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BRIGHT Project Summary

An Evaluation of the Child Psychiatry Resources Available at Moi Teaching and Referral Hospital, Eldoret, Kenya

Background

Kenya is a country of 36.5 million individuals with limited resources for diagnosis and treatment of mental illness in adults and even fewer resources for treatment in children. In 2009, there were 46 psychiatrists working in the public service sector and 24 psychiatrists working in the private service sector. Currently, the only psychiatry training program in Kenya is located at the University of Nairobi, which produces six psychiatrists per year.¹ Five psychiatrists work at Moi University Teaching and Referral Hospital in Eldoret, Kenya, and the university plans to accept its first residents into a psychiatry residency training program in September 2012.

Brown University, Indiana University and six other member medical schools have a long-standing relationship with Moi University and the Moi University Teaching and Referral Hospital in Eldoret, Kenya through the AMPATH (Academic Model Providing Access to Healthcare) program. AMPATH provides HIV prevention and treatment to over 100,000 HIV positive children and adults at the referral hospital, as well as rural clinics in the surrounding villages. Clinics are staffed by both physicians and medical officers (midlevel providers) who provide both HIV care and general primary care. Subspecialty care is provided at the referral hospital, including most psychiatric care. A psychiatric nurse provides mental health treatment at rural clinics one day per week at Mosoriot, Burt Forest, and Turbo.

It is well documented in the literature that there is a strong association between mental illness and HIV/AIDS,² and that these persons are treated at HIV clinics and primary care clinics. A study in Uganda showed that not only was psychiatric illness prevalent in persons with HIV/AIDS, but that the counselors in the clinic had limited training in mental health and did not feel comfortable treating mental illness.³

There are currently only about five child psychiatrists practicing in Kenya, and the extent of their practice which is children is highly variable. Overall access to child psychiatric care is extremely limited. There are no child psychiatry training programs in Kenya. Yet, recent studies have provided evidence to the prevalence of childhood mental illness. Epidemiological studies of school secondary school students (adolescents) in Nairobi, Kenya estimate that depression in children and adolescents in Kenya may be as high as 43.7%.⁴ A study published this year looked at psychiatric morbidity in HIV-infected children and adolescents ages 6 to 18 in Nairobi and found that 48.8% of the 164 HIV infected children studied had a psychiatric morbidity. The majority of these suffered from depression (17.8%), followed by social phobia, oppositional defiant disorder and ADHD, each with rates around 12%.⁵ Another study of PTSD rates in children from Nairobi, Kenya found that Kenyan children had higher rates of exposure to violence

(69%), physical assault by a family member (27%) and sexual assault (18%) but had lower rates of full symptom PTSD (5%) and partial symptom PTSD (8%).⁶

Since 2007, three groups of Brown University psychiatry residents and attendings have rotated for one month each at Moi University Teaching and Referral Hospital. In April 2010, I joined the second group. Through attending both psychiatry and pediatric rounds, as well as talking with psychiatry and pediatric staff, it became clear to me that children are presenting to the inpatient ward with the medical complications of mental illness- including admissions after suicide attempts and psychosomatic illness.

I returned to Kenya in March 2012 under the supervision of Kristen Shirey, attending in medicine and psychiatry from Duke University and my husband, a fourth year resident in adult psychiatry from the University of Massachusetts, and soon to be fellow in child psychiatry. As one of the first groups of psychiatry residents to travel to Kenya, and as the first residents to travel there with a primary child psychiatry focus, my goal was to assess the current scope of child psychiatric treatment currently occurring in Eldoret, Kenya. In doing this I will be able to shape future child psychiatry rotations of American child psychiatry fellows, as well as identify opportunities for child psychiatry training of the new psychiatry residents starting in September. This is important because currently there is six months of child psychiatry rotation time scheduled into this five year residency. Also, as there are at least 12 to 15 medical students who rotate through child psychiatry, it seemed important to also identify current exposure to child psychiatry as well as their training needs.

Methods

Over the four week period that we were in Eldoret we rotated through the psychiatry department in both inpatient and outpatient settings as well as the consult service and rural clinics. During this time we were able to interact closely with the five psychiatry attendings on staff as well as the social worker and two psychologists. I spent one day at the OSCAR clinic, a five-year longitudinal study of 4000 orphaned children who receive a medical and psychosocial evaluation including screening for mental illness. I also spent a day at the Eldoret Special School, a residential program for children with mental retardation and spent time with Lillian, the psychiatric nurse. In addition to these locations, we spent time at the Tumaini Center, a drop in center for street children and met with the program manager. Finally, I met with the medical students to discuss their current exposure to child psychiatry, their own perceptions of the field and areas where they wanted to learn more. Interviews were conducted to gauge what type of mental illness the provider was seeing in children, barriers to providing psychiatric care to children and ideas for expansion of services.

Results

Interviews with Psychiatry attendings:

I met with Drs. Gakinya, Atwoli and Omolo. Dr. Gakinya is the chair of the department of psychiatry and also travels every two weeks to the Eldoret Special School to provide psychiatric care to these children. Dr. Atwoli is an extremely active

psychiatrist in research, clinical care, teaching and politics. He is involved with the OSCAR clinic. Dr. Omolo is the only psychiatrist in the department trained in child psychiatry. He completed his training in the 1970's in the United Kingdom, but today sees mainly adults in his practice. All attendings have clinical and teaching responsibilities at the Referral Hospital as well as their own private practices.

Dr. Atwoli spoke at length about his experience in child psychiatry. He expressed the same concerns that I have heard from many in pediatrics, that pediatricians have very little if any training in mental illness and overall feel unprepared to diagnose and treat psychiatric conditions. Also, there is very little screening for mental illness in pediatric clinics. This, combined with few psychiatrists and providers misperceptions of the indications for referral, leads to only children and adolescents who are psychotic or severely disruptive being referred to psychiatry. This also occurs with the adults in care where the majority suffers from a psychotic disorder. Children who suffer from conditions such as depression, anxiety or PTSD are less likely to present to care. Also, as there are essentially no therapy options available in the community, providers are limited to psychopharmacological treatment. Dr. Atwoli was looking forward to the opening of a medical psychology bachelor's program at the medical school in the next few years.

In his private practice, Dr. Atwoli occasionally sees children who suffer from non-psychotic illnesses such as conversion disorders, anxiety and depression. These referrals peak during periods of school exams – January to February and October to November. One of the most common conversion disorders he sees is non-epileptic seizures. He has also seen children who were living in refugee camps who now suffer from PTSD, as PTSD is a personal interest of his.

Other prevalent conditions include substance abuse, mainly the use of inhalants (glue) as well as alcohol. Other substances abused include miraa (a local stimulant which is chewed), marijuana, gasoline (sniffed) and diazepam. Drugs such as cocaine and heroin are very rare due to the cost and availability. These are more prevalent along the coast. Substance abuse is most common among children who reside on the streets and these children rarely present for treatment. Dr. Atwoli discussed the various barriers to substance abuse treatment in these children including limited social support (outside of peers) and not having a sober environment to which to return. Dr. Atwoli completed his training at Kenyatta National Hospital in Nairobi and discussed the child psychiatry clinic there which is held weekly as well as the presence of a child psychiatry inpatient unit.

Dr. Omolo and Dr. Gakinya discussed the upcoming psychiatry residency training program at Moi and their concerns that 6 months of this program will be spent in child psychiatry. Both felt that at this time there are few places for exposure to children with psychiatric illness, as most psychiatrists practicing see mainly adults.

OSCAR Health and Well-Being Project

The OSCAR Health and Well-Being Project is a 5 year longitudinal NIH funded cohort study looking at the medical and psychosocial outcomes of orphaned and separated children raised in a variety of settings including with relatives, a single parent, children's home or on the street. Paula Braitstein, PhD is an epidemiologist and the principle investigator of the study. She is also an associate professor in the Dalla Lana School of Public Health at the University of Toronto.

In this clinic children are seen at intake and then yearly. 2000 children have entered the study including 100 children who live on the streets of Eldoret. Psychosocial assessment is based on tools used in South Africa. Children are screened using a self-report tool for depression, substance abuse, anxiety, PTSD, abuse (physical, sexual) and neglect. Children who can read complete the questionnaire on their own, while children who cannot read or are less than 10 years old complete the questionnaire with the help of a psychologist. If symptoms of depression, anxiety, substance abuse or PTSD are identified, children are followed by the psychologist for brief therapy. If children are felt to require medications or are found to have symptoms of psychosis they are referred to Dr. Atwoli.

The clinic psychologist reported that overall symptoms of mental illness were less commonly reported than they had expected. Symptoms that were most prevalent were drug abuse, predominantly glue sniffing, as well as some alcohol use, and smaller amounts of THC and cigarette smoking. Unfortunately there are no formal substance abuse treatment programs to refer children. Depression is the most common mental illness they identified followed by anxiety, PTSD and conduct problems, but all of these are comparatively less common. Most children were healthy with common ailments including amoebic dysentery, URI, pneumonia, tinea, seasonal allergies and eczema. All children are offered HIV testing but most refuse stating they do not want to be pricked for the blood draw. Most children screened in this setting denied trauma and PTSD symptoms. Dr. Atwoli reports he is rarely referred children – less than five children per month and some months none.

Eldoret Special School

The Eldoret Special School is a residential school for children with developmental disabilities including autism, mental retardation and genetic conditions. The majority of the children come from families who feel that they can no longer manage the child at home. Dr. Gakinya travels to the special school about every other week and provides medication management to the children there. Unfortunately there are limited resources for therapy. Children we saw while spending a day at this school had a variety of behavioral problems including self-injurious behavior and aggression and were treated mainly with antipsychotics.

Tumaini Center

The Tumaini Center is a drop in center for street children who reside on the streets of Eldoret. Over 3000 children live on the streets and are in need of shelter, education, medical care and psychiatric treatment. The Tumaini center was founded two years ago as a drop in center for street children where they can receive basic medical care, food, basic education, a safe place to bathe and social services with the goal of eventually returning to their families. Children gain vocational skills, and some children participate in income generating activities. About 80 children attend the drop-in center daily and the center also has an outreach program that meets kids on the streets.

I met with the program manager of the Tumaini center and we discussed the type of psychiatric illness that they are seeing in the program. He reported substance abuse –

particularly glue sniffing was the most prevalent problem, reporting the majority of the children who attend the program sniff glue. Currently the Tumaini center is using a substance abuse treatment program which is group based and meets weekly. Unfortunately, staff have found this program difficult to use and not a good match for the needs of the children. It was designed as a project by a public health student who was in country only briefly. There is currently a counselor working with the program for about 6 months, but he has limited knowledge of working with street children and has also not been a good fit for the program.

Other areas of need for these children include mental health treatment – staff often see symptoms of depression, PTSD and even psychosis but find that most children are not open to going to the referral hospital. Children are also in need of grief counseling as unfortunately they are seeing their peers die on the streets. Sexual abuse is also not uncommon and although contraception and STD testing is provided through the center, there is no access to counseling after a trauma has occurred.

Pediatrics Wards and Clinics

After speaking to pediatricians at Moi Teaching and Referral Hospital, it is clear they are seeing children with psychiatric illness, both on the wards and in the primary care clinics. Most commonly they are seeing children with symptoms of depression in the AMPATH clinics as well as PTSD and substance abuse, similar to that described in the psychiatric clinics. They also see children who have suffered physical and sexual abuse and lack good resources for referral. They also occasionally see children who have attempted suicide via overdose on pesticides present to the casualty department and require inpatient hospitalization.

Psychiatry Clinics

Psychiatry outpatient clinic is held at the Referral Hospital once weekly and encompasses all ages. During our month in Eldoret we saw a handful of children in clinic including a 6 y o boy with seizure disorder, enuresis, and ADHD and a 13 y o girl with traumatic mutism in the context of her mother's death. Children are seen in this clinic on occasion and are frequently being treated for neurological conditions such as seizure disorders, as children with seizure disorders are cared for by psychiatrists due to a lack of neurologists. I also saw children with the psychiatric nurse, Lillian, in some of the rural clinics, including an 11 y o girl with severe depression in the context of being deserted by her mother, extreme poverty and her grandmother (her only caretaker) dying of emphysema. Lillian reports she rarely sees children due to her own unfamiliarity with the field, but children are brought to clinic not infrequently.

Medical Students

We discussed child psychiatry with the medical students, including getting their thoughts on the role of child psychiatry in Kenya. The medical students initially stated they did not believe that children suffered from illnesses such as depression or anxiety. But then as the discussion progressed, talked opening of their own struggles with the

depression in the context of extreme pressure during school, especially around tests. The students talked about the current school system in Kenya, in which your ability to go on to college and your career after graduation is frequently determined by a test. They described the intense pressure they feel during testing time and talked about friends they have had either in secondary school or medical school who either attempted or completed suicide. They also talked of friends and colleagues who suffered from bipolar disorder or psychotic breaks during medical school or secondary school and the stigma these peers faced. They believed that the rate of suicide in adolescents was most likely increasing as more and more adolescents are able to attend secondary school and the competition for a few college positions becomes more and more intense.

Discussion and Future Directions

After a month of discussing the present care of child and adolescent psychiatric patients and the role of child psychiatry in Kenya and Eldoret specifically, it has become increasingly clear that the care available is extremely limited including essentially no therapy resources. Perceptions persist that children do not suffer psychiatric illness and therefore are not screened and symptoms are missed. Barriers to care include providers' misperceptions of when to make a psychiatric referral, children's fears that they may be punished if they reveal psychiatric symptoms and lack of access to care. The OSCAR clinic is a large study looking at the prevalence of psychiatric conditions in orphaned or separated children. This study will very much help with the identification of children who are suffering from psychiatric illness, but only provide limited treatment to the children in the study, and does not treat children not in the study.

In regards to the exposure of the future Kenyan psychiatry residents to the treatment of children with mental illness, I think at this point, due to the limited number of children presenting to care, six months of adequate exposure to child psychiatry will be difficult. Engaging in all of the experiences I listed above will help provide some exposure, but I think in order to increase the number of children seen in clinics and consults completed on the pediatrics wards, it will be important to provide education to the pediatricians around child psychiatric illness and when to refer.

The attendings I spoke with identified the need for educational lectures and textbooks in order to teach psychiatry to medical students and residents. Despite having access to computers and projectors, currently lectures are given informally and many topics are not discussed due to lack of a lecturer. During our time in Kenya we compiled 13 lectures on both general psychiatry (psychotic disorders, catatonia, the mental status exam, alcohol and other drugs of abuse, suicide, depression, overview of psychotherapy, anxiety disorders and the physical exam of the psychiatric patient) as well as child psychiatry (autism and developmental disabilities, pediatric bipolar disorder, pediatric depression, and pediatric anxiety) appropriate for medical students or residents. These lectures can be provided to medical students at the beginning of the course, posted on a website or given by lecturers. These were provided to Dr. Gakinya along with a stack of psychiatry text books to start a library where medical students can loan out textbooks on psychiatry. I continue to work with Dr. Atwoli and Dr. Gakinya on the curriculum of the child psychiatry portion of the psychiatry residency. Fortunately, residents will not reach this portion of the curriculum for a few years.

Another opportunity for collaboration is at the Tumaini Center. After meeting with the program manager, it was clear that the group-based substance abuse program they are currently using is in need of a revision to better meet their needs. I am in communication with the program manager and we are working together to revise this curriculum based on new research in glue sniffing in children as well as substance abuse curriculums used for marijuana abuse here in the states. Specifically, I am working with Dr. Lowenhaupt and her team of substance abuse counselors at Harmony Hill School and the Training School to adapt programs that have been useful in these settings (also mainly boys, many of whom do not have families who are active in their treatment and using a substance (marijuana) that does not cause physical dependence.)

Several research opportunities were identified through this process. First, prevalence data of psychiatric illness in children who are HIV negative or are not orphans is still needed. Studies like the OSCAR's Health and Well-Being Project are critically important to understanding mental illness in children, but again this is in a very specific population. It is also unclear how many children and adolescents present with suicide attempts and what the precipitating factors are to attempts (depression vs an acute stressor.) In addition, after talking to the medical students, it would be interesting to look at adolescents, depression and suicide in the context of educational stressors. More research is also needed into glue sniffing in children and specifically into the treatment of glue sniffing in the street children population.

In summary, although treatment of child psychiatric illness is currently extremely limited, there are several opportunities in Eldoret for education around child psychiatry. Specifically, the outpatient clinics, rural health clinics and pediatric wards all provide exposure to child psychiatric illness, but education is needed for pediatric providers to increase referrals of children to psychiatric care. Also, research projects such as OSCAR's Health and Well-Being Project and community programs such as the Tumaini center provide opportunities to screen children for mental illness and provide short-term treatment. Substance use, specifically glue sniffing, is extremely prevalent in Eldoret, especially among street children, and research is needed into treatment.

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