

WELLBOX

version 3.0



Team



Emerson Collin is a second year student at The Ohio State University studying Actuarial Science with the intention of becoming an actuary, post-graduation. He is an active member with the STEM Scholars Program and participates in the Ohio State University Athletic Band.



John Delia is a fourth year student at The Ohio State University studying City and Regional Planning at the Knowlton School of Architecture. His hobbies include creating business models, online websites and long reads.



Rachel Hardin is a fourth year student at The Ohio State University studying public health with a minor in international development studies. She currently serves as the Co-President of Buckeyes for Public Health, the Public Health and Medicine Senator in the Undergraduate Student Government, and a research assistant in the College of Public Health. Rachel plans to graduate in May of 2016 and will begin working at the

Ohio Department of Health.



Jamie Luster is a senior public health major specializing in sociology with a minor in city and regional planning. Jamie is a Co-President of Buckeyes for Public Health and interns at the Ohio Department of Transportation in the Office of Equal Opportunity. Following graduation, she hopes to pursue a Master's of Public Health degree in Epidemiology.

Table of Contents

Background	3
Methods	5
Results	9
Conclusions	12
Appendix	14

Background:

Objectives

WellBox 3.0 seeks to continue the efforts of the two previous WellBox projects in 2013 and 2014. The overall goal of the WellBox project is to improve access to health and personal hygiene products and education, empower individuals and communities in their own health and personal hygiene, and find sustainability through social enterprise. By working with the information gathered from the previous projects and addressing unanswered questions, we hope to make significant progress in outlining the logistics of WellBox implementation.

WellBox Obstacles Identified Prior to Spring 2015 Trip:

1. Does the cost of the WellBox allow profit to be generated?

In the past, women offered to pay 5-10 Cedi per box. After some preliminary pricing, we have determined that this is likely not a realistic price to sell each box at in order for women to profit. We made a rough pricing model with a “moderate” correlation and adjusted the USD totals of two different sized boxes to be more representative of the Ghanaian costs. For our local-sourcing, the small box was estimated to cost 65.56 Cedi and the large 110.83 Cedi. Using outsourcing via Alibaba, we were able to reduce the prices to 15.34 Cedi and 24.48 Cedi, respectively. Aside from the fact that this method yields a price 3 times greater than people are willing to pay, this method also involves ordering massive quantities which would not be feasible due to limited storage capabilities. We need to evaluate the pros and cons of locally-sourced items vs. items purchased in bulk from an outside entity.

2. Can WellBox items be sourced and sustained locally?

Wellbox items are likely unavailable in areas proximate to the villages where it will be sold. We need to determine if it is feasible for women selling them to travel to larger cities to purchase the items. Another issue may be item quality -- from past participants, we learned that hygiene items at markets may be sitting out for quite some time before purchase, possibly allowing them to become expired.

3. Will community members actually buy the WellBox?

Although community members have expressed great interest in WellBoxes in the past, we would like to see how many people will actually buy one when presented with the opportunity to do so. While people have estimated the price they would hypothetically pay for a WellBox, we would like to see if this price is realistic in practice.

4. What WellBox products are most desired by the community?

Past participants were only able to survey 8 community members about their desired products during the last trip. While this preliminary data is helpful, a more representative survey that prioritizes the need for each item should be implemented.

Proposed Solutions for Spring 2016 Trip:

1. Does the cost of the WellBox allow profit to be generated?

Create economic model which would profit wise break even after initial years creating future profits for participants. Develop a preliminary wellbox business plan and model for future participants to build from and implement. Research and explore for profit and nonprofit strategies.

2. Can WellBox items be sources and sustained locally?

Identify and record local pricing of wellbox items in country. Create database of items, price and location for future participants. Identify a list of potential partners US based and in country. Create database of these contacts and develop a partnership solicitation and support letter/email template.

3. Will community members actually buy the WellBox?

Form a pilot test group of specifically identified women to launch research and sales base. Gain buy-in and co-create scaling plan. Try to incorporate Ghana heritage and identity in branding for a more local feel.

4. What WellBox products are most desired by the community?

Create a surveying model which to receive feedback about wellbox items and pricing. Create visual wellbox item display cards which would be used to highlight the respective item. Work with the pilot team to have continued polling of locals in one community.

Methods:

Prior to departure from the United States, we purchased items based on recommendations from previous Wellbox groups to comprise the Wellboxes from Walmart. We selected this store because we felt that the items could be purchased here for the lowest cost. Using the items purchased, we assembled ten Wellboxes total (5 small, 5 large). The items we initially included in the small Wellbox were bandages (100), toothbrushes (6), toothpaste, hand sanitizer, antibiotic cream, insect repellent, and bar soap. In the large box, we included hydrogen peroxide and cotton balls, condoms (20), shaving cream, razors, deodorant (2), mouthwash, bar soap, tampons, lotion, insect repellent, and gauze (2) (refer to pricing chart for details). Each Wellbox was designed to last a family about 4 months.

We met with Emmanuel, our translator, on the first day we visited ONDA. We relayed our plans to him and he agreed to help us complete our tasks. Because of some prior arranging with the help of Rahmat, five women, Jasmine, Lucy, Pamela, Cynthia, and Esther, who were interested in selling the Wellbox prototypes were present at ONDA. We met with these women and Emmanuel informally to conduct a focus group to gain their input regarding the process.

We visited two villages, Sraneso and Nyinatase, at the recommendation of Rahmat. In Sraneso, the five women selected by Rahmat made their first attempt to sell the Wellboxes. Emmanuel and Jasmine helped to translate. The next day, we visited Nyinatase to sell the remaining boxes and began surveying villagers about their preferences. We did not use a systematic sampling method, because the setting in most surveying situations was not conducive to this type of approach. When surveying individuals, we approached those who were available and seemed willing to participate. We created three books of laminated sheets, each with the name in English and picture of the item. Each flip book contained 17 possible Wellbox items. For the most part, our group stood aside as Emmanuel flipped through the book and asked villagers to choose the five items they felt were most desirable to have in a future Wellbox and recorded the responses.

Following our visit to Nyinatase, we visited the Akumadan Market to determine the cost of Wellbox items sold locally. This market took place within walking distance of the ONDA building each Tuesday. Emmanuel used the flip book to ask vendors which items they had available for sale. The vendors reported the lowest priced and the highest priced brand of each item. After our visit to the market, we reviewed events of the past two days with Emmanuel and the five women and solicited their honest feedback.

On March 16th, we visited local pharmacies and medicine shops to determine the price of Wellbox items in a setting other than the market. Again, Emmanuel used the flip book aid to ask shopkeepers which items they had and they reported the highest and lowest price available of each item. Unknown to us prior to departure, small pharmacies such as those described were surprisingly common in Akumadan, with one even present in Sraneso. While in Akumadan, we also surveyed several storeowners who sold goods other than Wellbox items and asked them which 5 items they would like to have in a future Wellbox.

For the remainder of the work week in ONDA, our group offered help to other groups who required extra hands for building. On Friday, we presented our final presentation to ONDA district officials.

Proposed In-Country Work Plan

Pre-departure	<ul style="list-style-type: none"> ● Purchase items for pilot WellBoxes
March 13th	<ul style="list-style-type: none"> ● Techiman market → pricing
March 14th	<ul style="list-style-type: none"> ● Meet with Rahmat ● Identify potential storage options ● Surveying
March 15th	<ul style="list-style-type: none"> ● Hold focus group ● Surveying
March 16th	<ul style="list-style-type: none"> ● Market pricing ● Assemble locally-sourced box
March 17th	<ul style="list-style-type: none"> ● Surveying ● Recap with focus group
March 18th	<ul style="list-style-type: none"> ● Present to ONDA officials

Actual In-Country Work Schedule

Pre-departure	<ul style="list-style-type: none"> ● Purchased items for pilot WellBoxes
March 14th	<ul style="list-style-type: none"> ● Met with Emmanuel ● Held focus group ● Visited Sraneso with women to sell boxes

March 15th	<ul style="list-style-type: none"> ● Visited Nyinatase with women to sell remaining boxes ● Surveyed villagers with Emmanuel ● Visited Akumadan market to price items ● Recapped with focus group
March 16th	<ul style="list-style-type: none"> ● Visited local shops to price items ● Surveyed residents with Emmanuel ● Helped with hoop house
March 17th	<ul style="list-style-type: none"> ● Helped with hoop house
March 18th	<ul style="list-style-type: none"> ● Presented to ONDA officials

Funding + Financials

Cost of Goods Purchased in Columbus at Walmart						
Name	Quantity Purchased	Size each (or per pack)	Units	Total Quantity per Box	Total Cost per Box	Total Cost
Large Boxes	5	22	oz	1	\$3.97	\$19.85
Small Boxes	5	15	oz	1	\$0.94	\$4.70
Bandages (Careband, sheer adhesive bandages, assorted sizes)	5	100	ct	20	\$0.88	\$4.40
Insect Spray (Repel, 40% Deet)	10	8.125	oz	2	\$3.86	\$38.60
Shave Gel (Equate, Extra Moisturizing)	1	7	oz	1	\$1.97	\$1.97
Shave Gel (2-pack, Equate, Sensitive Size)	2	14	oz, 7oz each	1	\$3.54	\$7.08
Deodorant (Speed Stick, 2-pack)	5	6	oz	2	\$3.38	\$16.90

Condoms	Free	Free	Free	Free		\$0.00
Hydrogen Peroxide (No brand)	5	16	oz	1	\$0.52	\$2.60
Gauze (Band-Aid brand, Medium Rolled Gauze, 3in. X 2.1yds)	2	5	rolls	2	\$6.47	\$12.94
Antibiotic (Equate, 2-pack)	2	2	oz (1oz each)	1	\$3.98	\$7.96
Antibiotic (Equate, 1-pack)	1	1	oz	1	\$2.34	\$2.34
Toothpaste (Aim, Multi-benefit)	5	6	oz	1	\$0.85	\$4.25
Tampons (Tampax, Multipax, 3 sizes)	3	54	ct	1	\$6.97	\$20.91
Tampons (Equate, Multipax, 3 sizes)	2	54	ct	1	\$5.27	\$10.54
Cotton balls (White cloud, jumbo size)	1	200	ct	40	\$1.88	\$1.88
Mouthwash (Equate, Blue mint,)	5	16.9	oz	1	\$1.46	\$7.30
Hand Sanitizer (Germ-X, moisturizing original)	5	10	oz	1	\$1.98	\$9.90
Razors (Equate, Twin Blade Plus, disposable)	5	12	ct	12	\$1.82	\$9.10
Soap (Ivory, 10-pack)	1	10	ct	2	\$3.97	\$3.97
Toothbrush (Colgate, 6-pack, soft)	5	6	ct	6	\$4.96	\$24.80
Moisturizing Lotion (Suave, Advanced Therapy)	5	18	oz	1	\$2.83	\$14.15
				Totals	\$63.84	\$226.14

The preceding table shows the total cost of the goods purchased for the Wellboxes. We chose Walmart as our supplier because of its affordability. Initially, we attempted to make pricing

models to estimate the prices in Ghana, but they were entirely inaccurate and have been omitted from this report.

Results:

Survey Results:

In response to the varied demand we saw for WellBoxes, we decided to survey residents of both a town and a village about which health and hygiene products they most desired. We surveyed a convenience sample of 31 villagers in Nyinatase and 9 townspeople in Akumadan. 9 of the villagers were women, while 21 were men, and 8 of the townspeople were women, while 1 was a man. The following table ranks each item by observed desirability, from highest to lowest, for both the town and the village surveyed.

Most Desired Items	Town	Village
1	Feminine hygiene products	Insect repellent
2	Lotion	Toothbrush/toothpaste
3	Shaving cream/razors Mouthwash	Feminine hygiene products
4	Deodorant Toothbrush/toothpaste Antiseptic cream	Soap
5	Condoms	Hydrogen peroxide
6	Hand sanitizer Soap	
7	Gauze	
8	Hydrogen peroxide	
9	Bandages	
10		

Focus Group Results:

The major change that the Wellbox women suggested was to sell the Wellbox in towns/cities as opposed to villages, because people in urban areas can generally afford to pay more for the Wellbox than individuals in rural areas. In addition, people who live in rural areas may not have had as much exposure to certain products as city dwellers, and the lack of knowledge about

how to use the products could be dangerous if they are sold items they are unfamiliar with. The Wellbox women concluded that only a small version of the Wellbox should be sold in the future, because no one can afford the large one. Regarding products to be included in the Wellbox, all parties involved suggested several changes. We added one deodorant, 5 condoms, and one roll of gauze to the small Wellbox. The money from the boxes sold on the first day was divided evenly and given directly to the women in the focus group. On the second day, the money was given to Emmanuel for future distribution.

Pricing Results:

The following table shows average prices from the five pharmacy shops we visited (in Sraneso and Akumadan). Because we continually changed the Wellbox product, this new cost resembles a Wellbox filled with what the Ghanaians were interested in buying. It is a locally sourced estimate which would be much cheaper if the goods were purchased in larger markets (like Accra or Kumasi) and were purchased in bulk. Because they had indicated more interest in a small box, we eliminated the large box from any further price estimates. The recommendation led to another, which suggested that an explanation of how to use each product should either be added to the Wellbox or explained by the women during the sale.

Items	Ghanaian Supplies (Small Box)
Condom	GHC 2.81
Peroxide	Excluded
Antibiotic Cream	GHC 8.67
Gauze	GHC 3.50
Bandages	GHC 4.20
Sanitizer	GHC 6.00
Repellent	GHC 6.50
Pads	Excluded
Gripe Water	Excluded
Razors	Excluded
Lotion	Excluded
Disinfectant	Excluded

Mouthwash	Excluded
Soap	GHC 1.00
Toothpaste	GHC 3.25
Toothbrushes	GHC 4.50
Deodorant	GHC 2.00
Total for Final Cost in GHC (Suggestions of items in the box are based on ONDA officials' opinions)	GHC 42.43

Based on our surveys, discussion with locals, and observations about products needed, we concluded that the average cost to supply a Wellbox would be about GHC 42.43. People paid up to GHC 40 for our most expensive box, but it had many items that were useless to Ghanaians. This box, because it is more tailored to their actual needs, will be profitable for the women selling it if it is sold around GHC 55-60. That is also assuming the goods are purchased for a cheaper price in Accra or Kumasi, as the women assured us they would be able to do.

We realize that part of the interest in our Wellbox project stemmed from the American goods. Many locals were buying the boxes because of their appearance rather than out of necessity, so selling locally sourced boxes may pose a challenge for the women taking over this project.

Conclusions:

Our primary conclusion from this project was that, as it stands, the Wellbox project fails to achieve its two original objectives: empowering women through entrepreneurship and increasing access to essential health and hygiene products in rural villages. We found these two goals to be inherently conflicting; it is difficult to create a profitable business when the target market has limited financial resources.

We did, however, confirm that there is a demand for the Wellbox project among the ONDA staff and residents of Akumadan. Based on the responses of the focus group and ODNA staff, the continuation of the Wellbox project in towns, rather than villages, seems plausible if appropriate funding is secured. Such continuation does raise concerns about increasing competition for local shops that already sell these products. We observed that many community members already relied on selling health and hygiene products in shops or markets as a source of income, and continuing the Wellbox project would merely be introducing a middle man into this process for the sake of convenience.

Additional concerns involved the Wellbox products themselves. Although we purchased products according to recommendations from previous reports, many of Ghanaians we talked to were unfamiliar with some of the items in the Wellboxes. For example, many of the women were unfamiliar with tampons, which raises health concerns, as improper use of this product could be dangerous and detrimental to health. Additionally, Emmanuel reported that many of the villagers were attracted to the Wellboxes because they perceived them to include high quality American products, not because they truly needed the items in the boxes. As mentioned previously, this could impact the future success of the project if the Wellboxes are locally sourced.

Given these concerns, we have major trepidations about the continuation of this project. If the women do choose to continue selling Wellboxes, however, one positive impact would be the potential for financial gains for the women involved.

Next Steps:

After looking at various methods for funding supplies for the Wellbox, it was determined that a microloan would be the best financial option for the women taking over this project.

We had looked at creating a Non Profit Organization in Ohio or a Student Organization at OSU to continue this project and provide funding, but that is neither feasible nor sustainable. The women taking over this project will need to provide their own funding; that will not only help with logistics but it will ensure that they are serious and fully invested in making this project come to fruition.

At this point, we are providing all of the appropriate documents to ONDA and the women involved with this project, but beyond that, OSU and the Ghana - Sustainable Change program will no longer be involved in this project or supplying any goods for it.

Logistically speaking, the women assured us that they had access to vehicles so that they could shop in Accra and Kumasi and sell the Wellboxes in the rural areas. Additionally, we asked about storage, and they each claimed to have access to storage facilities, so theoretically, each woman could begin her own Wellbox business. The only issues holding them back, currently, are startup costs which is where the microloans come into play.

Appendix:

Sample Survey Response Sheet:

Respondent Description	Items Desired (Pick Top 5)
	<p>Hand Sanitizer Bandages/plasters Gauze Antiseptic Cream Hydrogen Peroxide and cotton balls Condoms Shaving Cream Razors Deodorant Mouthwash Soap Tampons/pads Toothpaste Toothbrushes Lotion Insect Repellent</p>
	<p>Hand Sanitizer Bandages/plasters Gauze Antiseptic Cream Hydrogen Peroxide and cotton balls Condoms Shaving Cream Razors Deodorant Mouthwash Soap Tampons/pads Toothpaste Toothbrushes Lotion Insect Repellent</p>

Sample Wellboxes:



Sample Pricing Sheet:

Key Contacts + Directory

2015 Participants

Emerson Collin (collin.15@osu.edu)

John Delia

Rachel Hardin (hardin.139@osu.edu)

Jamie Luster (luster.24@osu.edu)

Past Participants

Monica Baker

Yetunde Emanuel

Jack Grant

Nathan Cotton

Lauren Michlitsch

Ghanaian Contacts

Rahmat Ndego

Emmanuel Adabawhuni

Sunyani Regional Hospital - **Email: info@ghsmail.org**