



News Release

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Local project contact information spreadsheet: <http://bit.ly/ICPtWA>

Mobile Phones, Apps, Throw Lifeline to Shunned Sufferers of Brain and Mental Disorders in Remote World Corners

Grand Challenges Canada extends \$7.7 million to 22 projects

In Bhutan: Clinical test of new app for diagnosing seizure disorders; \$300 device could vastly increase epilepsy treatment -- estimated 65 million cases worldwide; 80% in developing countries

In Haiti: Quebec-based project targets widespread child abuse at root of many mental health problems

Grand Challenges Canada today offers funding of up to \$270,000 to 21 global mental health projects worldwide and up to \$2 million to an innovative program in India designed to improve the quality of mental health patient treatment and end reported abuses.

Together, the funds extend a CDN \$7.7 million (U.S. \$7.2 million) helping hand to sufferers of brain-related disorders in developing countries — the most neglected of neglected global health problems.

Funded by the Government of Canada, Grand Challenges Canada grantees will creatively explore how to augment and amplify relatively meagre existing help available to mental health and brain disorder patients.

Thirteen of the 22 projects include novel deployments of mobile phone technologies — in several cases connecting specialists with mental health patients directly or with lay health workers identifying sufferers in some of the world’s most remote corners.

And six of the projects offer help to the most vulnerable victims of all: children and youth, often shunned and brutally ostracized because of their problems.

Selected through independent peer review from 125 applications, the 22 successful projects break down as follows, by grantee institution:

Canada: 8 (Toronto (4 grants), Quebec City, Montreal, Ottawa, Vancouver)

Africa: 5 (Nigeria, Uganda, Union of Comoros, Ghana, Ethiopia)

Asia: 5 (India (3 grants) Laos, Pakistan)

Latin America/Caribbean: 4 (Guatemala, Colombia, Jamaica, Peru).

Project implementation will also involve activities in Kenya, Rwanda, Vietnam, Bhutan, Nicaragua, and Haiti.

Says Dr. Peter A. Singer, Chief Executive Officer of Grand Challenges Canada: “Nowhere is the suffering of mental illness — the most neglected of neglected diseases — more neglected than in developing countries. Tackling the grand challenge of global mental health improves not only the lives of individuals but also their productivity. Improving mental health stimulates sustained economic growth of nations by investing in people.”

Says the Honourable Christian Paradis, Canadian Minister of International Development and Minister for La Francophonie: “As a founding investor in Grand Challenges Canada, our government is supporting new and innovative approaches to resolving the most persistent global health challenges. Mental health is one of the most neglected illnesses in the world and these inventive projects and ideas will eliminate barriers for treatment and improve critical mental health services in developing countries.”

Says Dr. Shekhar Saxena, Director, Department of Mental Health and Substance Abuse, WHO: “The World Health Organization is pleased to see this round of grants by Grand Challenges Canada to facilitate much-needed services to some of the most underserved populations in the world. Use of advanced technology to scale up delivery of interventions is an especially welcome innovation. Knowledge generated by these grants will be useful to implement the Comprehensive Mental Health Action Plan of WHO.”

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New projects, in brief

1 transition-to-scale project (up to \$2 million)

INDIA

Indian Law Society

Ending abuses of patients with mental disorders in India

Grant # 0465-04 – [Video](#) | [Photo](#) | [Contact Details](#)

Ending the restraint, seclusion, neglect and abuse — physical, sexual, and emotional — of mental health patients is the goal of a project in India’s Gujarat state nominated for a Grand Challenges Canada Board-approved grant of up to CDN \$2 million, pending successful contract arrangements.

Working in six facilities — three mental health hospitals, two psychiatric units in general hospitals, and the psychiatric unit at a district general hospital, which together employ 220 mental health staff serving almost 50,000 in patients and out-patients per year, along with a control group of three other facilities for comparison purposes, the Indian Law Society aims to improve facility environments; train health workers, patients and families on human rights; build support programmes delivered by non-specialists; and introduce policies and mechanisms in the facilities to protect against inhumane, degrading treatment, violence and abuse — including the use of restraints.

An Internet-based platform will help deliver the training and create collaborative areas within which service communities can share experiences and results.

The project is based on the World Health Organization’s “QualityRights Tool Kit” and builds on its success over the past three years in Spain, Palestine, Greece and Somaliland.

In Somaliland, for example, pre- intervention conditions at one hospital included restraining patients with chains, with no advice on a treatment plan and “extremely poor” hygiene standards.

The QualityRights intervention led to long-term patients being released from the hospital, of which several found employment, the appointment of additional health professionals, improved hygiene standards, and an end to the practice of restraining patients with chains.

Similarly, in Spain’s northern Asturias province, an assessment of 28 facilities highlighted “the failure to obtain informed consent for admission and treatment, failure to use treatment protocols and guidelines, lack of psycho-education for service users and their families, and failure to provide legal advice and information about complaints mechanisms.”

The QualityRights intervention in Asturias led to a transformation in the service culture, among many results — even to a Bill of Rights for people with mental disorders and a Mental Health Commission to advise the Ministry of Health.

Says project leader Soumitra Pathare, of the Centre for Mental Health Law and Policy, Indian Law Society: “Mental health services in India face many similar problems and barriers to quality care as Somaliland and Spain do, and experiences of NGOs and mental health professionals working in Gujarat suggest that, with a sustained QualityRights intervention, outcomes could be substantial.”

Adds co-principal investigator Akwatu Khenti, of Toronto’s Centre for Addiction and Mental Health: “CAMH has extensive experience and expertise in anti-stigmatizing, evidence-based care that will inform this project — an initiative with global significance because of the exemplary collaborative / participatory involvement of patients and families at the core of the approach.”

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21 seed grants (up to \$270,000)

CANADA

University of Ottawa

\$300 device to help diagnose epilepsy, other seizure disorders

Grant # 0338-04 – [Video](#) | [Photo](#) | [Contact Details](#)

Among the seed grants: funding for the first clinical trials of a portable electroencephalography (EEG) device that innovators believe could become a routine tool in developing countries for the diagnosis and care of people with seizure disorders.



The new screening app, a \$300 device, could dramatically raise the global level of diagnosis and treatment of epilepsy, a problem that affects 1 in 100 people — 65 million worldwide, an estimated 80 to 90% of them in developing countries, of which at least 60% go untreated.

The high incidence of epilepsy in developing countries is attributed to higher rates of head injuries and certain infections, including cerebral malaria. (See also <http://bit.ly/JmPjDR>)

University of Ottawa-based researchers will pioneer tests of the technology in Bhutan, a small South Asian kingdom at the rugged eastern end of the Himalayas, landlocked between India, Nepal and China.

While there are two psychiatrists, not a single neurologist practices full time in Bhutan, a nation of 900,000 people with an estimated 10,000 epilepsy cases, most of them undiagnosed, says project leader Farrah Mateen, a neurologist and faculty member of both the University of Ottawa and the Massachusetts General Hospital of Harvard Medical School.

And, she says, there is only one EEG machine, working intermittently at the Jigme Dorji Wangchuk National Referral Hospital, the tertiary care centre in Bhutan's capital, Thimphu.

“Epilepsy is characterized by recurrent, unprovoked seizures and, in many poor countries like Bhutan, sufferers are stigmatized and ostracized — often feared by the ill-informed to transmit the illness through saliva.” says Dr. Mateen. “Such beliefs prevent epilepsy victims from getting the help they need during a seizure, which causes many serious injuries and death, often due to drowning or burns.”¹



An EEG detects tiny electrical impulses produced when brain cells communicate with each other. Typically, a test involves placing electrodes on the scalp, connected by wires to a speaker and recording machine. The brain's electrical signals are turned into wave patterns viewed on a

¹ In photo: Arkadiusz Stopczynski, one of the main software developers

computer as the patient is asked to, for example, breathe quickly and deeply, or to look at a bright flashing light.

Dr. Mateen and colleagues will gather the results of tests conducted with the EEG app, developed with the help of Danish Technical University using open-source software (offering the potential for rapid global scale-up), and compare them against those of more expensive stationary equipment.

The new device connects 14 electrode leads on the scalp through the headphone jack of a tablet or smartphone to capture the brain's electrical activity. The data can then be sent via cellular phone network to specialists for interpretation.

The ultimate goal: to enable a community-level primary healthcare worker anywhere in the world to diagnose seizure disorders. In the case of epilepsy, it can be treated with drugs that are both effective and inexpensive (as little as a few cents a day).

Says Dr. Mateen: "We particularly look forward to introducing the device in settings where children suffering seizures and related disorders are subjected to discrimination, and to study whether better diagnosis reduces stigma and increases social integration."

She sees the tablet/smartphone EEG as an effective solution to the shortage of neurologists in low-income countries.

"Data show that 12 African countries with a combined population of 26 million don't have a single neurologist, and 23 other countries — average population, 5 million — have four or fewer neurologists. By comparison, the WHO in 2004 reported Western countries average one to 10 neurologists per 100,000 inhabitants."

"Populating the world with neurologists, which involves training of a decade or more, is impossible. But we can roll out technology that is cheap and simple to use."

"People in Asia and Africa will be able to get a diagnosis and hopefully treatment, instead of going their entire lives without knowing that what they suffer from is epilepsy."

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University of Quebec-TELUQ

Addressing rampant child abuse and resulting mental illness in Haiti

Grant # 0331-04 – Video | [Photo](#) | [Contact Details](#)

In Haiti, the Western Hemisphere's poorest country still coping with the catastrophic effects of a major earthquake in 2010, there are currently fewer than 30 psychiatrists for more than 10 million people — a population with widespread psychosocial and psychiatric issues.

“Physical and psychological violence are frequent in a child’s life in Haiti — a problem exacerbated by extreme poverty,” says Yves Lecomte, a psychologist and professor at the University of Quebec-TELUQ.



He leads a Grand Challenges Canada project to create a network of Haitian community services and caregivers to promote mental health, to offer psychosocial services, and specifically, to oppose family violence, abuse, and the potential mental health problems caused.

Says Dr. Lecomte: “Children can be the victims of educational methods in which corporal punishment is commonly accepted, contributing to causing affective and conduct disorders.”

Commonplace also in Haiti: families forced by poverty to give children away.

“Those kids are not adopted,” he says. “They are incorporated into other families, not as children but as virtual slaves — cleaning, carrying water or providing other services, becoming easy targets for physical or psychological abuse. Those kids are at risk to suffer developmental problems growing up without anyone playing the fundamental role of parent.”

Dr. Lecomte's project will focus on Grand-Goáve, a semi-rural region of 130,000 inhabitants, and will collaborate with a citizens’ group already trained in the issues.

The network will promote mental health and non-violence toward children through radio broadcasts and meetings, with special target audiences to include new parents and young people. They also aim to reach children themselves (including abused children) to help them develop strategies to prevent violence and coping skills.

Other efforts under the project include the rehabilitation of victims of violence, suffering developmental, emotional and behavioural problems or disorders, including screening, treating or referring them to professional treatment centres.

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The Douglas Hospital Research Centre, Montreal, Canada

An innovative, low-cost model for improving mental health in rural Kashmir, India

In a part of the world locked consistently in violent conflict since 1989, and where there is no access to government mental healthcare services, researchers have documented a 30-fold increase in mental disorders. Using cell phones, netbooks and other electronic media, researchers will overcome barriers to mental healthcare access by training lay health workers to deliver and evaluate care in the rural Ganderbal district, with particular focus on psychotic, bipolar and depressive disorders, as well as trauma-related problems. The effort will dovetail into existing systems of medical and religious pastoral care, demonstrating a scalable way to reduce the prevalence of untreated mental disorders. Long-term, researchers hope to address the mental health needs of refugees from Kashmir, displaced from their millennia-old ancestral lands and living in miserable conditions in camps outside the Valley. This project receives additional funding from the Graham Boeckh Foundation, Douglas Mental Health University Institute, Douglas Hospital Research Centre, and Myelin and Associates.

Grant # 0337-04 – Video | Photo | [Contact Details](#)

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York University, Toronto, Canada

A community-based mental health intervention for maternal mental health in Rwanda

In Rwanda, 20 years after the 1994 genocide, an estimated 28% of the population suffers post-traumatic stress disorder. Nursing and mid-wife students in Rwanda will be trained in mental health issues — to identify, for example, mothers who need referrals for depression. The team will provide training in maternal mental health to community health workers, who will support new mothers in targeted communities, conducting weekly home visits for six months. Helping new mothers through depression will reduce a major contributor to child malnutrition.

Grant # 0329-04 – [Video](#) | Photo | [Contact Details](#)

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Centre for Addiction and Mental Health, Toronto, Canada

Unpacking social impact: Examining the scalability of top-tier mental health innovators

In some circumstances, organizations radically outperform expectations given very limited economic resources. In-depth case studies will be undertaken on six Ashoka Fellows (ashoka.org) making inroads in mental health in low- and lower-middle income countries — their implementation strategies, interventions and resource generation/use. The aim: catalyze and cultivate successful social entrepreneurship to address mental health in other low-income contexts.

"Simply put, we will develop a method for sharing the strategy, vision and passion of Ashoka Fellows, who are arguably professional-level social entrepreneurs. This would then lead to an effort to test whether or not lay social entrepreneurs in other settings can be activated to generate strategies to address mental health, based upon a broader vision to which they are exposed – unique strategies that will thrive in their own local context."

Grant # 0326-04 – Video | Photo | [Contact Details](#)

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Centre for Addiction and Mental Health, Canada

Improving mental health in Nicaraguan youth: A technology-enhanced, school-based program

Nicaragua, one of the poorest countries in the Western Hemisphere, has a long history of violence and natural disasters, consequences of which include post-traumatic stress disorder, depression, anxiety, substance abuse and increased family violence. The country also has the region's highest suicide rates, and the country's highest rates of psychiatric illness, addictions and suicide are found in the 15- to 24-year-old age group. Over two years, this project working in secondary and post-secondary schools in Leon, Nicaragua will promote early mental illness identification, the reduction of stigma, greater access to services and more help-seeking among 15- to 24-year-olds . Complementing the school-based literacy program: Internet-based self-help initiatives and evaluations.

Grant # 0341-04 – Video | [Photo](#) | [Contact Details](#)

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World Vision Canada, Toronto, Canada

Feasibility and effectiveness of low-intensity cognitive-behavioural treatment (CBT) for women affected by urban violence (Kenya)

In Kenya, violence against women is a potent risk factor for depression, anxiety, post-traumatic stress and other common mental disorders, for which no or minimal mental health support is provided. This project will test the effectiveness of Cognitive-Behavioural Treatment (CBT) as a way for para-professionals in low-income settings to help such women, creating a much-needed template for interventions that could be contextualized and rolled out for different violence-affected populations globally, engaging government structures to ensure sustainability.

Grant # 0368-04 – [Video](#) | Photo | Contact Details

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Simon Fraser University,
Vancouver, Canada

Preparing a trial of enhanced, low-cost primary mental healthcare

This project will prepare a trial of low-cost, enhanced primary healthcare services in Vietnam for depression, a common condition in the country. The goal is a scalable program to train primary healthcare providers in mental healthcare delivery.



Grant # 0330-04 – Video | [Photo](#) | [Contact Details](#)

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ASIA

The Banyan, India

The NALAM study: Village workers promoting mental health

A multi-dimensional package of interventions, combining social and clinical care, will be delivered through village mental health workers in Thiruporur Block, Kancheepuram district, Tamil Nadu. The workers will offer counselling in settings appropriate to circumstances, help mental health patients find income-generating activities and access disability



allowances and other social entitlements, and initiate activities in response to specific community needs (e.g. provide counselling services from home, start a daycare centre). Using this approach, the project hopes to meaningfully impact service access and reduce the number of untreated mental disorders.

Grant # 0332-04 – Video | [Photo](#) | [Contact Details](#)

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Indian Law Society, India

“ATMIYATA”: Reducing distress and improving access to mental healthcare through community-based self-help groups and farmers’ clubs in rural Maharashtra state

Self-help groups, farmer’s clubs and other community-based organizations will identify mental illness cases and facilitate access to care in a rural part of India where 5–7% of citizens suffer mental health problems and three in 100 commit suicide. With mental health professionals in short supply, detection rates are low, especially in rural areas, and problems are compounded by social stigma of patients. The result: an estimated 80–90% of mental illness in India goes untreated.



Grant # 0327-04 – Video | [Photo](#) | [Contact Details](#)

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Pakistan Institute of Living and Learning, Pakistan

Participatory intervention to reduce maternal depression and under five child morbidity

To address particularly high rates of depression among women in Pakistan, and the impact it has on the psychosocial development of young children and child mortality, a participatory, community-based intervention called



“Learning Through Play Plus” promotes mother-infant play, providing stimulation and support for the infant. It can be used by non-specialists, including mothers and lay health workers with minimal training in low-resource countries. The project will document the program for potential scale-up.

Grant # 0336-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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Francophone Institute for Tropical Medicine, Laos

Door-to-door health visits to improve access to epilepsy care in Laos

Primary healthcare givers making bi-monthly home visits to patients will be trained to identify and treat epilepsy, a novel approach to compensate the country's acute shortage of doctors. The workers will be supported by neurologists via mobile phone. This project receives additional funding from Sanofi.



Grant # 0325-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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LATIN AMERICA / CARIBBEAN

Institute of Nutrition of Central America and Panama, Guatemala

Tackling maternal psychosocial distress among marginalized women in Guatemala: a community-based approach

In Guatemala, an estimated 28% of the population can anticipate a mental disorder in their lifetime, with women of childbearing age, showing the highest rates of depression and anxiety, especially those living in indigenous areas and poor urban settings. The problems are due in large part to



economic hardship and family troubles. Community health workers will be trained to identify troubled women and support groups will be created to help women to meet specific needs including food and shelter, integrating mental health into existing, though limited, health programs in marginalized communities.

Grant # 0333-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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Universidad de Los Andes, Colombia

OSITA: Outreach, Screening, and Intervention for Trauma for Internally Displaced Women in Bogota, Colombia

This project aims to pilot-test the OSITA (Outreach, Screening, and Intervention for Trauma for Internally Displaced Women) project in Colombia — a country with 5.4 million internally displaced persons due to armed conflict. In the capital of Bogota, 70% of IDPs are women and children, including many indigenous peoples and Afro-Colombians, living marginally and at high risk of anxiety, depression and post-traumatic stress disorder. Supported by mobile phone app, OSITA will train community health workers to screen for and refer severe cases of mental disorders. Goals include offering employment through OSITA-branded micro-enterprises and other opportunities.



Grant # 0339-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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Universidad Peruana Cayetano Heredia,
Peru

Elephant in the room: Integrating mental health into daily routine primary healthcare practices

In Peru, neuropsychiatric disorders are a leading cause of disease burden but, as in most low- and middle-income countries, such problems are largely unrecognized and untreated. Supported by the use of a mobile app for screening depression, project researchers will train primary healthcare providers in Lima to integrate mental health into routine practices to improve early identification and referral to depression treatment of socially-disadvantaged people. A particular focus: low- and middle-income pregnant women and patients with physical diseases (i.e., tuberculosis, HIV/AIDS, diabetes, and hypertension) that increase their risk of depression.



Grant # 0335-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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Caribbean Institute of Mental Health and Substance Abuse (CARIMENSA), University of the West Indies, Jamaica

Countering youth and urban violence with a community engagement cultural therapy program in Kingston, Jamaica

Jamaica has the world's third highest homicide rate (53 per 100,000), with Kingston's inner-city communities socially isolated by violence and gangs. In collaboration with a government-run Community Mental Health (CMH) program in two inner-city communities, this project will target high-risk Grade 3 students, and the wider youth and adult populations with a Community Engagement Cultural Therapy (CECT) program. The effort involves group discussion of painful issues and uses drama, song and dance to translate and help express concerns. The community will be guided through the creation of goals for social and financial development. Objectives include reducing child conduct disorders, as well as reducing domestic and interpersonal violence among youths and adults, stimulating youth employment and reducing poverty.



Grant # 0334-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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EAST AFRICA

Centre Hospitalier National El Maarouf et Ministère de la Santé de la Solidarité, de la Cohésion Sociale et de la Promotion du Genre, Union of Comoros

Putting a “tele-psychiatrist” in communities in the Union of Comoros

About 45% of 800,000 citizens of the Union of Comoros live below the poverty line. The UN's Human Development Index ranks the country 163rd of 187.

On the country's main island, Grande Comore, the Bambao Itsandra district (population 60,000) has an estimated 600 people with epilepsy and 600 with schizophrenia. This new project will offer mental health training to community health workers and will connect patients for psychiatric consultation via mobile phone (there is just one psychiatrist working in the country). Computer tablets will also be used for weekly reporting and mobile apps deployed to help inform the local public about mental health issues. Project aim: on the main island of the Union of

Comoros, to reduce by 30% in 18 months the number of schizophrenia and epilepsy patients who receive no treatment at all.

Grant # 0328-04 – Video | Photo | [Contact Details](#)

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Makerere University, Uganda

Using mobile mental health clinics to expand access to mental healthcare in rural post-conflict northeastern Uganda

Many of the war-scarred citizens of Uganda’s northeastern Soroti district (population 322,000) suffer mental health problems. However, because mental health is accorded low priority by government and other agencies, people in need of help today resort to uninformed traditional and faith healers. Under this project, primary healthcare workers will be trained to screen for disorders such as post-traumatic stress disorder, depression, anxiety, alcohol and drug abuse, and epilepsy, referring patients as required to additional help and user groups, and sensitising local communities to mental health issues. Innovations include support to trauma victims by community health workers and greater access to medicines through the creation of a service users’-owned pharmacy.

Grant # 0324-04 – [Video](#) | Photo | [Contact Details](#)

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School Readiness Initiative, Ethiopia

Introducing mental health services in Ethiopia’s schools

Mental health services are virtually non-existent for Ethiopia children, up to 23% of whom have disorders. Over 72 weeks, this project will train teachers and parents of 5,000 children



from disadvantaged homes in the Addis Ababa region in the prevention, early detection and management of mental and behavioural problems, leading to better emotional/behavioural, social and academic functioning in children, and relieving family stress. The project will collect information to help identify cases in need of referral and will create groups to support the generation of income by mothers.

Grant # 0342-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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WEST AFRICA

National Catholic Health Service, Ghana

An available, feasible way to scale up innovative, integrated care for common mental disorders in low- and middle-income countries

Ghana has developed Continuous Quality Improvement methods (CQI), which are helping to reduce child mortality and other health problems. This project will use CQI to develop mental health identification and treatment packages for test use in two districts, along with information technologies to increase access to care for maternal depression and epilepsy. Among expected outcomes of the project: a 50% reduction of women with post-natal depression at 12 weeks. Mental disorders affect an estimated 13% of adults in Ghana, a country of 22 million people with 13 psychiatrists.

Grant # 0340-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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Childhood Neuropsychiatric Disorders Initiatives, Nigeria

Early diagnosis and interventions for neurodevelopmental disorders among 3-year-olds in Nigeria

The project in Nigeria will improve diagnosis and treatment of childhood Neurodevelopmental Disorders (NDD) before age three, reducing associated social stigma. Late intervention for childhood NDD often leads to lack of access to education and impaired language ability. The project will incorporate routine surveillance and screening for childhood NDD into Nigeria's well-established National Programme on Immunization.

Grant # 0323-04 – [Video](#) | [Photo](#) | [Contact Details](#)

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The Grand Challenges Canada “Global Mental Health” program

seeks breakthrough and affordable innovations that could transform the way mental health diseases are treated in the developing world — innovations that may benefit the health of developed world citizens as well.

Since it began in 2011 and including today's grants, Grand Challenges Canada has invested almost \$28 million in 48 projects designed to improve mental healthcare in low- and middle-income countries in Africa, Asia and South and Latin America/Caribbean.

Depression and anxiety disorders are a major focus across the portfolio. Almost all projects support training non-specialists to augment local human resources, and many exploit newly-

opened opportunities to deploy information technologies in critical telemedicine support roles, including patient records, clinical decision-making, adherence, referrals, caregiver support and community engagement.

Grantees are encouraged to use an Integrated Innovation® approach that combines business, social and science/technology-based innovations to address barriers to mental health service delivery.

Scientific/Technological Innovation: The development and application of new (and/or modifying existing) scientific or technological products, services, practices or processes.

Social Innovation: This includes elements necessary to bring solutions to scale in specific local and regional contexts to influence health outcomes, such as health systems, determinants of health, ethical/social/cultural/legal frameworks, public policies and human resources, among others.

Business Innovation: Development, distribution and delivery of appropriate solutions, including high-quality goods and services, affordably and sustainably where and when they are needed most. A part of business innovation is to determine the value proposition or incentives that are able to bring the right players to the table. It acknowledges that there will always be an investor who needs to be convinced that this is a worthwhile investment.

Grand Challenges Canada also supports the Mental Health Innovations Network (mhinnovation.net/about), an online repository of innovations in global mental health. Providing an overview of each innovation and its impact, the repository links users directly to tools, publications, and other materials. The Mental Health Innovation Network is hosted and maintained by researchers and policy makers from the Centre for Global Mental Health of the London School of Hygiene & Tropical Medicine, and the WHO's Department for Mental Health and Substance Abuse.

Please visit grandchallenges.ca and look for us on Facebook, Twitter, YouTube and LinkedIn.

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About Grand Challenges Canada

Grand Challenges Canada is dedicated to supporting Bold Ideas with Big Impact™ in global health. We are funded by the Government of Canada through the Development Innovation Fund announced in the 2008 Federal Budget. We fund innovators in low- and middle-income countries and Canada. Grand Challenges Canada works with the International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR), and other global health foundations and organizations to find sustainable, long-term solutions through Integrated

Innovation® – bold ideas that integrate science, technology, social and business innovation. Grand Challenges Canada is hosted at the Sandra Rotman Centre.
www.grandchallenges.ca

About Canada's International Development Research Centre

The International Development Research Centre (IDRC) supports research in developing countries to promote growth and development. IDRC also encourages sharing this knowledge with policymakers, other researchers and communities around the world. The result is innovative, lasting local solutions that aim to bring choice and change to those who need it most. As the Government of Canada's lead on the Development Innovation Fund, IDRC draws on decades of experience managing publicly funded research projects to administer the Development Innovation Fund. IDRC also ensures that developing country researchers and concerns are front and centre in this exciting new initiative.
www.idrc.ca

About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's health research investment agency. CIHR's mission is to create new scientific knowledge and to enable its translation into improved health, more effective health services and products, and a strengthened Canadian health care system. Composed of 13 Institutes, CIHR provides leadership and support to more than 14,100 health researchers and trainees across Canada. CIHR is responsible for the administration of international peer review, according to international standards of excellence. The results of CIHR-led peer reviews guides the awarding of grants by Grand Challenges Canada from the Development Innovation Fund.
www.cihr-irsc.gc.ca

About the Department of Foreign Affairs, Trade and Development Canada

The mandate of Foreign Affairs, Trade and Development Canada (DFATD) is to support the achievement of Canada's international goals, as well as provide improved outcomes for Canadians through more efficient, effective and targeted programming.
www.international.gc.ca

About Sandra Rotman Centre

The Sandra Rotman Centre is based at University Health Network and the University of Toronto. We develop innovative global health solutions and help bring them to scale where they are most urgently needed. The Sandra Rotman Centre hosts Grand Challenges Canada.
www.srcglobal.org