STRONGMINDS MENTAL® HEALTH AFRICA

DESCRIPTION OF PROGRAM IMPLEMENTATION

StrongMinds is working to scale a program to deliver life-changing mental healthcare to African women suffering from depression using Group Interpersonal Psychotherapy (IPT-G) – a proven technique, recommended by the WHO as a first-line treatment for depression in resource-poor settings. We have treated nearly 70,000 women and adolescents in Uganda and Zambia since 2014. Our data has consistently demonstrated that our community-based depression treatment model drastically reduces symptoms in all our patients with over 80% of patients being depression-free[1]* at the completion of therapy, with results sustained two years later. There is no reliance on anti-depressant medications but, rather, women are resourced with life-long skills to manage future depression episodes, build resilience, and maintain their mental health.

StrongMinds Therapy Model

StrongMinds Therapy Groups

StrongMinds model uses IPT-G in a culturally adapted format delivered by local women. IPT-G is a simple, innovative, cost-efficient community-based model to treat depression. It uses a participatory approach, empowering socially isolated and vulnerable women to improve relationships, develop communication and conflict resolution skills, and foster lasting support networks. Within these groups, participants share their challenges, discuss actions that they have taken to manage these challenges, and provide support to one another.

Each StrongMinds Therapy Group (STG) lasts 12 weeks, with groups of 10-14 women coming together for 90- minute sessions each week. They are led by a Mental Health Facilitator (MHF) who is a full-time salaried staff member for StrongMinds. MHFs are not clinicians, but local professionals who are given training by a certified StrongMinds IPT-G expert and ongoing supervision by a mental health professional. MHFs help guide group members to identify the root causes of their depression and to design strategies to overcome them. Since depression can be episodic and continue to recur throughout people's lives, these newly acquired skills have both an immediate impact and a long- term preventive impact for the depression sufferer.

Each 12-week therapy cycle is broken into three clinical phases, each with distinct objectives:

- ***Initial phase:*** This phase focuses on creating initial bonds between group members and building rapport with one another, so women feel comfortable sharing personal information and discussing the reasons for their depression.
- ***Middle phase:*** This phase ensures that all members are actively engaged and helping each other by making suggestions regarding one another's problems. This is also the phase where important progress is made for members to fully understand all the symptoms and triggers of depression.

[1]* The term depression-free refers to patients that, upon screening using the PHQ-9, a standardized depression screening tool, have a total score of 0-4 (inclusive) out of 27 points. This is categorized as minimal or normative depression, meaning that the individual cannot be diagnosed with any significant symptoms of depression.

- ***Termination phase:*** These sessions prepare members to end formal sessions. Members are reminded to continually identify their own triggers of depression in the future, and what they should do to respond. Individual action plans are created and reviewed.

A key element in the final weeks of therapy is to reinforce the importance of shared support and continued meetings beyond our formal facilitation. We do this with all groups through the identification of leaders within each group to encourage continued support. We have found this approach to be highly successful, creating continued networks of support for the women and playing a critical role in preventing recurrences of depression in the months and years ahead.

Peer Therapy Groups

In addition to staff-led therapy groups (STG), StrongMinds also operates Peer Therapy Groups (PTG), which are led by select volunteer graduates of our original STGs. These volunteer women, called Peer Facilitators (PFs), are identified and trained in an adapted IPT-G curriculum by StrongMinds and run their own PTG groups within their communities, serving as an ongoing resource to fight depression. Since completing the full-year pilot of the PTG program in 2016, StrongMinds has expanded the model to four districts in Uganda with our 300 volunteer group leaders having cumulatively treated over 10,000 depressed women to date.

The PTG Program creates a pathway for women to give back to their peers, share the skills they have learned in their own therapy groups, and restore the mental health of the depressed women they reach. Additionally, it provides an opportunity to create leadership roles for women, building their individual capacity while also 'planting healthy seeds' of support and opportunity in each community that will continue to flourish over time.

As we scale our mental health intervention, we envision the PTG model playing a key role in sustainability. As StrongMinds initiates STG in new geographic locations, over time volunteer-led PTGs will begin to take root and provide further coverage of the depressed population in that same catchment area, permitting StrongMinds to move into another area without treatment services for the same complementary process to begin anew. StrongMinds data show that the remaining PFs are viewed as important leaders and role models in that community that give back to their peers by helping them and their families to build resilience over the long term.

M&E METHODOLOGY AND PLANNING

StrongMinds is a data-driven organization. We collect and analyze data over multiple time-points to demonstrate our impact. We use the Patient Health Questionnaire-9 (PHQ-9) to measure depression in our patients – a standardized screening tool that is contained within the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) published by the American Psychiatric Association and supported by the WHO for use in low- and middle-income countries.

The PHQ-9 is a series of nine questions that score the severity of depressive symptoms for a patient. Each question can receive a score of zero to three. An overall score between 0-27 is totaled at the end of the questionnaire. A score of zero to four is considered minimal depression, meaning that there are no significant clinical symptoms of depression. StrongMinds refers to this score as depression-free. A score of five to nine is considered mild depression. It is generally considered that mild depression does not require therapeutic intervention. Individuals who score above ten are considered to have moderate depression, while those who score between 15-19 are considered to have moderate-severe depression. Individuals who score 20 or higher are considered to have severe depression.

We administer the PHQ-9 at multiple time-points for each depressed patient, ensuring high-quality care, and providing an extensive data set to track our impact.[2] Following internal collection of baseline and mid-line data, StrongMinds utilizes external enumerators to collect end-line and six-month data to prevent biases and ensure data integrity. All data collection and analysis are managed by StrongMinds' Monitoring & Evaluation (M&E) team consisting of Ugandan and Zambian professionals, with support and oversight from StrongMinds US and guidance from an external research consultant. Our findings are made available in impact evaluations published on our website and through reports with our partners. Lastly, all data within the StrongMinds Therapy Group program, led by MHFs, is electronically collected using our custom-built app (tablet/smart phone-based) which then securely uploads the information to the StrongMinds M&E cloud-based database.

StrongMinds has three primary mental health indicators:

1. Percentage of women depression-free immediately post IPT-G treatment: 75% of treated patients show a reduction in depressive symptoms to the level that they can no longer be diagnosed as depressed (or in short, depression-free).
2. Percentage of women depression-free six months post IPT-G treatment: 75% of treated patients continue to show no recurrence of depressive episodes.
3. Average reduction in depression score: 12 points on the PHQ-9 scale.

In 2019, StrongMinds treated 23,036 patients in Uganda and Zambia with 84% being depression-free after therapy. The average reduction in depression score among our talk therapy groups was 13 points on the PHQ-9.

In addition to measuring the depressive state of our patients, StrongMinds also measures the impact of our intervention on the overall well-being of our patients and their families using selected secondary impact indicators, focused on well-being. Our well-being indicators correspond to broader evidence linking depression recovery to other life improvements. These

[22] The StrongMinds measurement approach is rigorous when compared to mental health practice in the US. According to The Kennedy Forum, only 18% of US psychiatrists routinely administer simple measurement tools like the PHQ-9 to monitor their patients' progress quantitatively.

standardized indicators meaningfully reflect our mission, are easily collected/analyzed as part of our current M&E activities and are sensitive to change in a relatively short period of time (less than one year). Data is collected at baseline, end-line, and six months after therapy allowing for comparison between pre- and post-therapy populations.

The four well-being indicators are:

- Food security: Percent increase in women who report that they and their children consumed three or more meals in the past 24 hours.
- Work productivity: Percent increase in women who report they have not missed significant work or economic activity over the past seven days.
- Social support: Percent increase in women who report having someone in their lives they can turn to for support.
- School absenteeism: Percent decrease in women who report their children missed school over the past week.

Our latest well-being data (from 2019) show that women who complete therapy experience a 16% increase in work productivity and a 28% increase in social support. Within their households, there is a 13% increase in families eating regular meals and a 30% decrease in children's school absenteeism. StrongMinds analysis of impact data for patients up to two years post-treatment shows that these initial functional gains, including economic productivity and social support systems, persist over time.

COST-EFFECTIVENESS ANALYSIS

According to the WHO, every US$ 1 invested in scaling up treatment for common mental illnesses such as depression and anxiety leads to a return of US$ 4 in better health and ability to work.

StrongMinds' internal measure of efficiency is cost-per-patient (CPP). We have historically calculated CPP by dividing our total expenses by the number of patients treated. Since commencing our program in 2014, we have achieved a relatively sustained reduction in our cost-per-patient, reflecting our realization that, to scale our impact, the cost of our intervention must be as low as possible. We have achieved annual reductions in the CPP by increasing the number of groups our paid Mental Health Facilitators run each day/week, expanding our volunteer-based Peer Therapy Group model, and streamlining organizational processes and practices. Our 2019 CPP was our lowest CPP ever at $109.

As we scale to reach more depressed women in future years, we believe that the StrongMinds CPP will continue to decrease as our efficiencies increase. As we partner with others, the CPP will continue to reduce because of substantially increased patient volumes, gained efficiencies, and shifting costs from StrongMinds to the partner. As we work with partners, our team will have lower mobilization costs since the partners will have "captive" populations who can be

engaged and screened for depression and enrolled in therapy. Partner staff will be trained to lead talk therapy groups and the associated cost will be removed from the StrongMinds CPP.

In 2018, we conducted a broad landscaping exercise to determine the competitiveness of the StrongMinds CPP in Africa. We surveyed numerous mental health organizations of all sizes to compare their method of treatment and associated costs to our model. Regrettably, we were only able to collect data from 17 organizations in Africa who were treating depression. Many organizations were hesitant to share their cost information; they were only treating several hundred to two-thousand depressed patients annually. CPP information from these 17 organizations ranged from $3 to $222 for 2016, compared to the StrongMinds CPP of $122 for 2018. We are not certain that the cost data shared was accurate or comparable to StrongMinds, but the exercise was broadly helpful to verify that our CPP is competitive.