example, in the United States universities are enrolling ever increasing numbers of students in programs preparing them for careers in "global health." The world's health is increasingly interconnected.

The U.S. Global Health Initiative is among the latest major players to call for a fundamental re-visioning of the global response to healthcare disparities in Africa and elsewhere. Peter Piot and others argue that the center of gravity for global health development must shift from North America and Europe to institutions that can drive health innovation where it is needed most.

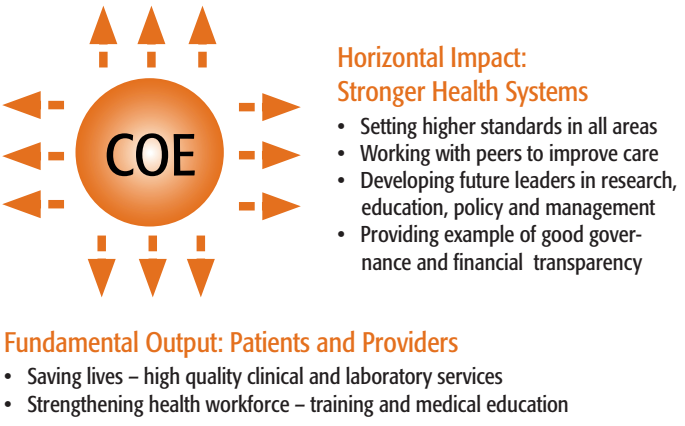
Clearly, thought leadership in global health development is converging on a longer-term vision of permanent health capacity in the developing world. Increasingly we hear calls for major investment in the research and science capacity in Africa, with the accompanying efforts to strengthen institutions and leadership, and for a greater emphasis on local ownership of these initiatives.

Role of Centers of Excellence in Africa

As health systems evolve, both in developed and developing economies, there is a renewed focus on the role of Centers of Excellence in producing health leadership and driving health innovation.

The establishment and support of Centers of Excellence in Health is an effective, long-term strategy to build permanent health capacity in Africa and other parts of the developing world. Centers of Excellence conduct original and translational research, save lives through the provision of high quality clinical and laboratory services, and strengthen the health workforce through training and medical education. They help strengthen national and regional health systems by setting higher standards in all program areas, and working with peers to improve the widely available quality of care. They are a primary source of future leaders in research, education, policy and management, and provide an example of good governance and financial transparency for others to emulate. Centers of Excellence can transform a nation's healthcare system from within.

Figure 1. Schematic of Centers of Excellence Impact



The research and other scientific accomplishments of Centers of Excellence have been well documented, but today there is a clear need to better understand the business models and operational structures that ultimately determine their sustainability.

Centers of Excellence Initiative

To better understand the successes and challenges of existing Centers of Excellence in Health across Africa, Accordia identified priority activities in the following categories:

CANVAS sub-Saharan Africa for other viable models of "Centers of Excellence"

CONVENE a representative sample of Centers of Excellence to discuss their operating models and strategies for sustainability

COLLABORATE for more effective advocacy and impact

CANVAS – The Comparative Models Initiative

With a goal of more fully understanding the African landscape of Centers of Excellence, Accordia set the following objectives to shed light on the continent's existing initiatives:

- Agree on a working definition for "Centers of Excellence"
- Identify representative examples of Centers of Excellence across Africa
- Describe various models of legal structure, governance systems, and operations
- Identify key issues of common concern as they relate to strategy and sustainability

A "Definition" - Center of Excellence

The term *Center of Excellence* (COE) is used by different people, in different contexts, to describe different things. It is worth noting, however, that several descriptive traits are common even among the vastly differing interpretations of the COE concept: high quality, cutting edge, dedicated, and focused.

After considerable input and debate, we found it more compelling to *describe* a sustainable Center of Excellence in health in the African context than to *define* it:

"A sustainable COE in health is an organization effective at establishing, achieving, and promoting the highest quality standards in its focused set of health disciplines or diseases. Such a Center aims to have a fundamental impact on the local and regional population, conducting original and translational research, saving lives through the provision of high quality clinical and/or laboratory services, and strengthening the health workforce through training and medical education."

COE in the health sector are typically built around the complementary program areas of preventive and clinical services, training and education, and research. Supporting functions such as governance, management, financial administration, laboratory services, information and communications technology, and library resources are all fundamental to enabling the center to achieve excellence in its core programmatic areas.

COE strengthen national and regional health systems by setting higher standards in all program areas and working with peers to improve the widely available quality of care. COE are a primary source for developing future leaders in research, education, policy and management, and provide an example of good governance and financial transparency for others to emulate.

COE collaborate with other peer organizations locally, regionally, and throughout the world to maximize their impact and cost-effectiveness.

COE also aspire to an upward influence and global reach, influencing national and global policy, and furthering the global health agenda. Sustainable COE drive their own viability through excellence in business and programmatic strategy and implementation.

Identification of Representative Centers of Excellence in Health

In setting out to identify existing research enterprises in sub-Saharan Africa that meet the definition for Centers of Excellence, Accordia relied heavily on the nominations from a variety of sources. We sought suggestions and recommendations from Accordia's Academic Alliance members, Scientific Advisory Board and other networks, from our colleagues at the National Institutes of Health and Wellcome Trust, and from those Centers across Africa to whom we were referred.

Criteria for Inclusion

To be included in the survey, a Center needed to:

- **Be based in sub-Saharan Africa.** We recognize that several exemplary Centers of Excellence from other regions of the world have experience and insight that may well be generalizable to the African context. Nevertheless we limited our investigation to sub-Saharan Africa.
- **Perform original and/or translational research.** To ensure a commonality between our subjects, and because we believe a robust research portfolio indicates many other success factors for a COE, we considered only those Centers with active research programs.
- **Perform training activities or provide clinical services.** Most of the COE that met our definition and other criteria had both training and clinical service components, but we only required at least one to avoid excluding Centers who rely on partners for clinical services.
- **Have a relatively focused expertise in a medical area or areas.** We believed going into this exercise that an essential mark of a COE was a comparatively narrow programmatic focus. That assumption was called into question through the Summit agenda, and is discussed further, below.

For purposes of this study, we excluded:

- **Entire universities and hospitals.** The contribution of universities and teaching hospitals to research and to the education of health leaders is well understood. Accordia intended this exercise to explore the newer, less studied model of small and focused Centers of Excellence, often public private partnerships, within larger host institutions. We therefore excluded entire universities or hospitals from consideration.
- **National research institutions.** Support for research in developing countries varies drastically from one country to the next, but it is increasingly understood that national governments should be responsible for providing some level of support to ensure that its researchers and educators are competitive. The need for strengthened national institutes is relevant to the notion of "local ownership" – a significant topic of our Summit and discussed further below. For the purpose of our survey initiative, however, we declined to consider national research institutions as Centers of Excellence.
- **Partnerships or programs with a predetermined end date.** Much of our intent was to assess issues of long-term viability of Centers of Excellence, so a project mentality or specific term or duration disqualified centers that may have otherwise met our criteria.

Disclaimer of Potential Bias

In 2004, Accordia founded the Infectious Diseases Institute (IDI), Makerere University, in Uganda. Today, IDI remains our flagship program, and a recognized Center of Excellence in research and training for the region. Accordia is now committed to creating and networking other Centers of Excellence throughout Africa. We set out through this initiative to identify models and attributes of other successful COE to improve our own blueprint – therefore, we attempted as much as possible to minimize any bias Accordia may have toward the particular IDI-Makerere model. Survey questions were open-ended and our selection included a very diverse set of COE recommended through varied sources. While unintended, we may have had an English-speaking bias; we conducted our internet searches in English, and did not translate our inquiries or surveys to French or Portuguese.

Centers of Excellence Questionnaire and Survey

Survey Recipients: Nominations and suggestions from professional networks, internet searches and other publically available information yielded a long list of potential Centers of Excellence for our examination. Inclusion and exclusion criteria were applied (see page 9), and Accordia's Sustainable Centers of Excellence Questionnaire and Survey was distributed to 45 Centers of Excellence throughout Africa.

Survey Response: Twenty-one qualifying Centers of Excellence from 12 African countries responded.

Survey Design: The Survey was designed to identify common challenges of sustainability, and novel strategies for operations and longevity. Twelve questions profiled the Centers on size and scope, and 12 open-ended questions explored the Centers' history, financial and governance structures, and sustainability strategies.

Analysis: Data from the surveys were coded using a 5-point Likert Scale of 12 key attributes to create a descriptive characterization of the Centers based on their survey response. Respondents were offered an opportunity to adjust their attribute scores as wished. Information presented in this report refer to the 21 survey respondents unless otherwise indicated.

Summary Statistics from Accordia's Survey

Twenty-one Centers responded to Accordia's Sustainable Centers of Excellence Questionnaire and Survey.

Countries: Botswana, Burkina Faso, Ethiopia, Gabon, Ghana, Kenya, Malawi, Nigeria, South Africa, Uganda, Zambia, Zimbabwe

Age: Age ranged between 3 and 72 years old. More than half the COE were established after the year 2000.

Legal Structure: 8 of the surveyed COE have independent legal status as non-profit organizations, while the remaining 13 are unincorporated centers within a larger host, or formal partnerships.

University Linkages: 6 COE report a primary linkage to a US university, and 3 report a primary link to a European university. Ten (10) COE reported no primary linkage to any single university beyond their host institution.

Employees: Size of COE in the sample ranged from 18 employees to 1,500 (median=176)

Budget: Among COE who provided this information, annual operating budget ranged from $180,000 to $52M USD (median=$6.5M)

Research: Among COE who provided this information, the number of current research projects underway ranged from 2 to 89 (median = 21)

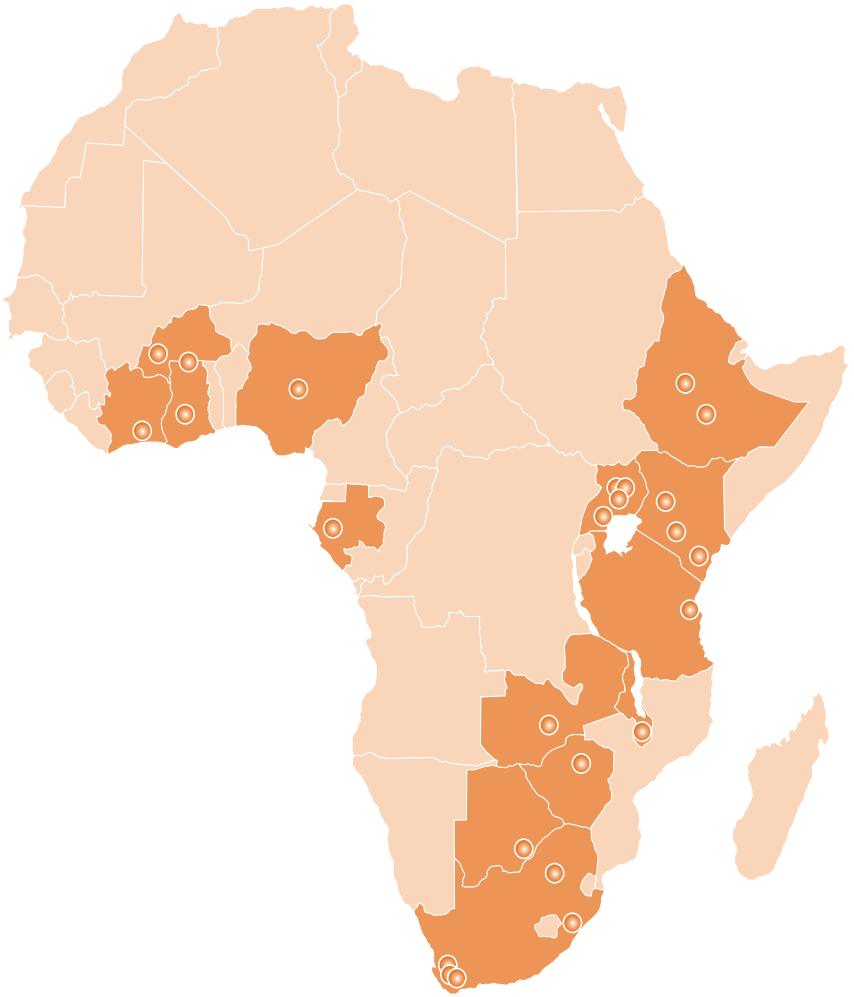
Table 1. Survey Respondents and Summit Participants

Center of Excellence	Host Institution	Country	Year Established	Primary Focus Area
African Centre for Health & Population Studies	University of KwaZulu-Natal	South Africa	1997	HIV and related diseases
African Population & Health Research Center	NA	Kenya	1995	Urbanization and wellbeing, population and reproductive health, health challenges and systems, and Education Research Program
AMPATH	NA / multiple	Kenya	1989	HIV and chronic disease management
Armauer Hansen Research Institute	Federal Ministry of Health	Ethiopia	1970	Immunology and molecular epidemiology of infectious diseases
Baylor College of Medicine- Children's Clinical Centre of Excellence	Mulago Hospital	Uganda	2003	Pediatric and adolescent family-centered HIV
Biomedical Research and Training Institute	NA	Zimbabwe	1995	Biomedical and social sciences
Botswana Harvard AIDS Institute	NA	Botswana	2007	HIV
Center for Infectious Disease Research in Zambia (CIDRZ)	NA	Zambia	2001	HIV and other infectious diseases, women's health, child health
Centre for Infectious Disease	Stellenbosch University	South Africa	2008	HIV, TB and other infectious diseases
Centre for Proteomic and Genomic Research	University of Cape Town	South Africa	2006	Genomics, Proteomics, Bioinformatics
Centre Muraz	Ministry of Health	Burkina Faso	1939	Infectious disease, neglected tropical diseases, and nutrition
Desmond Tutu Tuberculosis Centre	Stellenbosch University	South Africa	2004	TB/HIV, pediatric TB
DST/NRF Centre of Excellence for Biomedical TB Research	University of the Witwatersrand	South Africa	2004	TB
Ifakara Health Institute	NA	Tanzania	1956	Malaria, maternal and neonatal health, HIV, Tuberculosis
Infectious Diseases Institute	Makerere University	Uganda	2004	HIV
Institute of Health Sciences Research	Jimma University	Ethiopia	2005	Malaria, maternal-child health
Institute of Human Virology Nigeria	NA	Nigeria	2004	HIV, TB and malaria
KEMRI – Wellcome Trust Research Programme	Kenya Medical Research Institute	Kenya	1989	Basic, epidemiological and clinical research
Kumasi Centre for Collaborative Research in Tropical Medicine	Kwame Nkrumah University of Science and Technology	Ghana	1997	Malaria, Buruli ulcer, Onchocerciasis, TB, emerging viruses and immunology, Lymphatic filariasis, HIV, Typhoid Fever
Malawi-Liverpool-Wellcome Trust Clinical Research Program	University of Malawi	Malawi	1995	Biomedical research in tropical health problems with particular interest in malaria, HIV, TB, bacterial infections
Medical Research Unit	Albert Schweitzer Hospital	Gabon	1981	Clinical Trials, observational studies and basic science
Medical Research Council Programme on AIDS	Uganda Virus Research Institute	Uganda	1936	HIV vaccine research
MU-JHU Research Collaboration	Makerere University	Uganda	2000	HIV/AIDS
Navrongo Health Research Centre	Ministry of Health	Ghana	1988	Major causes of illness in Northern Ghana
Swiss Center for Scientific Research	NA	Cote d'Ivoire	1951	Natural environment and biodiversity, food security and nutrition, human and animal parasitology, urban environment

Description of Survey Sample

- Responses were received from 21 centers from 12 countries: Botswana, Burkina Faso, Ethiopia, Gabon, Ghana, Ivory Coast, Kenya, Nigeria, South Africa, Uganda, Zambia, and Zimbabwe. Estimates from those consulted and further research suggest that our sample of 21 COE from 12 countries may represent one third of the African Centers meeting our definition and criteria.
- Resulting sample of African COE is a markedly heterogeneous group. In addition to broad range of programmatic or disease foci, widely differing age and size, and varied ownership and governance structures, respondents fell at both extremes of every "attribute" we coded.
- Sample achieved good geographic distribution. Concentration of COE respondents in East Africa and South Africa is probably representative of higher investment in such Centers in those regions, when compared to the more sparse representation through Central and West Africa. We feel Francophone and Lusophone countries may be underrepresented in our small sample, despite no intended bias toward English speaking Centers.
- HIV/AIDS was the most common focus area. Among our sample, a large number of COE were established immediately or soon after the introduction of PEPFAR and have HIV/AIDS as their primary focus, though we attempted to avoid any bias toward infectious disease during our nomination and survey processes.

Figure 2. Map of Survey Respondents and Summit Participants



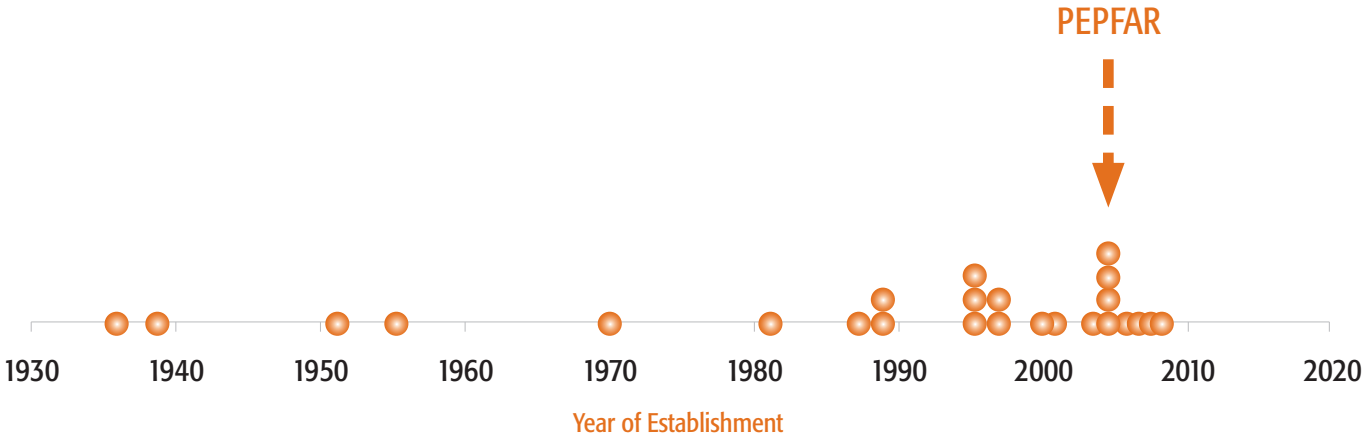
Critical Issues Revealed

Accordia's questionnaire and survey were intended to identify both unique attributes and common themes, specifically as related to issues of operational strategy and sustainability, for closer examination. We asked COE about their origins, legal and governance structures, current funding models and strategic pressures. Select observations from our survey are included in this report alongside elaboration and insight gained from subsequent conversations.

Among many other common concerns and priorities, the surveyed COE surfaced a number of critical issues in the following categories. Through subsequent discussions and work sessions, these questions were agreed to be of greatest common interest, and shaped the agenda for the Centers of Excellence Summit held in Kampala in September 2011.

- What are the most appropriate legal and governance structures for African COE to ensure "local ownership", find a balance between flexibility and stability, and maximize impact and influence?
- How essential is "Core Funding", what are alternative ways to generate it, and how can adequate reserves be achieved to maintain current or intended standards of excellence?
- Is an expanding or shifting programmatic scope compatible with other goals and objectives of a Center of Excellence, and how should sufficient control over programmatic direction be maintained?

Figure 3. Date of Establishment, for Survey Respondents and Summit Participants



How essential is "Core Funding" and how can it be used to maintain intended standards of excellence?

CONVENE – The 2011 Centers of Excellence Summit

Having cast a wide net and identified existing Centers of Excellence in Africa, and surveyed them to better understand the biggest challenges to their ongoing growth and stability, we resolved to convene leaders from these Centers to discuss critical issues in more detail. The focus of our invitation-only Summit co-sponsored by Wellcome Trust was the leadership challenge of sustaining Centers of Excellence in sub-Saharan Africa given today's challenging and dynamic global health environment. The Summit convened leaders from many of the most successful, lasting and innovative health-focused Centers from across Africa, and invited a closer look at elements of their individual governance and operating models that have contributed to their success.

Invitation to attend the 2011 *Centers of Excellence Summit* was extended only to the leaders of those institutions who had participated in Accordia's questionnaire and survey process. All but three respondents were able to participate. COE were encouraged to send their Executive Director (or equivalent) and a senior member of their leadership team responsible for either finance or strategic development.

The Summit held in Kampala, Uganda on 12 – 13 September 2011 covered topics of agreed mutual priority, and each agenda topic was structured to spotlight that aspect of a select participating COE, followed by open discussion and debate. While many of the participating individuals had attended the same conferences or events in the past, they consistently expressed their appreciation for the first opportunity to discuss these important topics with their peers across Africa. The closed meeting offered a rare forum in which leaders of Africa's Sustainable Centers of Excellence could candidly exchange insights, share lessons learned, and discuss future challenges to the continued success and growth of their Centers.

Accordia's survey and subsequent interviews identified the most critical and widely shared challenges and considerations among participating COE. Those issues formed the basis of the Summit's agenda, and some of the insights and questions raised in the survey and the Summit are presented here in summary form.

Optimal Legal and Governance Structures

Appropriate structures, systems and host institutions to balance flexibility, impact and longevity

Accordia Survey Findings

Of our 21 survey respondents, 6 were independent NGOs, 14 were housed within a public institution, and 1 was a department within a private institution. Of those housed within a public institution, 10 were within a university's medical school or college of health sciences. Also of those housed within a public institution, 3 had an independent legal identity. This hybrid model of relative independence within an established institution generated much discussion at the Summit.

9 of 21 respondents report having an independent board of directors (or governors), while others share governance structures with their hosts or don't have them at all.

Where and How to Situate a Center of Excellence?

There is no current consensus on the most appropriate legal structure, governance system, or institutional host arrangement for a Sustainable Center of Excellence in Africa. Discussion at the Summit focused on the advantages and disadvantages of several potential structures and governance systems. At one extreme, complete independence yields autonomy and flexibility, but may be more challenging to achieve efficient size, and assumes more risk to its sustainability. At the other extreme, an unincorporated department of a larger organization is constricted by the strategy, systems and policies of its host institution. Several examples of compromise and hybridization were examined, and one model in particular shared by several centers was of great interest to the Summit participants: a semi-autonomous non-governmental organization, owned by a public academic institution, with independent policies and systems, and a governance board including permanent institutional representation.

Table 2. Legal and Governance Structures

	Academic Institution Host	Government Agency Host	No Public Host
Independent legal entity	2	1	5
No separate legal entity	8	3	2

The Center of Excellence with an Academic Institution as Host

COE are often embedded within a university, although legal structures and the levels of autonomy vary considerably. While not always located within an academic medical institution, such positioning is believed to offer particular advantages for three common pursuits of a COE.

- **Enhance medical education.** Incorporation within an existing medical school offers the obvious advantage of proximity to students and future healthcare professionals, and the ability to influence their pre-service education by contributing to a dynamic curriculum, offering enhanced clinical placement opportunities, and providing supplemental faculty and other mentorship resources.
- **Conduct high quality research.** Proximity to the full faculty of an academic institution provides access to the supporting disciplines needed to effectively grow a research portfolio. Major institutions may also have specialized laboratory capacity or existing international partnerships that complement what the COE brings to the table.
- **Influence national and regional policy.** Being housed within a University provides "name brand" recognition and credibility to the COE, particularly with regard to the Ministry of Health (MOH). While often imperfect, medical schools and academic institutions usually enjoy a reputation and working relationship with the MOH and other national and regional health leaders, giving the COE an opportunity to be viewed as a resource for producing credible evidence in support of policy considerations.

The COE with a public institution as a host is also believed to enjoy some measure of additional security and sustainability - presumably owing to a perception that the government would not let the host institution fail. Other perceived advantages include:

- Ability to attract and retain higher caliber staff, through adjunct faculty status and clear academic career path
- Flexibility in competing for programmatic funding, through access to other expertise in complementary disciplines

These advantages must be balanced against the potential limitations of having a public institution as COE host:

- Limited autonomy may compromise internal strategic processes, and/or reduce opportunities to compete for funding
- University systems and processes may be less efficient than a COE's, slow in decision-making, and/or incur additional costs (e.g., procurement)

From the Host Institution's Perspective

Housing a COE can be advantageous for a public institution, and particularly a university. The COE may create additional research and training opportunities for students and faculty, and enhance the University's ability to generate new resources and funding. A COE may also drive improved capacity for supporting services such as Human Resources and Grants Management.

One issue that received ample attention at the Summit was that a hosted COE has the potential to experience a "perception of harm" from its neighbors. Such perceptions must be carefully managed by leadership. Some of the common complaints include:

- **"COE are a drain on our human resources."** COE deliberately attract the best and brightest, and often these individuals come from elsewhere within the host organization. Is the COE draining its host institution of its best talent? Or, is it providing a rewarding new career path that will help keep those leaders from pursuing opportunities abroad? Some COE may have the ability to offer higher salaries or better employment terms than their host institution, but the decision to do so must be carefully weighed against the perceived inequity. Often a more rewarding work environment and clear career path is all the benefit required.
- **"COE operate 'above the law', and circumvent institutional policies."** COE that attain substantial autonomy may be thought of as a liability by others within the host institution. Some worry that the COE's acting without explicit approval from institutional leadership, but while using its name, could create a perception of disorganization or risk to reputation. Yet, the ability to move quickly and independently is often why COE are highly competitive and productive. The perceived lack of control can be managed by giving institutional leadership permanent seats on the COE's governing board, as checks and balances to the semi-autonomy they may be granted.
- **"COE make our other institutions look bad by comparison."** COE aspire to elevate standards and set new benchmarks for quality and productivity. In doing so they may actually highlight inadequacies among their neighbors, and create temporary disparities between service providers and other institutions. This reality must be managed carefully, and include a long-term commitment to collaboration and capacity transfer.

Many COE have found effective methods of mitigating the perception of harm:

- Frequent and transparent communication, on the strategic issues as well as day-to-day concerns
- Outreach in support of joint quality improvement and capacity building
- Joint proposals for funding where program interests and capabilities intersect
- Part-time cross-employment of faculty, students, and other academic staff
- Ongoing educational pursuits of COE staff in other departments/units

The Essential Role of "Core Funding" to Maintain Standards of Excellence

Enabling investment in permanent and local capacity

Accordia Survey Findings

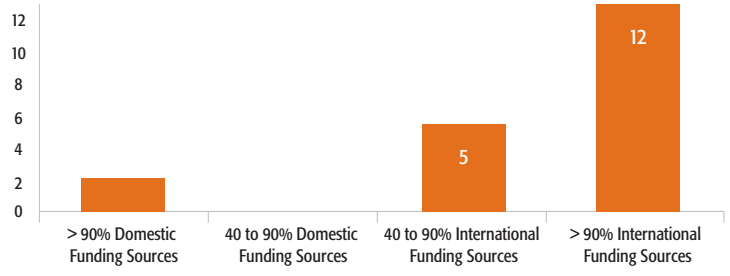
The annual operating budgets of our survey respondents ranged from $180,000 to $52 Million. Of those COE who provided this information (18), nearly half (8) reported an operating budget below $3 Million, while 40% (7) reported a budget above $10 Million – with just 3 Centers falling between those amounts. Though the sample is small, this distribution does raise the interesting question of whether there is an issue of scale which makes it difficult to maintain a mid-sized COE for long. The concept of pursuing funded programming to fuel "core" costs of excellence was one that inspired much discussion and debate among Summit participants.

Most COE (62%) reported relying on a single or very few funders for the majority of their operating costs. In all instances but one, the major sources of funding came from outside of the COE's host country. Heavy reliance on a single foreign source of funding creates an inherent distortion that was frequently acknowledged during the Summit.

Qualitative information from our survey revealed a consistent concern about covering core costs and securing long-term sustainability.

Figure 4. Domestic versus International Funding Sources

All but 1 Center surveyed report the vast majority of their operating costs is funded by international sources.



What is Core Funding?

Core Funding refers to relatively unrestricted funding that can be used to cover fixed and administrative costs, as well as the incremental costs of maintaining a Center of Excellence. Those incremental "core costs of excellence" may include the additional expense of an internationally recruited leadership team, superior infrastructure and other capital assets, and the elevated standards required for high caliber research and other service provision.

Without Core Funding, Centers are required to recover administrative expense and the incremental costs of excellence uniquely through direct cost recovery and indirect rate allowances on funded programs. The often-insufficient rate limits may drive a need for program volume that drive a COE's program portfolio in ways not always in keeping with its strategic plan.

The need for Core Funding to enable growth and long-term viability was a nearly unanimous sentiment among Summit participants. Several drivers of the need for flexible core funding, both practical and long-term, were cited:

- The "core costs of excellence" (see above) may exceed what can currently be recuperated through conventional programmatic funding.
  - Current research funding provides inadequate provision for the true cost of conducting quality research, with notable disparities in allowances for research partners in the developing world. This disparity may reflect a lag in the recognition of the quality research being performed by African COE.
  - Current funding for research and other programmatic activity in the developing world does not take a "long view" allowing for ongoing investment and enhancement of infrastructure.
- Maintaining stable reserves of cash on hand for operational needs is challenging, given the sometimes unpredictable timing of payments from funders, and particularly considering the inability to borrow.
- Other sources of funding do not allow the investment required to build and sustain meaningful capacity and a permanent institution, including retention of a permanent staffing base in areas of strategic importance, strong systems for strategic development and outreach, grants and contracts management, and good governance and financial transparency.

Many of the Centers of Excellence participating in Accordia's Summit reported receiving some Core Funding from one or more sources. Often these funds come from philanthropic partners or individual benefactors, though they are sometimes also negotiated with more programmatic or research funders. Several examples were given of mechanisms through which Core Funding was secured, and the strategic advantages it afforded.

- More than one COE reported having been established by a large grant from a single benefactor who included several years of Core Funding during the early start-up period. During the period in which the COE received this "start-up" Core Funding, the COE successfully transitioned to a more diversified set of funding sources, substantially increasing the likelihood of its long-term sustainability.
- Similarly, several COE are provided negotiated Core Funding for overhead cost elements, intended to create an enabling platform for growth and stability, particularly by raising the profile of the COE and enabling outreach and fund generation activities.
- One funder provides several COE with Core Funding for important aspects of research capacity, with a long-term view of creating permanent new capacity. Examples of program elements supported through this Core Funding are clinical and epidemiological surveillance; a high quality laboratory environment; information, data handling and analysis; and support for ethics and public engagement.

Centers are increasingly proactive in their efforts to find alternative sources of Core Funding.

- Many COE are considering new ways to generate core operating funds to become less reliant on international donor funds, and one approach is through the full recovery of research costs. The Summit discussion revealed the need for a harmonized approach to calculating fully loaded research costs and indirect rates, and for collective advocacy for full coverage of those costs by international funders.
- Centers with the ability to borrow have used bank or partner loans creatively–building structures and using rent from programs to pay back the loans.
- Some COE have considered the possibility of generating endowment funds to alleviate their dependence on any single funder, and reduce future instability from economic fluctuation and shifting priorities among international funders.
- Many COE seek to increase their income-generating activities, either by introducing fee-for-service schemes, pursuing patents and licensing arrangements, or introducing sponsored clinical trials.

The tendency to pursue funded programs solely on the strength of their indirect or overhead allowance could distort a COE's programmatic portfolio. A distinct topic of the Summit was the risk that can arise from the need to cover the core costs of excellence through funded programs' indirect cost recovery rates alone. A common sentiment among participating COE was the notion that they couldn't say "no" to a large funder even when the program wasn't well aligned with their strategy, for fear of not being offered subsequent opportunities. Such behavior could push a COE to become bigger more quickly than it intended, or to in other ways stray from its strategic direction or lessen its standards of quality.

The relentless pursuit of greater volume of funded programs to cover core costs may be inherently at odds with the nature and goals of Centers of Excellence. Implementing large programs in service of strategies developed elsewhere, and carrying out plans developed by large multinational organizations, more closely resembles a service provider than what many imagine a COE to be – an incubator of new policies with local and regional relevance and designed to support the development of local health leadership and innovation.

A "Downside" to Core Funding?

Acknowledged risks associated with having a single or very few sources of Core Funding included:

- reliance and complacency within the leadership
- promoting unreasonable risk-taking behavior
- compromised independence

Maintaining Control over Programmatic Agenda

Defining and monitoring programmatic scope to achieve excellence and depth

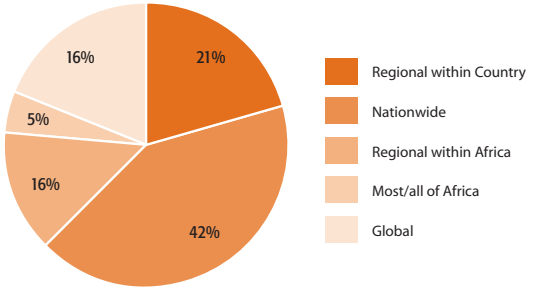
Accordia Survey Findings

Accordia's survey respondents ranged from those with extreme specialization to those who broadly address healthcare concerns in the countries where they work. Approximately 80% (17) reported having expanded beyond a single disease focus – many of them substantially. Maybe not surprisingly, there was a notable correlation between age and breadth of programmatic footprint: the longer a COE had been in existence, the more likely it was to report an expansion of its strategic focus.

We hypothesized that most COE may ultimately face the decision either to expand their programmatic agenda to address other health concerns of the communities they serve, or to expand their geographical focus and become a global authority on a more narrow topic. We were surprised to see that only 8 of the COE surveyed reported having a geographic focus beyond the borders of the country where they were located.

Figure 5. Geographic Scope

Just 1/3 of surveyed Centers consider their reach larger than national.



Most COE are initially established with a relatively narrow goal of achieving excellence in the research and/or treatment of a single disease state or medical discipline, in a particular country or region. If successful in building a reputation and funding relationships, though, COE will be faced with a daunting number of opportunities for growth and expansion – not all of which will fit within their original strategy. Many of the considerations in accepting (or not accepting) new programs, and expanding (or not expanding) strategic goals, are financial and were discussed in the previous section.

If one takes the long-term view and intends for COE to drive the creation of permanent local capacity for health leadership and innovation, and to continue to prove that depth and quality of medical research is as possible in sub-Saharan Africa as in the US and Europe, then this expansion of programmatic focus over time may or may not be an unsettling observation. Prior to our survey, Accordia had expected to see more examples of COE becoming 'global authorities' in their focus areas.

Summit participants contended that there are several valid reasons for deliberately broadening programmatic scope:

- **Risk Management:** Some COE have a specialized niche that strengthens their likelihood of survival due to high barriers to entry for competitors, but others must broaden as a good risk management strategy.
- **Maintain Relevance:** A narrow scope can mean the COE is not responding to the changing needs of their communities, or to the new priorities and evidence generated from the global health landscape.
- **Achieve Synergies:** Existing programs can often be leveraged to achieve synergies in new program areas, achieving diversification of scope without compromising depth. A specialist on staff in each area can greatly increase the Center's depth of expertise in each new program area.
- **Emerging Competencies:** Centers may see emerging competencies within their institution, and expand programming to take advantage of the expertise.
- **Build New Capacity:** In some instances, the COE have identified gaps in national and regional capacity that need to be met, and have undertaken the challenge to meet the gap themselves.

However, one cannot dismiss the impression that these are not always the driving factors behind the broadening of focus among COE. Further, there is evidence that some of the "broadening" is actually "shifting" and may in fact reflect changes in global funding trends more than changes in local burdens of disease. This phenomenon has the potential to leave significant gaps in national and regional capacity, as previous leaders move on to pursuits in other areas before sufficient national expertise is established.

Despite a host of good reasons for broadening programmatic scope, COE agree that it often occurs only out of necessity– in other words, that COE are "following the funding" rather than driving it. Centers often face the pressures described above to take on new initiatives, often by foreign donors who prefer the efficiency and comfort of a known entity - whether or not it is a good strategic fit for their in-country partner.

What considerations are relevant in developing systems to internally monitor a COE's strategic and programmatic scope? What happens when international funding shifts do not reflect the needs of the communities COE serve? How can we ensure that COE have a stronger voice in setting the international funding agenda? These questions merit further consideration by COE, their funders, and their stakeholders alike.

Broadening programmatic scope is often a function of international funding trends and Centers' pressing need for grants to help cover core costs. Could this prevent the development of national capacity with depth and permanence?

COLLABORATE – An Association of African Centers of Excellence

Function and Value of Networks

Most COE are members of multiple networks with varied purposes and goals, aspiring to a collective impact greater than the sum of their individual members' contributions. Many of these networks are focused on the research or technical areas in which these Centers work. Few if any create a forum for strategic discussion around success factors and sustainability determinants for Centers of Excellence, which were the topics of discussion at Accordia's Summit.

The Summit included presentation and consideration of three distinct networks, each of which functions differently and offers separate advantages to its members and stakeholders. The best of networks offer advantages and efficiencies of shared services and resources. Members can achieve strategic advantages and capitalize on the advances of others by accessing harmonized processes in everything from financial planning, to ethical review for human subjects and Institutional Review Board (IRB) approvals, to fundraising materials. Members can improve their cost-effectiveness and increase their impact by sharing centralized products like standardized training curricula, libraries, electronic medical record systems, policies and best practices. In theory, access to such shared resources and services give each member institution an opportunity to function at a higher level than they otherwise could. In practice, there are few examples of a network functioning well in that regard.

A less intuitive benefit to a properly functioning network is the healthy sense of competition it may foster among its members. Where there is willingness to participate openly, shared metrics and performance indicators, and periodic scorecard and benchmark reporting, could drive improvement among all member COE.

At the conclusion of the Summit, there was a clear call for further collaboration between participating Centers of Excellence and others across Africa, as a forum for ongoing exchange on operational issues and strategies for sustainability. It was suggested that Accordia initiate such an association, and take interim responsibility for its launch, organization and maintenance. This Association of African Centers of Excellence in Health would have three primary objectives:

- **Serve as a forum for further discussion on topics of mutual and strategic importance, relevant to issues of governance and sustainability.**
- **Leverage shared services and resources for maximized impact and to create key cost-efficiencies among member COE.**
- **Create a unified voice for advocacy or change among international funders and other major stakeholders.**

Centers of Excellence show the world what is possible when long-term investments are made in permanent African institutions, at global standards.

CONCLUSION

The future of Africa's Centers of Excellence in Health looks bright. In response to evidence amassing in support of their impact, global thought leadership is converging on the notion that Africa's Centers of Excellence could transform the continent's health and its prospects for a vibrant future. To be sure, Centers of Excellence have improved the quality of care available to people across Africa even today. Just as importantly, they have helped identify and cultivate tomorrow's leaders, and ensured that they can have challenging and rewarding careers in Africa. They have accelerated the pace of research in Africa and the extent to which it informs good health policy. Centers of Excellence show the world what is possible when long-term investments are made in permanent African institutions, at global standards.

The ultimate viability of Africa's Centers of Excellence in Health depends in part on finding solutions to the challenges laid out in this report. Through this introductory initiative and the collaboration we hope it will promote, Accordia believes we can collectively maintain the momentum these Centers have created, and ensure their ongoing growth and success.

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