

Tiendas de Salud, Guatemala

A qualitative evaluation of
a micro-pharmacy franchise

Anna De La Cruz and Naomi Beyeler
The Global Health Group
University of California, San Francisco
November, 2013



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From evidence to action

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Health in Guatemala

Guatemala is one of the poorest countries in Latin America and has some of the worst health outcomes in the region: the country has among the region's highest rates of infant and maternal mortality,¹ and lowest life expectancy.² Guatemala has a large indigenous population, making up 66% of the total population.³ Indigenous and rural communities face greater health and economic challenges than other population groups, with over 75% of indigenous people living in poverty, compared to a poverty rate of 36% among non-indigenous people.⁴ There are higher rates of diarrhea and acute respiratory illness in rural areas, and indigenous communities have twice the rates of childhood malnutrition and stunting as compared to non-indigenous communities.⁵

Limited access to health facilities and essential medicines contribute to these poor health outcomes. Community mapping of 60 rural communities in Guatemala showed that only 25% of communities had a government hospital within one-hour of travel time, and 88% had a health center or health post within one-hour of travel time.⁶ Poorer communities have lower access to health services; a study in Alta Verapaz found that 77% of communities were within one-hour of health facilities, but the poorest people had the least access to health services.⁷

Tiendas de Salud

The *Tiendas de Salud* (TISA) program, a micro-pharmacy franchise initiated in 2009 through a partnership between the Linked Foundation and Mercy Corps, works to address these health challenges by expanding access to essential medicines in rural communities. Each TISA store—owned and operated by community residents in rural villages—sells essential medicines and basic health products. Currently, there are more than 50 TISA stores in operation, each in a different village in the Alta Verapaz and Baja Verapaz states in central Guatemala.

The program includes the following main elements:

- **Business support:** Store owners are provided with a start-up loan from Guatemalan Bank *BanRural*, as well as monthly supervisory visits to support business development
- **Medicine supply:** TISA store owners purchase generic medicines from *Farmacias de la Comunidad* pharmacies at a 20% discount, and may sell these medicines at the same price as the *Farmacias de la Comunidad* (keeping the 20% as profit)
- **Training:** Store owners receive basic book-based training in business and health practices, and an instructional manual including information on business operations, and storing and dispensing medicines.

With the success of the initial TISA stores, Mercy Corps partnered with *Farmacias de la Comunidad* (*Farmacias*) to expand the TISA program and transition from a donor-funded to a financially sustainable model. *Farmacias* is a Guatemalan pharmaceutical company that produces generic medicines and operates pharmacies in urban areas throughout the country. *Farmacias* has a goal of opening 410 new TISA stores, and is expanding the program into new states. Mercy Corps continues to provide technical assistance on the development and operation of participating stores, though *Farmacias* has taken over the program operational management and finances.

TISA qualitative evaluation goals

As the program expands, there is growing interest in the effectiveness of the TISA program as a model for the sustainable expansion of access to medicines in the communities served. The goal of this case study is to evaluate how well the TISA stores meet the program's mission of improving access to essential medicines.

¹ Gragnolati and Marini 2003

² World Health Organization

³ Montenegro and Stephens 2006

⁴ UNICEF 2011

⁵ Chary et al 2013

⁶ Goldman et al 2002

⁷ Owen et al 2010

METHODOLOGY

The study objectives are to:

1. **Understand when and how community members use the TISA stores**
2. **Assess the community-level effects of the TISA program, including what healthcare gaps the program fills**
3. **Assess the operations and management of the TISA stores**

Our goal in this case study is to identify program successes and opportunities for improvement, to enable TISA stores to be of greater service to the communities in which they operate and to serve as a feasible business opportunity for TISA store owners.

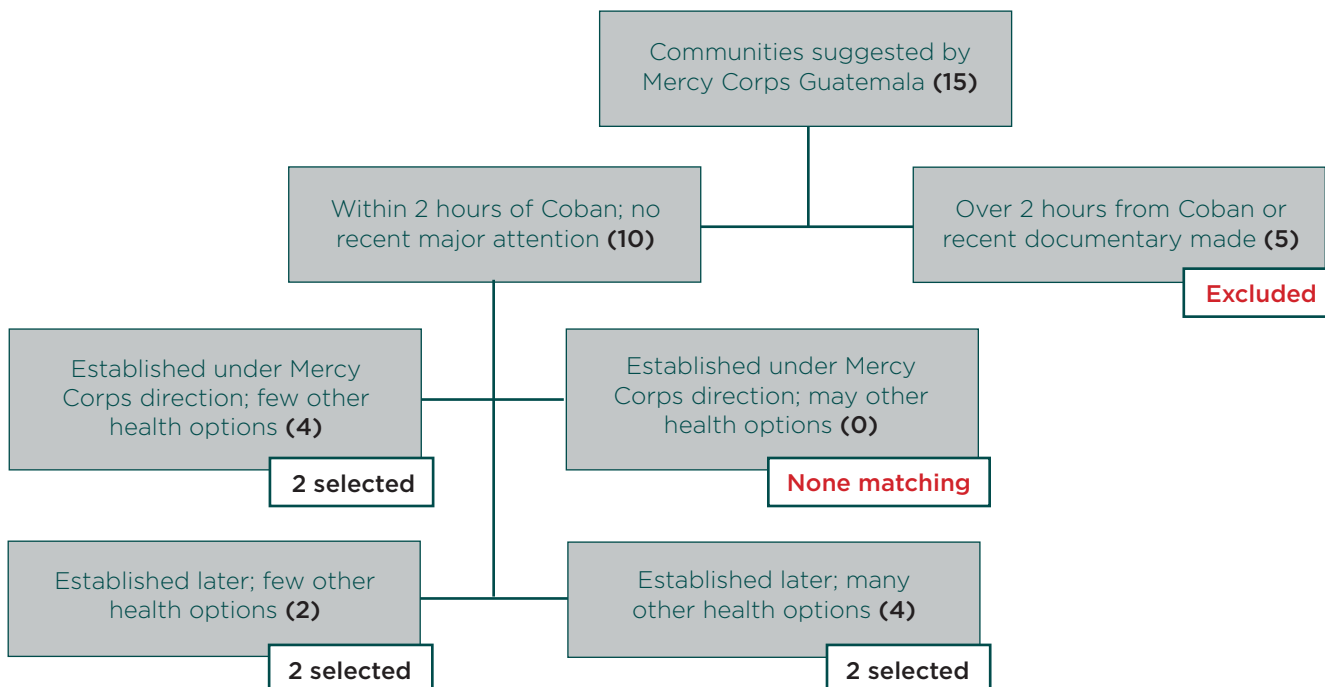
The research team visited six TISA communities in the Alta Verapaz and Baja Verapaz regions of Guatemala. We conducted 65 in-depth interviews with community residents and four focus group discussions with 26 community participants.

Community selection

We sought to include different types of stores and communities in this study, and selected stores that were opened both under the direction of Mercy Corps and Farmacias, as well as stores located in communities with and without alternative sources of medicine. Mercy Corps Guatemala provided data on 15 potential TISA communities, including: driving time to reach the site from Coban; municipality; the date the store opened; and the presence of other medicine purchasing options in the community.

From these 15 sites, we excluded three communities that were over two hours away, and two communities that were recently part of a filmed documentary about the program, as the shops in these communities may have received increased publicity. The remaining ten sites were divided into categories based on when they opened—under Mercy Corps or Farmacias—and whether there were few or many other health and medicine options in the community. We then selected two communities from each category. (See Figure 1.)

FIGURE 1. COMMUNITY SELECTION PROCESS



Data collection activities

Several types of data collection were undertaken to understand the healthcare options in each community, community members' health-seeking practices, and the use and functionality of the TISA store.

TISA stores

Qualitative interviews were conducted with each of the store owners, as well as with the store attendant in one community. The interview guide included questions about the store owner's role in the community, experience as a TISA store owner, common illnesses in the community, client interaction, and experiences with the TISA program. Interviewers also asked store owners about their sales, profits, and products sold, as well as demographic and asset questions used to calculate the Progress out of Poverty Index (PPI).⁸

In addition, interviewers collected sales records for part or all of July 2013. These records, which store owners are required to keep, list each sales transaction, including date, product, price, quantity, and total amount charged.

Researchers also conducted several hours of store observation in each TISA shop, focusing on store owner and customer interactions, maintenance and appearance of the store, products stocked and their prices.

Community members

The research team conducted in-depth interviews with community residents in each community, as well as four focus group discussions in two communities. Structured interview and focus group guides included questions about common health concerns, care-seeking behavior and progression, health and medicine options used by community members, and knowledge, use and perceptions of TISA stores. Interview and focus group participants were asked the PPI asset and demographic questions.

Participants were selected by approaching houses in each community. Interviews were conducted with residents in most areas of the community, including those areas closer to and farther away from the TISA store, rather than concentrating interviews in any one place. At each selected household we asked to speak with the female head of household over 18 years of age. The majority of women approached agreed to participate.

Ethical considerations

Ethical approval was obtained through the UCSF Center for Human Research.

Limitations

This study successfully answers the research questions for the communities included. However, given the study design there are some limitations to the data. First, researchers were only able to include communities within two hours to Coban. Communities further away from Coban may have different characteristics or experiences with TISA than those close to a larger city, which are not accounted for in this study. Second, selection of individuals within each community was non-random, though researchers did their best to interview residents from all areas within a community. In some cases the interviewers did not speak all local languages, and it was necessary to find Spanish-speaking interviewees. Lastly, it is important to note that while the data highlight important challenges, successes and recommendations, the data collected here may not be representative of the TISA program as a whole. However, qualitative data is meant to elicit the detailed experiences of individuals and key themes they raise, which this case study successfully does.

⁸ The Progress out of Poverty Index is a poverty measurement tool developed by the Grameen Foundation. More information can be found here: <http://www.progressoutofpoverty.org>.

COMMUNITY WEALTH AND EDUCATION PROFILES

Community members

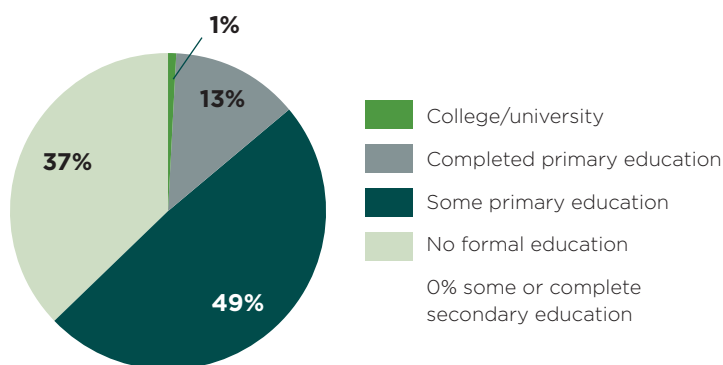
Alta Verapaz and Baja Verapaz are predominantly rural and indigenous states, with high rates of poverty. In Alta Verapaz 43% of the population lives in extreme poverty, compared to 15% of the national population.⁹ TISA stores operate primarily in rural indigenous communities, which also face high poverty levels.

To measure the poverty levels among the people interviewed for this study, we used the Progress out of Poverty Index (PPI)—a standardized set of asset and demographic indicators that allow for calculation of an individual poverty score, which is translated into the likelihood that individuals fall below certain poverty lines. The PPI scores in Table 1 show the poverty profile of the community members who participated in the study; these poverty rates are not representative of the community as a whole.

Similar to Alta Verapaz as a whole, the majority of interviewees in this evaluation (73%) fall below the Guatemalan national poverty line, and 38% fall below the USAID extreme poverty line. Among the interviewees who report attending the TISA stores, there is a slightly higher rate of poverty compared to all participants. However, given the small and non-representative sample of community members, it is not possible to determine if the TISA stores serve poorer community residents. Future studies may consider examining whether there is a significant difference in poverty levels between TISA users and non-users.

The community members interviewed for this study also have low levels of education; the majority of participants had no formal schooling or had completed only a part of their primary education. (See Figure 2.)

FIGURE 2. COMMUNITY EDUCATIONAL PROFILE



TISA store owners

The TISA store owners are generally wealthier and more educated than the community members interviewed. Store owners are much less likely to live in poverty; four of the six store owners interviewed do not likely fall below any of the poverty lines. The store owners also had much higher levels of education than community members; five of the six owners had completed secondary school. All of the store owners had a second source of income or employment in addition to the TISA store. Four of the owners completed health training as a nurse or community health worker and these four currently work in a health-related job.

TABLE 1. COMMUNITY PPI PROFILE

	Percentage of community participants who fall below these lines			
	USAID extreme poverty line	\$2.50/day line	National poverty line	Food poverty line
All participants	38%	44%	73%	18%
TISA-users	40%	47%	77%	19%

⁹ World Bank 2009. Extreme poverty as calculated by the World Bank is the inability to consume a minimum level of calories.

COMMUNITY HEALTHCARE CONTEXT

There is wide variation in the availability and accessibility of health services and medicines in the rural communities in which TISA stores operate—some communities have many health options, while in others the TISA store is the primary source of medicines.

To understand the health context, we asked community residents a series of questions about where they go to get medicines and healthcare, the time and cost involved to reach those places, and the time they wait to receive services once they arrive at the facility. Residents in all of the case study communities utilize a range of options both for healthcare and medicine purchases, in addition to the TISA stores. These generally fit into the following categories:

- **Centro de Convergencia:** Small government health posts, typically staffed by a community health worker or nurse. They are the most basic level of government health service, and primarily provide basic preventative services, and in some cases dispense basic medicines. All TISA communities have a Centro de Convergencia, however in some communities the facility is open only weekly or monthly for routine preventive services.
- **Centro de Salud:** Government health center, typically staffed by doctors and nurses, and providing both basic preventative and treatment services. Some TISA communities have a Centro de Salud, while others do not.
- **Hospital:** No TISA communities have government or private hospitals located in the community, however community members in all of the study communities report traveling to the nearest town or city to attend the hospital.
- **Pharmacies:** Several TISA communities have privately run pharmacies located in the community. All community members report visiting pharmacies located in the nearest small town or city.
- **Provisions stores:** Small provisions stores that sell basic over the counter treatments, and in some cases medicines such as antibiotics. In the majority of the study communities, residents report that there are a number of provisions stores that stock basic medicines. These stores are the most similar to the

TISA program, as they are attended by non-health professionals and stock and sell primarily based on customer demand.

Progression in health-seeking behavior

To understand the role TISA plays in providing health services to the community, we asked residents about their health decisions, including when and where they go if they or their family members are sick. We identified a typical progression in health-seeking behavior, beginning with self-treatment with traditional medicines, and progressing to a professional consultation in the case of serious illness. (See Figure 3.)

TISA's role in community health

TISA stores appear to serve two primary functions within this general progression of community health-seeking behavior: 1) providing over-the-counter medicines and 2) filling prescriptions when free medicines are not available at the Centro de Convergencia or Centro de Salud.

Describing their typical progression of seeking healthcare, community residents report attending the TISA store as a source of over-the-counter pain and symptomatic relief medications such as cough syrup. Given the desire for a consultation prior to purchasing essential curative medicines, few customers report patronizing TISA stores for these before attending a health facility. After attending the Centro for an exam or consultation, some residents will return to a TISA store to purchase prescribed medicines, though this varies by location and availability of other pharmacies.

The principal use of TISA stores as a source of over-the-counter medicine results from the perceptions of community members about their healthcare options, and the relative position of TISA stores compared to other healthcare options. Community residents highlighted the factors, such as cost and quality, which are important in their decision-making about health. These factors, combined with several key program design and operations factors, impact the utilization, and consequently the success, of the TISA program.

FIGURE 3. TYPICAL PROGRESSION OF HEALTH-SEEKING BEHAVIOR

Self treat at home

Community members first attend to illness at home. There is widespread use of traditional and herbal remedies.



Purchase over-the-counter medicine

If there is no improvement, many people will then purchase simple, over-the-counter medicines for symptomatic relief (e.g., ibuprofen or cough syrup).



Attend health facility

When an illness is perceived to be severe, community members prefer to attend a health center to receive an exam or consultation by a trained health professional.



Purchase prescription medicines

If the health facilities do not have free medicines available, people typically fill their prescriptions at the pharmacies nearest to the health center, if they can afford it.

What influences decisions about seeking health care?

Several major factors shaped people's decisions about when and where to seek health services, including medicine purchase: the cost and convenience of care, severity of the illness and provider expertise, and the community health context.

Cost

The cost of healthcare and medicines greatly shapes peoples' healthcare decision making. Cost was a major barrier to purchasing essential medicines in all study communities. Community residents prefer to attend publicly-run health centers in part because these clinics offer free medicine. Often, community members do not buy medicines because they cannot afford them. For others, participants reported taking on significant financial challenges—including borrowing money, requesting drugs on credit, and selling animals—in order to pay for medicines. Accessing facilities that are located outside of the community is also difficult for community members who are unable to afford the costs of traveling to nearby towns.

Severity of illness

Community members seek healthcare at different types of facilities depending on the perceived severity of the illness. In general, community members are willing to try both home remedies and over-the-counter western medicines to alleviate an illness prior to seeking health services. However, there is a widespread reluctance to self-diagnose or purchase medicines for any illnesses

that are perceived to be more severe. For serious illness, and illnesses that do not respond to home treatment, community members will seek treatment with a trained health professional.

Provider experience

Community residents report a strong preference to receive consultation or examination from a trained health professional in the case of serious illness, and before purchasing any non-over-the-counter medicine. There is widespread preference to attend pharmacies, public health centers, and private hospitals, where community members perceive staff to have more experience and qualifications.

Community health context

The overall health context within a community also impacts community members' decisions to use the TISA stores. In communities with a greater number of options for medicine purchase, the TISA store seems to play a less central role in providing access to medicines.

There is wide variation in reported awareness and use of the TISA stores. While in some of the study communities all of the residents interviewed knew about the TISA store, in other communities many interviewees had never heard of or used the TISA store. Similarly, in some communities, the majority of respondents reported having purchased medicines and health products at the TISA store, while in others most respondents indicated they had never patronized the stores. The level of awareness and use of TISA appears to be influenced by the range and accessibility of alternative sources of medicine. In

those communities with more drug stores and closer health centers there is less knowledge of the TISA store, while in communities without as many places to purchase medicine, there is greater reported awareness and use of the TISA store.

Each of these factors significantly shapes how community members perceive and use the TISA stores. The relative cost and accessibility of TISA stores, the training and expertise of TISA store owners, and the availability of alternative health options impact the role of stores in communities.

TABLE 2. SELF-REPORTED ACCESSIBILITY OF HEALTH FACILITIES¹⁰

Health context	Community (Number of respondents)				
	B (3)	C (17)	D (16)	F (17)	G (7)
Reported TISA as source of medicines in community	100%	53%	69%	18%	100%
Number of reported stores selling medicines	0	5	4	8	1
Number of reported pharmacies in community	0	2	0	4	0
Average time to arrive at TISA	6 min	9 min	13 min	13 min	9 min
Average time to arrive at Centro de Convergencia	-	9 in	10 min	-	15 min
Average time to arrive at Centro de Salud	40 min	58 min	41 min	21 min	70 min
Average wait time at TISA store	0	1 min	2 min	0	4 min
Average wait time at Centro de Convergencia	-	1.9 hrs	15 min	-	30 min
Average wait time at Centro de Salud	0	4.5 hrs	2.9 hrs	1.8 hrs	1.5 hrs
Average cost to arrive at Centro de Salud	10Q	6.25 Q	9 Q	1.5 Q	10 Q

¹⁰ This data was not collected for the first pilot community

KEY PROGRAMMATIC ELEMENTS FOR TISA'S IMPACT AND SUSTAINABILITY

Three main programmatic components impact the role that TISA stores play in a community:

- **Business operations and finances**
- **Training and staffing**
- **Connections to the health system**

Each of these areas shapes perceptions of the cost, quality, and role of TISA stores—influencing the ways in which residents use the stores and the business viability and sustainability of the TISA model. The following sections discuss the main findings relating to each of these key elements, the implications for TISA use, and how these elements shape the success of the program.

Business operations and finances

Stocking and sales data (self-reported)

Four out of six store owners reported restocking every fifteen days, while two reported they restock more frequently. Store owners reported spending between

200 and 800 Quetzals (\$25–100 USD) each time they restocked, an average expenditure of 513 Quetzals every fifteen days. They reported an average of 612 Quetzals in sales every fifteen days. While this is an average reported profit of 99 Quetzals (\$12 USD), the differences between earnings and sales by store owner covered a huge range: from a loss of 583 to a profit of 1200 Quetzals. This indicates that while on average store owners earn less than \$12 USD profit every fifteen days, whether they lose or earn money varies greatly by store.

Store owners were also asked which products bring the highest profits. All listed non-medicine products, with the exception of oral electrolytes and vitamins. Sugar, soap, diapers and detergent were the most frequently cited highest profit-generating items. Owners indicated they would like to stock but cannot obtain (largely due to stock-outs and generics at Farmacias outlets), certain antibiotics, contraceptives and pregnancy tests, antacids, an anti-parasite and vitamin supplements. (See Table 3.)

TABLE 3. SELF-REPORTED STOCKING AND SALES INFORMATION

Restocking Frequency	Every 15 days; 2 stores re-stock more frequently
Amount spent each time (range)	200–800 Quetzales (25–100 USD)
Amount spend every 15 days (average)	513 Quetzales
Earnings (sales) every 15 days	612 Quetzales
Difference between sales and restocking every 15 days (range)	From -583 to 1,200 Quetzales
Difference between sales and restocking every 15 days (average)	99 Quetzales (12 USD)
Products bringing highest profit	Oral electrolytes, vitamins, sugar, soap, diapers, detergent
Products owners would like to sell but cannot obtain	Antibiotics (amoxicillin, trimethoprim, ceftriaxone), contraceptives (depo-provera) and pregnancy tests, antacids, anti-parasite (Yodochlorina), vitamin supplements

Sales record data

To complement self-reported data, we collected sales records from each store. TISA store owners are required to keep sales records for each item including the date of sale, product, quantity, price and total sale amount. We analyzed 15 days of sales data from July 2013 from each store. The data was analyzed by transaction, regardless of quantity purchased, since a quantity of “1” could refer to single doses of medicines or a full package of several does. The store record data is summarized in Tables 4 and 5.

Products listed in the logs were classified by the researchers into three categories: medicine, hygiene, and other (items such as sugar and candles). On average, the stores’ sales are about half medicine, and one quarter each hygiene and other products. Interestingly, the range in the percentage of product sales that are medicines varies greatly by store—from 15% to 91%. While some stores primarily sell medicines, as intended, others sell only a small quantity of medicines and mostly rely on hygiene and other product sales. Sales income generated in the stores also showed wide variation. The total sales income during a 15-day period ranged from 277 to 1,080

Quetzals, with an average of 723 Quetzals (\$91 USD). This results in an average sales income of 48 Quetzals, or \$6 USD, per day. For TISA store owners that are primarily selling medicines, this translates to about \$1.20 USD per day (20%) in profit.

The most common products sold were similar across stores (see Table 5). In order of sales, the most common products sold were: sugar, candles, soap, cold medicine, basic pain medications (acetaminophen) and anti-inflammatories (ibuprofen). These latter three products were the most common medicines sold, though two stores included an antibiotic in their top medicine sales. The most common hygiene products included soap, detergent, diapers, toilet paper, sanitary napkins, bleach, shampoo and water. Although the common products were similar across stores, there was much variation in whether the top selling products are medicines or hygiene or others. This sales record data aligns with community-reported data on use of TISA primarily as a source of basic over-the-counter medications, not prescribed or essential medicines used to treat major illnesses.

TABLE 4. PRODUCT SALES IN SELECTED TISA STORES, JULY 15–30, 2013

Product sales	Range	Average
Percent of sales that are medicine	15%–91%	52%
Percent of sales that are hygiene	1%–40%	24%
Percent of sales that are “other”	5%–63%	24%
Total sales income 15 days	Q277–1,080	Q 7223 (91 USD)
Total medicine sales income 15 days	Q 241–988	Q 509 (64 USD)
Average sales income/day	Q 18–166	Q 48 (6 USD)

TABLE 5. MOST COMMON PRODUCTS SOLD IN SELECTED TISA STORES, JULY 2013

Products	Average
Most common products sold (overall)	Sugar, candles, soap, cold medicine, OTC pain medication (acetaminophen) and anti-inflammatories (ibuprofen)
Most common medicines sold	OTC pain medication (acetaminophen), anti-inflammatories (ibuprofen), cold medicines, antibiotics (in 2 communities)
Most common hygiene products sold	Detergent, soap, diapers, toilet paper, sanitary napkins, bleach, shampoo, water

Store owner challenges: sales, prices, and profits

TISA store owners face a number of challenges in maintaining the profitability of their stores, and implement various strategies to overcome these challenges. In general, TISA owners report restocking based on customers demand. However, some store owners have large stocks of medicines that remain from their first purchase (e.g. antibiotics), made prior to understanding consumer preferences.

TISA stores seem to have a small numbers of customers—researchers observed one or two clients during several hours observing at each shop—and this matched the reports from some store owners of low (and recently declining) sales. Owners attributed this to three reasons: 1) free medicine available at health centers (when stocked); 2) difficult economic times reducing client ability to pay; and 3) stock outs at Farmacias de la Comunidad.

This month there have been almost no sales. In the beginning, when I started in March, there were customers, but lately I think that now they have restocked the health centers, and so that's why people aren't coming in to buy.

—TISA store owner

Low sales volumes and small profit margins present a challenge for store finances. Some owners reported that it is difficult to repay the BanRural startup loans, and were concerned that they are paying back loans without making a profit.

Low levels of financial literacy also impacts TISA owners' stocking and sales practices. Store owners had trouble articulating their profit margins and overall profits, and had limited understanding of their finances and business operations strategies and finances—none of the

owners interviewed seemed to calculate overall profits by looking at their sales compared to what they spend restocking. They often reported that profit margins vary by medication, despite the program rules indicating that the profit on each medication should be a consistent 20%. Interviewers also observed the same medications being sold for different prices.

In response to these financial challenges store owners changed the medicine prices—either selling medicines on credit or at discounted price so customers can afford them, or would increase the prices of some medicines to generate greater profit.

There are women that, in reality, they need the medicine and don't have the money. They say, 'Look ma'am, can you give it to me and another day I'll pay you?' Since they are people that I know will pay, I give it to them. But there are others that I know don't pay, and I feel bad but I don't give [medicine] to them.

—TISA store owner

Sometimes they leave 50%, for example. Later they bring the other 50% next week or the end of the month. This can help because illnesses get worse or maybe they die... money you can find, but not the life of a person if they die.

—TISA store owner

Implications for TISA use

In all communities, residents stressed their lack of resources and inability to pay for medicine. These economic difficulties result in a general preference to attend health centers that provide free drugs, rather than



attending the store where medicine purchase is required. Frequently, community members reported that they simply did not purchase medicines, even if they knew they needed them, because the cost was prohibitive.

Sometimes there is no money, there is no work—where are we going to get the money? In the pharmacies nothing is given free; you have to bring money.

—Community member

The [health center] prescribed ambroxol, but because I don't have money, I didn't buy it. I didn't buy it and I didn't take it because I don't have money.

—Community member

The financial strategies employed by TISA owners—reducing or increasing medicine prices—also shape community perception and use of TISA. In communities where the TISA owner offers discounted drugs or drugs on credit, this is an important reason offered by community members for why they prefer the TISA stores.

He will lower the price a little, or he will wait a little for you to pay. 'Give me a little medicine for my baby' I tell him. 'Tomorrow or the next I will pay,' I tell him. That is how he helps us. That is why we only go to him.

—TISA customer

The cost of medicines at TISA stores in comparison to other sources of medicines varies by community—in some communities residents report that TISA is cheaper,

while in others they report that it is more expensive—and these perceptions of relative cost impact residents' willingness to go to the TISA store.

I can't go there [TISA] to buy [medicines]. I don't have enough money for my home...I see that he sells medicines, but I see that it is a little expensive. I don't have money. Where am I going to find it? There is nowhere for me to find money for medicine.

—Community member

In this little pharmacy [TISA] we can find cheap medicines, and in the stores they are more expensive...that is the reason we go there.

—TISA customer

Training and staffing

The training and qualifications of the TISA store owners and staff have a large impact on how community members perceive and use the TISA stores. The majority of community members we spoke with prefer to attend trained health professionals before purchasing medicines, in particular when they perceive that an illness is serious. The perceived training and expertise of the TISA store owner influences the trust community members have in TISA, and their willingness to purchase medicines at the store. Where community members view TISA owners as businesses, rather than health professionals, there is less trust in their ability to sell medicines.

Medical and business training

TISA owners have two types of training—one that is provided to all store owners through the TISA program, and medical training received through external programs.



The TISA program provides a very basic level of training on business management and medicine sales to all TISA owners. This training is book-based, and largely self-taught. Owners are provided with an instructional manual containing worksheets for each content module, and supervisors from Mercy Corps and Farmacias review these worksheets with owners during their monthly monitoring visits.

In addition, the majority of TISA owners we interviewed (4) have additional training as nurses or community health workers. The store owners who have medical training report relying on this training to inform their work at the TISA store. Owners with medical qualifications and medical experience beyond their TISA work focus more on their role as healthcare providers, and in some cases provided an expanded set of services including simple diagnostic exams and preventive care services in addition to the TISA medicine sales.

Staffing

As a result of their work at community health centers and pharmacies, many of the store owners do not staff their store during the day, and leave family members to attend to their customers. Unlike the owners, the majority of these store attendants do not have any medical training, and are not required to participate in any of the TISA program training. This difference in skills between the store owners and store attendants significantly impacts the type and quality of services provided at the store at different times. Both store owners and community residents reported challenges with these staffing issues. From the store owners perspective, the inability to staff the store at all times was thought to reduce sales in some cases.

Implications for TISA use

Community members prefer purchasing medicine after consultation with a trained health professional, and this limits the times when residents are willing to go to the TISA store, and the types of medicines they are willing to purchase there.

I first buy pills, like panadol or acetaminophen, something to calm me. But if these don't calm me, then I go to the health center or hospital if it is more serious.

—TISA customer

Little things like for a common cold or cough, then you can just give your child medicine. But once it is more serious, then you have to go to the health center because you have to get the medicines prescribed. We can't just give any medicine; maybe it wouldn't be the right one or maybe it could put your child's life at risk... it has to be prescribed in the health centers or hospitals.

—Community member

As a result of this preference for trained providers, community members were more trusting of and willing to attend those TISA stores where the owners have medical qualifications, particularly when the TISA owner works in the local health center. Conversely, in communities where the TISA owner has no formal medical training, residents know the limits of owners' health expertise, and hesitate to attend the store.

In other places they have more health experience, and they can give me advice about the medicine, or I can ask questions about the medicines. But the difference is at [TISA] they can't give me this advice because they have almost no health experience.

—Community member, on TISA owner without medical training

She [TISA owner] works in the health center, so we can go to her with confidence. We trust that she gives you the right medicine. She knows these things because she works in the health center.

—Community member, on TISA owner with medical training

Community residents are also aware of the different health knowledge and training of owners and attendants; attendants without medical training are unable to provide the same level of advice and support about medicine purchase and use. There is greater trust in the owners given their medical training, and many residents prefer to go to the store at times when the owner is available.

When she [TISA owner] is the one attending, then one can go with confidence. When she is not there, it is like going to a store: 'I want an Alka-Seltzer, I want diclofenaco.' When she is there, it is more like a pharmacy—she tells you how to use the medicine.

—TISA customer

The training and qualifications of owners and staff result in different community perceptions of the TISA stores, influencing the way residents use the stores, and may in turn influence the sales volume and viability of the TISA program.

Connections to health facilities

Linkages to other health facilities affect the ability of TISA stores to provide access to essential medicines, and are important to the business viability of the model.

Linkages with health facilities

Several strong linkages exist between the TISA program and the government healthcare system. First, all TISA stores are opened in communities with a public Centro de Convergencia, with the intention that community members who are prescribed medicines at the Centros can purchase these medicines at the TISA stores. Second, many of the TISA owners work in the public health sector, which facilitates service delivery through improved health knowledge and stronger referral networks.

The TISA owners who work in the health centers or have received health training in another health facility use these connections to improve the quality of their services. For example, TISA owners will reference their health training to provide better diagnosis and dispense the proper medicines, or will call upon health professionals within their social network to request assistance in case a customer brings a complicated or severe illness.

Immediately I called the fire department so they could come bring the woman...I can sell any medication—but it's not like that, it's risky and also against the law...so I sent her to the health center.

—TISA store owner, describing a customer with a birth complication

The TISA owners interviewed acknowledge the limits of their practice, and understand the importance of referral—both for customer safety and their business reputation. While the majority of store owners spoke of referring their customers when an illness was too severe, owners with stronger connections to health facilities—knowing the health facility staff, for instance—were able to provide better referral services.

Gaps in linkages and the TISA business model

Although each community has a Centro de Convergencia, there is wide variability in the quality and function of these facilities across communities. In many communities, the Centro is open only one or two days a month, primarily to provide simple preventive services such as vaccinations. In many cases, the Centro is staffed by low level health professionals rather than doctors. Given these limitations in the public health system, many community members travel into the larger town to attend the Centro de Salud—which has higher-level staff, more reliable hours, and more extensive services.

Implications for TISA use

The quality of the health facilities, and the strength of the linkages between TISA and the public health system, impacts the number of residents who use the TISA store to fill prescriptions for essential medicine. Upon traveling to the town for a medical consultation, few community members are willing to return to their community to purchase medicines at the TISA store. Rather, residents prefer to fill their prescriptions at the pharmacies in town, where they are guaranteed to find the medicines prescribed.

In other pharmacies, when I go to buy, I am sure that I will be able to find the medicine I have been prescribed, and I will get more advice about the medicines.

—Community member

At times I have to go to [town] to buy in the pharmacies, because at times here there is no medicine. This [TISA] is a small store, it is not stocked with all kinds of medicine.

—Community member

CONCLUSIONS

The TISA program offers an innovative approach to meeting the health and medicine needs of rural Guatemalan communities, while supporting rural micro-entrepreneurs. Store business practices, staff training and experience, and the community health context significantly shape the community's perception and utilization of the TISA store, in turn impacting the financial and operational sustainability of the program. Looking across a diverse set of TISA stores and communities, there are several areas where TISA has achieved great success, and some key opportunities for building greater impact and sustainability.

Program successes

Owners report satisfaction with the TISA program.

Store owners were pleased with the opportunity and assistance to start a business, despite some challenges. The loans for startup costs are imperative to making this possible—in some cases, store owners reported using the loan money to smooth personal financial challenges. Some also reported a changed role in their community, having experienced increased trust and leadership potential as a result of their participation in the program. Owners feel proud to provide an essential service to their community and in many cases described their role as more than just a store owner—wanting to integrate all health knowledge into their practice (i.e., prescribing medication, explaining dosage). Most reported that one benefit was the opportunity to reinforce their existing health knowledge and learn new things.

The benefit is that I have a way to help people that need it because before there wasn't anyone to sell all medicines, the benefit is that people now come during the day or at any time of night to find medicine. So they don't have to go to [the nearby town].

—TISA store owner

The benefit is that I have the medicine on hand and can help people.

—TISA store owner

TISA Stores provide an important source of medicine.

They are often available at all hours, and are more easily accessible to community members, being closer to the

community. This is important for time and convenience, but also reduces transportation costs. The stores seem particularly important in communities with less access to other health stores and facilities.

If we didn't have this store, then there is nowhere to find medicines. That is why it is good to have all the medicines that we need. As you can see, if he wasn't here, then where would we find [medicines]?

—Community member and TISA customer in rural community with few health options

In some cases, TISA offers additional important health services.

TISA stores with experienced and previously trained health staff offer additional health services such as health education and information, examinations, and referrals to higher level care. Several of the store owners we spoke with reported offering a greater range of health services than is permitted—for example, many reported giving (and researchers witnessed) injections.

People have confidence in me, they tell me what their symptoms are, what they are feeling, and I know what they need. And sometimes, especially with children, what I do is send for urine or feces examinations in the lab—with my order they accept them in the Centro de Salud, so when the results come in, I know how to read the results, and I have to see what dose I can give them. That's what I do.

—TISA store owner

Program challenges

The public health system is relied upon for prescriptions and treatment, but has its own challenges.

The Centros de Salud are frequently closed, and community members must travel to town to receive health care. In this case, people do not want to return all the way to the TISA store to fill their prescription, especially given the risk that TISA won't have items they need—transportation cost is a big consideration so they fill prescriptions in the pharmacies near the health centers where they receive care.

It is far away. If one has to go [to the Centro de Salud], if there isn't an early bus, one has to go on foot, and if there is a bus, you have to pay the fare, and then when you go you have to get up at 5 in the morning. You have to be there to take a number by 8:00... you are back here at 2:00pm... its just really difficult to go to the Centro de Salud.

—Community member

TISA stores do not stock all the medicines that are prescribed. As mentioned above, stocking is driven by customer demand. However, demand for specific medicines prescribed and not obtained immediately at the health centers may be so infrequent that store owners do not have all the potentially necessary items on hand.

There are times when the illness is complicated, and you have to go to bigger pharmacies because here you will not find what the doctor has prescribed to you. This is a little pharmacy; it is only for first aid.

—Community member

Even with reduced prices, the cost of medicines is prohibitive for some community members. The issue of inability to afford medicines came out strongly in interviews in all communities. Many residents reported trying herbs and going to the health centers for diagnosis

and free medicine, but that purchasing medicines was not an option. Store owners are also aware that many people are not able to afford to purchase the medicines they need.

The truth is there is no money, we just have to be patient and ask God to help us. How am I going to buy medicines? If I have money, I will buy them. But if I do not have money, then I won't.

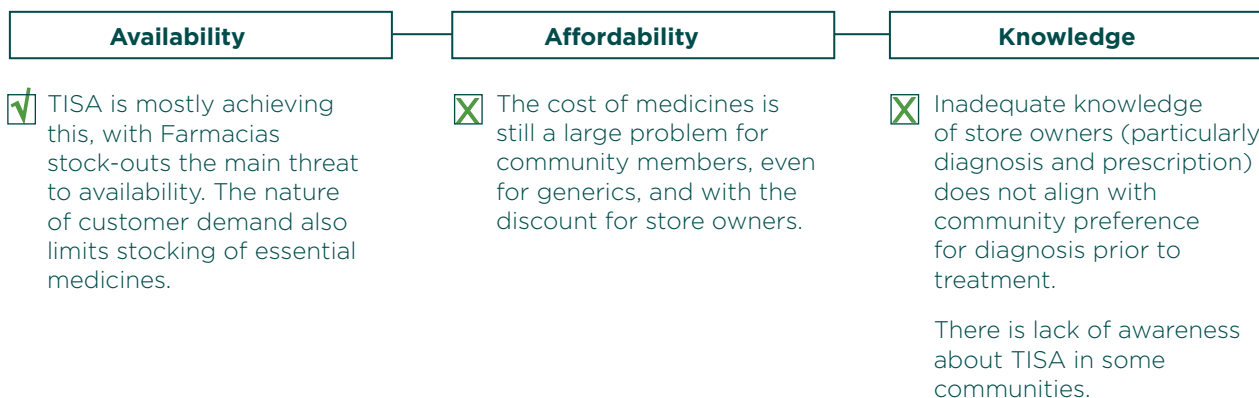
—Community member

In some communities, there is limited awareness about the TISA stores. Researchers found variation in the extent to which community residents selected for interviews knew about the TISA store and/or reported using it. This lack of awareness throughout the community likely impacts sales.

Creating access to essential medicines

Access to essential medicines has several components, including availability, affordability, and knowledge. TISA is achieving some aspects of access and has a strong foundation, but could improve other areas that drive true access (see Figure 4). These issues in turn affect business viability via low sales volumes and decreased competitive advantage.

FIGURE 4. ELEMENTS OF ACCESS TO ESSENTIAL MEDICINES



Recommendations

Expand business and health training for store owners:

TISA store owners reported a great desire for expanded health training, and this was repeated by community members who have a strong preference to receive a consultation by a trained health professional prior to purchasing medicines. Giving store owners adequate training on when to use the medicines they stock—potentially including simple diagnostic tools—would increase their ability to move beyond selling simple over-the-counter medications. In addition, increasing the business literacy training could strengthen the long-term viability of the TISA stores.

Ensure all staff receive training: While the TISA program actively recruits individuals with a health background, customers frequently interact with untrained store attendants while the owners work in second jobs. To improve the quality of services at the TISA stores, it is essential that all store staff are provided with a basic level of health training on all medicines stocked at the store.

Select sites with highest impact potential: TISA stores in more rural areas with fewer alternative health facilities play a greater role in health care provision than those stores in communities with many other pharmacies and health centers. Continuing to emphasize store placement in underserved and isolated communities will improve the role of TISA as a central source of essential medicines.

Develop stronger linkages with public health system:

The ability of TISA stores to meet demand for filling prescriptions, and for referring serious cases of illness, is important for the quality of health services provided and the business viability of the program. Strengthening the connections to the health facilities—for example by improving referral chains, or ensuring store stock matches the medicines prescribed in health facilities—will increase TISA's efficacy in improving health outcomes, and help to build community trust in the store owners.

Consider options for increasing profit margins:

Although the program provides a 20% profit margin on all medicines sold, the low sales volumes, particularly of medicines, leads to overall low earnings at the TISA stores. Several potential routes for increasing profit margins could be explored: 1) Increasing the profit margin on essential medicines through re-negotiation of purchasing and sales terms with Farmacias; 2) Increasing the customer base—and sales volumes—through demand generation, improved training of store owners, and stronger linkages with the public health sector; 3) Addressing the inability of customers to afford medicines through partnership with demand-side financing mechanisms such as vouchers.

REFERENCES

- Chary A et al (2013) The Normalization of Childhood Disease: An Ethnographic Study of Child Malnutrition in Rural Guatemala. *Human Organization*, 72(2):87-97.
- Goldman N, AR Pebley, and M Gragnolati (2002) Choices about Treatment for ARI and Diarrhea in Rural Guatemala. *Social Science and Medicine*, 55(10):1693-1712.
- Gragnolati M and A Marini (2003). Health and Poverty in Guatemala. World Bank Policy Research Working Paper 2966. Accessed at: http://econ.worldbank.org/external/default/main?pagePK=64165259&theSitePK=477894&piPK=64165421&menuPK=64166093&entityID=000094946_0302070416252.
- Grameen Foundation. Progress out of Poverty Index: Guatemala. Available at: <http://www.progressoutofpoverty.org>.
- Montenegro RA and C Stephens (2009). Indigenous Health in Latin America and the Caribbean. *The Lancet*, 367(9525): 1859-1869.
- Owen KK, EJ Obregon and KH Jacobsen (2010) A Geographic Analysis of Access to Health Services in Rural Guatemala. *International Health* 2: 143-149.
- UNICEF. Guatemala Country Profile, 2011. UNICEF Humanitarian Action for Children Report. Available at: www.unicef.org/hac2011.
- World Bank (2009). Guatemala Poverty Assessment: Good Performance at Low Levels. Central America Department, Poverty Reduction and Economic Management Unit. Report No. 43920-GT.
- World Health Organization. Guatemala: Country Health Profile. Available at: <http://www.who.int/countries/gtm/en>.



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