



UNIVERSITY HOSPITALS CASE MEDICAL CENTER/  
CASE WESTERN RESERVE UNIVERSITY

# “Health Education through Health Examination”: Community-Based Health Interventions for Mercado Global Artisans

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## **I. Background**

The “More Skills Less Pills” program has been implemented since October 2013 by the MG community facilitators with GHT-FM-CASE members. Over the past 2 years, the three pillars of the program, the “Pain Away” exercises, the “Power to Change” group problem-solving skills, and the “Do-it-together Health Education”, have been revised to better serve for the needs of the artisans. During the last visit in April 2015, it became clear that we needed more detailed discussions with each artisan to capture her health needs and attitudes towards their health. For this purpose, we provided ‘health check-ups’ to each artisan and a member of her family within two communities, Chipiacul and San Jorge. The check-up was not only a tool to understand individual health problems, but also an opportunity to provide one-on-one health education.

## **II. Procedures**

See appendix 4 for full details on the procedures for the community visits.

## **III. Findings**

Community Visit #1: Mercado Global Staff, Panajachel.

- 17 individuals were seen (2 men).
- Almost half of the people (7/17) had impaired vision.
- More than half of the individuals had problems with weight. 7/17 individuals were overweight and 2/17 were obese.
- There were many musculoskeletal complaints including cervical and thoracic spine tenderness, trapezius tenderness, and lateral epicondylitis (elbow pain) which were likely job related.

Community Visit # 2: Chipiacul (Mujeres Unidas, Mujeres Girasoles)

- 20 individuals were seen (1 man).
- Almost half of individuals were overweight (8/20) or obese (7/20).
- Most individuals had musculoskeletal complaints including cervical and thoracic spine tenderness, trapezius tenderness, and lateral epicondylitis (elbow pain) which were likely job related or due to "preocupaciones."
- Many people had vision problems.

Community Visit #3: San Jorge (Grupo San Jorge, Genesis)

- 27 individuals were seen. 26 were adults (1 man) and 1 was a female child.
- More than half of the individuals were overweight (13/26) or obese (1/26).
- The majority of individuals had impaired vision.

- Most people had musculoskeletal complaints including cervical spine tenderness, trapezius tenderness, and low back pain which were likely job related.
- Many individuals had dental problems.

#### **IV. Assessments**

Based on the findings above, our overall assessment of the community visits include:

- 1) A majority of individuals throughout the communities are overweight.
  - The calculated body mass index (BMI), a measurement of height and weight, showed that 28 out of the 63 individuals were overweight (BMI 25-29); and 10 of the 63 were obese (BMI >29). This indicates that 60% of individuals seen were either overweight or obese
- 2) Many artisans, MG staff, and family members have impaired vision.
  - Poor lighting in workspaces as well as environmental exposures likely contribute to the number of visual problems seen in the communities.
- 3) Artisans, MG staff and family members have a significant number of musculoskeletal complaints.
  - Low back pain, shoulder pain, neck pain, trapezius pain, foot and leg pain, and epicondylitis (elbow pain) were most common and likely related to work.
  - Each community had a preponderance of certain problems possibly related to the specific work of each community (i.e. foot pain in the Chipiacul community where foot looms are used).
  - Many of the ill-defined musculoskeletal pain syndromes may also be secondary to underlying stress, mental health challenges, or self-esteem issues.
- 4) Non-specific pain syndromes may be symptoms of underlying stress or mental health challenges.

#### **V. Recommendations**

- 1) Workplace Improvement: Improve the workplace environment for MG staff and artisans.
  - Include education on good working environment into the Pain Away program.
  - The workplace environment of the artisans needs to be evaluated more thoroughly based on the work they are doing including lighting and posture.
  - The working conditions in the MG office should also be evaluated and improved.
- 2) Weight Issues: Create a program to address weight issues and educate on chronic diseases.

- Create a program within the existing “More Skills, Less Pills” program to educate MG staff and artisans on the connection between obesity, hypertension (high blood pressure) and heart attacks/strokes. Possible ways to accomplish this include:
    - i. Community walking groups
    - ii. Identifying “community models” who have adopted exercise or the Pain Away program into their daily lives
- 3) Revised Pain Away Program: Update and simplify the Pain Away program.
    - Include more information on the reasons for doing the exercises in the Pain Away program (eg. Improvement of headaches)
    - Modify the Pain Away program to include all parts of the body in a simple, easy to follow sequence.
  - 4) Underlying self-esteem Issues manifesting with anxiety, fatigue, and generalized pain syndrome: Continue to address self-esteem through the Power to Change Program.

## **VI. Future Plans**

- 1) Olga and Aurora will present our findings from the health “check-up” back to the communities.
- 2) Dr. Aaron Lear will return in January to evaluate the work environment. We will try to arrange for an occupational therapist to accompany him for this trip.
- 3) Dr. Morikawa and his team will return for 3 additional community visits to finish the health check-up in all 20 communities.
- 4) Dr. Morikawa and his team will update the Pain Away program.

## Appendix 1: Visit 1

Monday 9/28/2015 Demographics/findings – Mercado Global Staff

- Total individuals seen 17, consisting of 15 females and 2 males
- Average age 30
- Average height 60.19in, average weight 131.4lb, average BMI 25.37
- 7/17 (41%) individuals were overweight and 2/17 (11.8%) were obese by BMI.
- 7/17 (41%) had vision problems.
- Average Blood pressure 116.8/75.8. There were 2 people with pre-hypertensive blood pressure. No hypertensive blood pressures.
- Common physical exam findings include: impaired vision (7/17), dental carries, bilateral lower quadrant tenderness
- Common musculoskeletal findings cervical and thoracic spine tenderness, trapezius tenderness, lateral epicondylitis
- All patients had good ROM in back, neck and shoulders

## Appendix 2: Visit 2

Tuesday 9/29/2015 Demographics/findings – Chipiacul (2 groups seen: Mujeres Unidas, Mujeres Girasoles)

- Total individuals seen 20, consisting of 19 females and 1 male
- Average age 39.
- Average height 57.5 in, average weight 131.5lb, average BMI 28.02, median 27.7
- 8/20 (40%) individuals were overweight and 7/20 (35%) were obese by BMI.
- Average Blood pressure 115.8/74.3. One person had elevated blood pressure, 2 people had pre-hypertensive blood pressure ( $>130/80$ ).
- Common physical exam findings include impaired vision (4/20), lower pelvic pain (5/20), abdominal pain, peripheral neuropathy and foot pain
- Common musculoskeletal findings cervical and thoracic spine tenderness, trapezius tenderness, lateral epicondylitis
- Common Medical history findings: Gastritis, Irregular periods, lower back pain, foot pain, headaches
- Diagnoses: acute episcleritis, pterygium.
- Many of the people had seen a doctor before in a private clinic.

### Appendix 3: Visit 3

Wednesday 9/20/2015 Demographics/findings - San Jorge (2 groups seen: San Jorge, Genesis)

- Total individuals seen 27 (26 adults, 1 female child. 1 male)
- Average age: 40.
- Average BMI 28.
- Average BP 116/74. One person had elevated blood pressure.
- 13/26 (50%) were overweight and 1/26 (3.8%) was obese by BMI.
- Common physical exam findings included impaired vision (15/24), poor dentition, general pelvic pain.
- Common musculoskeletal findings cervical spine tenderness, trapezius tenderness, low back pain.
- Common past medical history: headaches, C-sections
- Diagnoses: pterygium (3 people), presbyopia, visual impairment, musculoskeletal strain.

## Appendix 4: Community Visit Procedures

### Materials used:

- Scale x1
- Measuring tape x2
- Blood pressure cuff x1
- Pulse oximeter x2
- Snellen eye chart x2
- Stethoscope x4
- Penlight x2
- VQ scan x1
- Panophthalmoscope x1
- Hand sanitizer x4
- Alcohol wipes x1

### Locations:

- Day 1: Mercado Global Panajachal office
- Day 2: Chipiacul
- Day 3: San Jorge

### Station Set up:

- Station 1 - Weight and Height measurement
- Station 2 - BMI calculation, Blood Pressure, Heart Rate, SpO2
- Station 3- Vision screening
- Station 4 - Musculoskeletal exam
- Station 5 - General exam + Final health assessment

### Summary:

Upon arrival to the designated location, the team would prepare by setting up the individual stations needed for the health assessment. Once set up was completed and the artisans and family members had arrived, introduction of the team was performed by Dr. Mori. An explanation of the purpose of health examination and community assessment along with the review of the individual stations was given.

The health checkup began at the first station where health assessment forms were handed out and height and weight was assessed. Participants then moved onto station 2 where blood pressure, heart rate and pulse ox were measured. BMI was also calculated and written on the assessment form and the participant moved onto station 3. At station 3, a vision screening was performed by testing visual acuity using Snellen chart, extraocular muscle testing and visual field testing. At station 4, a musculoskeletal exam was performed which examined ROM in neck, shoulders, lower back and hip. Strength was assessed in the upper and lower extremities along with an extensive shoulder exam which included rotator cuff testing and lower back assessment with sitting leg raise testing. Once the musculoskeletal exam was completed, the participants moved onto the final station which encompassed the general exam along with the final health assessment. The general exam consisted of appearance, HEENT exam, cardiovascular and lung exam along with an abdominal and neurological exam. During the final assessment, the results of the health checkup were discussed with the participant in a private setting and recommendations were made based on individual problems. A referral was given if deemed suitable. After the health checkup was completed, stretching exercises were demonstrated by Hikari on an individual basis as recommended by Dr. Mori.

## Appendix 5: Time Log

September 28, 2015

9:15: Project update by Olga.  
9:35: Project purpose by Dr. Mori.  
9:40: Procedure review by Dr. Rog.  
9:55: Arrival to health checkup location- Panajachal.  
10:00: Prepare site for health checkup.  
10:40: Began health checkups.  
13:00: Health checkups completed.  
13:20: Arrival to Mercado Global office in Panajachal.  
13:25: Lunch Break.  
14:45: Discussion and review performed.

September 29, 2015

7:05: Departure from residence.  
9:15: Arrival to health checkup location- Chipiacul.  
9:25: Team introduction by Dr. Mori.  
9:30: Began health checkups.  
12:15: Health checkups completed.  
12:25: Departure from health checkup location.  
14:35: Arrival to Mercado Global office in Panajachal.  
14:40: Discussion and review performed.

September 30, 2015

8:50: Departure from residence.  
9:00: Arrival to health checkup location- San Jorge.  
9:30: Team introduction by Dr. Mori.  
9:40: Began Health checkups.  
12:05: Health checkups completed.  
12:10: Departure from health checkup location.  
12:30: Lunch Break  
13:45: Discussion and review performed

## Appendix 6: Health Check-Up Form

Nombre (Iniciales): \_\_\_\_\_

Edad: \_\_\_\_\_ Sexo: F / M

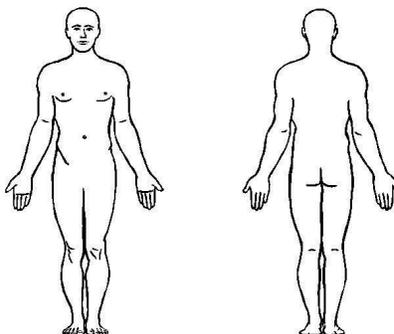
Altura: \_\_\_\_\_ Peso: \_\_\_\_\_ Presión Sanguínea: \_\_\_\_\_ / \_\_\_\_\_ Pulso: \_\_\_\_\_

SpO2%: \_\_\_\_\_

Visión R 20/\_\_\_\_\_ L 20/\_\_\_\_\_

	Normal	Anormal
Apariencia		
Piel		
HEENT		
CVS		
Respiración		
Abdomen		
Examen neurológico		

Exámen musculoesquelético:



Historia Médico/Quirúrgica:

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Medicamentos:

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# de Hijos/Edades:

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Con quién vive:

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