



BIPAI

Headquarters, Texas Children's Hospital
2014-2015 Annual Report
INNOVATION

TABLE OF CONTENTS

- Letter from the President..... 3
- Locations 4
- BIPAI At-A-Glance 6
- 2014-2015 Accomplishments..... 7
- Prevention, Care and Treatment..... 8
- Education..... 10
- Research 12
- Leadership 16
- Sponsors 17

VISION

A healthy and fulfilled life for every HIV-infected or affected child and his family.

MISSION

To provide high-quality, high-impact, highly ethical pediatric and family-centered health care, health professional training and clinical research, focused on HIV/AIDS, tuberculosis, malaria, malnutrition and other conditions impacting the health and well-being of children and families worldwide.

Cover photo:
A formerly malnourished young girl benefited from home visits to her remote village in Colombia.



Plumpy'nut[®], a high-calorie, nutrient-dense food supplement, helps malnourished children gain weight quickly and keep medicine down, which improves their chances of becoming healthy.



Job training during adolescence helps young people successfully transition to healthy adulthood by giving them a way to support themselves and thus afford medicines and trips to the doctor.

LETTER FROM THE PRESIDENT

Dear Friends,

Since our founding in 1996, when we opened a clinic for HIV-positive children in Romania, to today, BIPAI continues to find new and better ways to transform the health of children. Innovation weaves throughout our organization.

Examples of our innovations begin with our model of providing pediatric health care in resource-limited settings through our network of centers of excellence. These centers have become beacons of medical education, research and treatment for the most complex health challenges facing that country's children and their families, from malnutrition to tuberculosis to maternal health.

We have adapted as our network has matured, creating more decentralized care models like the one we launched 18 months ago in Colombia. There, we must take desperately needed health services into the countryside to succeed in making a difference in the health of mothers and their children.

Inside these pages you will find numerous other examples of the ways BIPAI innovates to meet some of the greatest challenges facing pediatric health. We continue to adapt child-centric services to better serve adolescents, expand our training in pediatric emergency medicine and pediatric cancer, and advance our collective knowledge of pediatric health and disease through the Collaborative African Genomics Network (CAfGEN).

I thank all of you who have contributed to this year's exceptional success and look forward to another year of innovation.

Very best wishes,

Mark W. Kline, M.D.

*President, Baylor College of Medicine
International Pediatric AIDS Initiative*

Physician-in-Chief, Texas Children's Hospital

*J.S. Abercrombie Professor and Chairman
Department of Pediatrics, Baylor College
of Medicine*





WHERE WE WORK

BIPAI operates in 14 countries, providing pediatric medical care, professional education for medical professionals and research into pediatric health. Here we list the primary health conditions focused upon in each country.

- | | |
|--|---|
| 1. Angola
Primary Focus:
Sickle Cell | 4. Ethiopia
Primary Focus:
Quality Improvement |
| 2. Botswana
Primary Focus:
HIV, PHO, TB | 5. Lesotho
Primary Focus:
HIV, TB |
| 3. Colombia
Primary Focus:
Pediatrics, Malnutrition,
OB/GYN | 6. Liberia
Primary Focus:
Medical Education in
Pediatrics and OB/GYN |

* PHO: Pediatric Hematology/Oncology



7. Malawi
 Primary Focus:
**HIV, Malaria, Malnutrition,
 OB/GYN, PHO, TB**

8. Morocco
 Primary Focus:
**Training in Pediatric
 Subspecialty Care**

9. Papua New Guinea
 Primary Focus:
**Medical Education in Pediatrics,
 OB/GYN, Public Health**

10. Romania
 Primary Focus:
**Dentistry, Hepatitis, OB/GYN,
 HIV, TB**

11. Swaziland
 Primary Focus:
HIV, OB/GYN, Palliative Care, TB

12. Tanzania
 Primary Focus:
**HIV, Malaria, Malnutrition,
 Palliative Care, PHO, TB**

13. Uganda
 Primary Focus:
HIV, Malaria, OB/GYN, TB

14. United States
 Texas Children's Hospital
 Primary Focus:
**Headquarters Office
 Treats HIV, Trains in
 Public Health,
 Pediatrics**

BIPAI AT A GLANCE

BIPAI, founded as a program for HIV-infected and -affected children in 1996, now cares for children and families and offers professional health education in resource-limited settings around the world.



Adolescent care requires a complex mix of medical and psychosocial services in order to help youth move successfully from childhood to adulthood.

Budget	\$43.2 million
Patients in care	271,151
Health professionals trained	87,233
Active research projects	30
Employees	913
Countries	14
Centers & clinics	16
Offices	6



A mobile clinic in Lesotho brings basic medical care and HIV and TB testing to remote areas as part of the Mobilizing HIV Care and Treatment project.



Pregnant women living with HIV receive antiretroviral medicines, prenatal care and health education to prevent mother-to-child transmission of the virus.

2014-2015 ACCOMPLISHMENTS

- Officially opened a tuberculosis center of excellence in Swaziland, the country with the world's highest TB infection rate.
- Opened a fifth satellite center of excellence in Mohale's Hoek in the Mountain Kingdom of Lesotho.
- Renewed agreement to continue sickle cell testing of newborns in Angola for another five years.
- Established mobile clinics in Lesotho to extend HIV-testing and basic patient care to children in remote communities.
- Expanded treatment for HIV-related cancers in Botswana, Malawi and Tanzania.
- Expanded cervical cancer screening and treatment in Malawi and Swaziland to combat a leading cause of early death in HIV-positive mothers.
- Began addition to Romania center of excellence in order to care for more patients and expand hepatitis services.
- Managed distribution of medicines, medical supplies and nutritional supplements to 14,000 Romanian hospital patients.
- Malnutrition program in Papua New Guinea improved diagnosis of severe acute malnutrition and mortality rates from malnutrition in children under 5.
- With partners, refurbished maternity ward in remote Ugandan province of Kibiito to expand prevention of mother-to-child transmission of HIV and improve obstetric care.
- Shipped a 40' container of infection control supplies to Liberia's John F. Kennedy and Redemption Hospitals in Monrovia.
- Re-established a pediatric and OB-GYN medical education program in Liberia after the ebola outbreak cleared.
- Provided advanced training in pediatric emergency medicine in Botswana and Morocco.
- Provided advanced training in pediatric oncology in Morocco.
- Conducted Uganda's first-ever beauty pageant for pregnant women to encourage prenatal care and HIV testing.
- Initiated Memorandums of Agreement with the governments of Botswana, Malawi and Uganda for pediatric hematology/oncology (PHO) programs.

PREVENTION, CARE & TREATMENT

Originally an organization focused on providing health care for children with HIV/AIDS, BIPAI today treats a host of pediatric health issues around the world.

HIV/AIDS is still at the center of much of its work. The systemic nature of HIV infection means that BIPAI's pediatric specialists must also treat co-infections such as tuberculosis and malaria, as well as conditions of poverty such as malnutrition. Testing programs help identify new cases and prevent the spread of further HIV infections.

In developing its model of care for pediatric HIV/AIDS, BIPAI became a world leader for delivering high-quality, efficient health services in resource-limited settings.

Today, that model is being used in a growing number of countries to address a variety of conditions affecting children and the families that care for them. Because pediatric expertise is generally thin in its host countries, BIPAI staff frequently help care for the sickest children with a host of serious conditions.



Above: Since TB and HIV infection often co-exist in Swaziland's children, the organization opened its first center for tuberculosis next door to its HIV center, making it easy for families to access all the services needed for comprehensive treatment.

Below: Home visits keep the most vulnerable patients healthy, a tactic first pioneered in Botswana. Pictured here, staff check on a young girl near Mbeya, Tanzania.



LOCALLY DRIVEN INNOVATION

In 2013, BIPAI partnered with University of Gondar Hospital, Ethiopia to pilot a quality improvement program aimed at improving patient care from the grassroots up. CLIP, the Collaboration for Locally-driven Improvement in Pediatrics, worked with local doctors to identify site-specific, system-level obstacles to excellent performance and removed those obstacles through continuous, data-driven changes in service provision.

CLIP trained doctors and nurses in quality improvement, basic epidemiology, data management and research ethics. More physicians than expected joined in the effort, and the hospital's nurses then asked to be included. Results proved that even in a poorly equipped, aging hospital, health care can be improved dramatically. **Results included:**

Reduced length of stay of **hospitalized malnourished patients** by **26%**

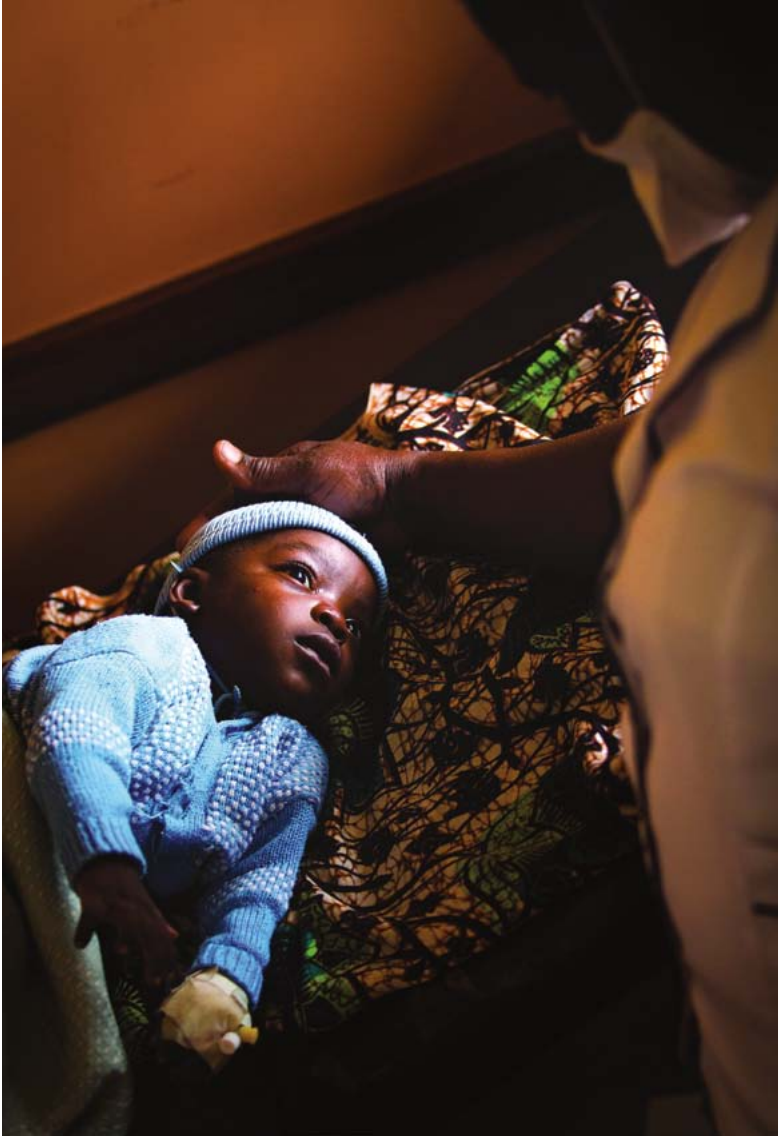
Reduced **neonatal mortality** by **18%**

Reduced **neonatal hypothermia** at admission by **17%**

Reduced **neonatal perinatal asphyxia** by **20%**

Improved documentation upon discharge of both neonatal and malnourished patients.

CLIP succeeded beyond expectations and proved extremely **inexpensive** at just **\$125 per person for training and educational materials.**



HIV-positive children are particularly vulnerable to TB infection. BIPAI treats both conditions at once, along with any other medical needs, to improve health outcomes.

EDUCATION

Children and adolescents, particularly those with HIV, TB and malnutrition, remain under-treated in many countries. Sometimes that lack of treatment stems from limited government and family resources combined with remote locations.

Where lack of treatment occurs due to limited knowledge of pediatric medicine and the unique needs of children, BIPAI works to fill that gap by providing health professional education.

This training acts as a multiplier, allowing BIPAI to improve the care and treatment of children attended by better-trained professionals throughout a country, not just those in its clinics.

In addition to education for medical professionals, BIPAI creates educational materials targeted especially to children and teens to help them better understand their disease and its treatments.

Health professionals trained

87,233

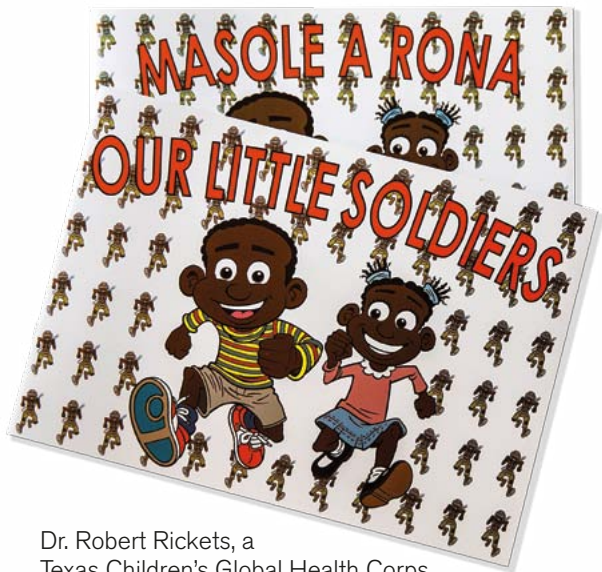
Countries where they are trained

14

Doctors, Nurses, Nutritionists, Pharmacists,
Community Health Workers and more

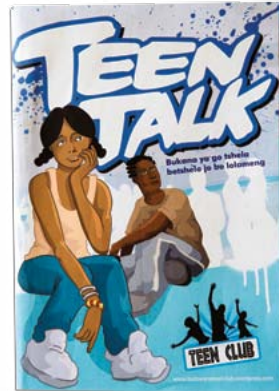


During one-on-one mentoring, experienced pediatric specialists train other doctors so that they return to their home practice able to provide better care. Seen here, Dr. Alan Anderson on rounds at Princess Marina Hospital in Gaborone, Botswana.



Dr. Robert Ricketts, a Texas Children's Global Health Corps physician in Lesotho, published *Our Little Soldiers*, a book that explains adherence to children, in six languages and distributed 40,000 books in Lesotho, Uganda, Swaziland, Tanzania, Malawi and Botswana.

Teen Talk, a Q&A guide originally developed by the Botswana team, is now used by several organizations worldwide to discuss issues important to HIV-positive adolescents, including ARVs, adherence, friendship, nutrition, reproductive health and disclosure.



The comic book *Genome Adventures*, helps explain genomics and heredity to children and teens being tested by CAfGEN.



Demonstration gardens like this one in Tanzania help address malnutrition by teaching families to grow their own food. Better nutrition helps children keep medicine down and get healthy more quickly.

RESEARCH

BIPAI innovates as it delivers healthcare through the extensive research conducted throughout its network. This research builds upon and expands the best of evidence-based care and treatment of children and families fighting HIV, tuberculosis, malnutrition, malaria, hepatitis and maternal mortality.


In addition to benefiting BIPAI children and their families, this research helps improve the delivery of children's health care worldwide. In the last year, BIPAI research has been published in several leading journals such as *JAMA Pediatrics*, *PLoS ONE*, *Journal of the International AIDS Society* and *Tropical Medicine & International Health*.

Current research is listed here:

KEY RESEARCH

- Clinical Presentation and Outcome of Tuberculosis at the Baylor-Tanzania Southern Highlands Zone Children's Clinical Centre of Excellence (COE)
- Collaborative African Genomics Network (CAfGEN) Host Genetic Factors Influencing HIV and TB Disease Progression In African Pediatric Populations
- Comparison of the Effectiveness of Using a Single Drug Zidovudine Versus 3 Drug Combination Therapy For Prevention of Mother-to-Child Transmission of HIV at Baylor College of Medicine Children's Foundation Clinical Centre- Lesotho
- IMPAACT P1115 (Version 1.0) Very Early Intensive Treatment of HIV-Infected Infants to Achieve HIV Remission: A Phase I/II Proof of Concept Study

- Isoniazid Prophylaxis to Children at the Baylor College of Medicine – Bristol-Myers Squibb Children's Centre of Excellence Swaziland: A Follow Up Study
- A Prospective Comparison of Adherence to HAART Amongst Adolescent Patients of the BIPAI Children's Centre of Excellence Before and After Attendance at Recreation Therapy
- Tingathe TB-Evaluating the Impact of a Community Health Workers-Based Program to Improve Active Case Finding, Contact Tracing, and Treatment Supervision in HIV-Affected Populations
- The Utility of Interferon-Gamma Release in TB-HIV Co-infected Children

The image features a group of young people, likely adolescents, silhouetted against a bright, cloudy sky. The silhouettes are dark against the lighter background of the sky, which is filled with soft, white clouds. The people are standing in a line, and their forms are clearly defined by the light from behind. The overall mood is one of hope and community.

Research confirms the value of teen programs in helping keep adolescents healthy as they navigate the transition into adulthood. In Lesotho, young adults who graduated from Teen Club found the support so important that they created another group, Wise Youth.



Data-driven research contributes to large-scale, sustainable health improvements.

ADDITIONAL RESEARCH

- Adherence to Antiretroviral Therapy By Adolescents in Maseru: Influencing Factors and Social Work Support
- Adherence of HAART Among HIV+ Adolescents
- Assessment of Cardiovascular Risk Factors and Projected 10 Year Risk of Cardiovascular Disease in HIV Infected Young Adults at the Baylor Center of Excellence in Constanta, Romania
- Formative Research to Develop Approaches and Recommendations for Obtaining Assent and Disclosing Illness information (HIV Status) to Children in Lilongwe, Malawi
- Determination of the Prevalence of Depression Amongst HIV Infected Adolescents in Malawi
- Determining the Prevalence and Severity of Hearing Impairment in HIV-Infected Children in Lilongwe, Malawi
- Establishment of a Pediatric Consultation Hotline for HIV Care and Prevention in Central Region, Malawi
- Medical Audit of Activities From the Baylor College of Medicine at Bugando Medical Center, Mwanza, Tanzania



Rigorous measurement and evaluation standards help make BIPAI research some of the most valued pediatric medical research being conducted in resource-limited settings worldwide.

- Medical Audit of Activities From the Baylor College of Medicine Southern Highlands Zone Children's Clinical Centre of Excellence at Mbeya Referral Hospital, Mbeya, Tanzania
- Medical Audit of Patients Registered at the Baylor College of Medicine Children's Foundation - Lesotho Clinical Centre of Excellence
- Outcomes Evaluation of Pediatric HIV/AIDS Care at Baylor-Uganda Sites, Uganda
- Performance Evaluation of New Point-of-Care Test for Early Infant Diagnosis of HIV-1 Infection in Resource-Poor Healthcare Settings
- Prospective Observational Cohorts at the BCM Children's Foundation-Uganda
- Medical Audit of Patients Registered at the Botswana-Baylor Children's Clinical Centre of Excellence, Gaborone
- A Retrospective Analysis of Medical Records of Patients Enrolled in the Baylor College of Medicine Children's Foundation Malawi (BCM-CFM) Pediatric
- Antiretroviral Treatment Program Between October 2004 and October 2013
- A Retrospective Study of Isoniazid Preventative Therapy on Anemia in HIV-Infected Children in Lesotho
- Medical Audit of Patients Registered at the Baylor College of Medicine Children's Foundation - Swaziland Clinical Centre of Excellence
- The Importance of Pharmacokinetic Variation on Efavirenz Plasma Levels and Treatment Effects in ART-Naïve HIV-Infected Ugandan Children Aged 3-12 Years
- Perceptions and Expectations of Host-Country Preceptors on Visiting Scholars During Short-Term Rotations in Four Sites in the BIPAI Network
- S4: ART Safety and Durability During First and Subsequent Pregnancies with Option B+ in Malawi



BIPAI works to eliminate new HIV infections among children and to keep their mothers alive, transforming lives throughout the developing world.

LEADERSHIP

Board of Directors

Mark W. Kline, President and Chairman

Michael B. Mizwa, Secretary

Robert Corrigan, Jr., Assistant Secretary

Bridgette Naik, Treasurer

Claire Bassett, Member

Nancy R. Calles, Member

Criss C. Daskevich, Member

John J. Scales, Member

Doug Spade, Member



Community health workers in Colombia go into sparsely populated areas to identify malnourished and sick mothers and children.

KEY STAFF

Headquarters

Mark W. Kline, M.D.
Founder and President

Michael B. Mizwa
Chief Operating Officer and
Senior Vice President

Nancy R. Calles, R.N., M.S.N, P.N.P, A.C.R.N., M.P.H.
Senior Vice President

Gordon E. Schutze, M.D.
Vice President-International
Medical Services

Tess Barton, M.D.
Chief Medical Officer

Bridgette Naik, C.P.A.
Chief Financial Officer

Diane Nguyen, Pharm.D.
Global Health Coordinator

Sebastian Wanless, M.B.Ch.B., Ph.D.
Measurement & Evaluation, Consultant

BIPAI Network

Gabriel M. Anabwani, M.B.Ch.B., M.Med. (Paeds),
Dip. Cardiol., M.S.C.E
Executive Director, Botswana

Ana Maria Galvis
Executive Director, Colombia

Makhosazana Z. Hlatshwayo
Executive Director, Swaziland

Peter N. Kazembe, MB.Ch.B., F.R.C.P.C.
Executive Director, Malawi

Adeodata Kekitiinwa, M.B.Ch.B.
Executive Director, Uganda

Edith Q. Mohapi, M.B., B.S. FAAP
Executive Director, Lesotho

Lumumba F. Mwitwa, M.D, M.Med.
Executive Director, Tanzania

Ana-Maria Schweitzer, M.Sc.
Executive Director, Romania

SPONSORS

All BIPAI programs are made possible through the generous support and close partnership of the following organizations and governments:



Back cover photo:
BIPAI is expanding knowledge of pediatric emergency medicine in places like Tanzania.

A young child with dark skin is lying in a hospital bed, looking towards the camera. The child has a clear nasal cannula taped to their face. They are wearing a blue and yellow patterned hospital gown. A hand is visible in the foreground, giving a thumbs-up gesture. The background is a plain white hospital sheet.

BIPAI

Baylor College of Medicine International
Pediatric AIDS Initiative – Headquarters

Texas Children's Hospital
1102 Bates St, FC 630
Houston, TX 77030
www.bipai.org