

Chemax Health Study Survey: Summary

Laura Orlando¹

¹Boston University School of Public Health, Boston, MA 02215 USA

Lorlando@bu.edu

The town of Chemax, in the Mexican state of Yucatán, is home to some 11,000 people in the city center, almost all of whom are Mayan. A basic health assessment was carried out in Chemax from November of 2005 through March of 2006 by members of the Boston University School of Public Health (BUSPH), together with the Resource Institute for Low Entropy Systems (RILES), a Boston-based non-profit. The study was conducted in order to gain a clearer understanding of the environmental and health conditions in the community, as well as to establish a baseline against which to measure progress in environmental and public health. The study also gave the RILES/BUSPH team the opportunity to build relationships with community members and local health clinic staff, while getting to know the town and people's everyday lives, and giving the people of Chemax the chance to meet the BUSPH/RILES team and to learn about our work in the area.

The survey was created by RILES staff with Boston University School of Public Health teaching faculty, and was reviewed by biostatisticians prior to its use. The sample set was randomized, with a sample size of 303, or approximately 10% of households. The sectors herein referred to are those used by the local community health center. Methods were consistent with commonly accepted best practices.

The survey was comprised of 118 questions with an additional 54 questions per child living in the household. Questions were separated into thematic sections, namely: Health of Primary Caretaker, Health of other adults in the home, Profession of Primary Caretaker, Household data, Individual Personal Data, Child health, Water and Sanitation. A final section was provided for the interviewer to record their observations about the household, languages spoken by interviewee and language of interview, participant's willingness to be interviewed and their comfort with the process, etc.

Local Mayan and Spanish-speaking clinic workers, familiar with the town and its people, conducted the interviews after work or on weekends. Before conducting the surveys, trainings were held for the interviewers in which issues such as confidentiality, sensitivity, and the importance of thorough note taking and explaining an interviewee's right to refuse participation were discussed. Local monitoring and evaluation was carried out by a member of the clinic's education staff, who was responsible for quality control of returning surveys, communication with interviewers and Boston staff, and for holding meetings of the local interview staff to monitor progress and answer questions, etc. All were compensated for their time.

Interviews were conducted in-home, almost exclusively with women. The average interview lasted approximately 35 minutes, and almost all interviews were conducted in Mayan. While again, the right of each potential interviewee to refuse was clearly explained, not a single resident declined participation.

The resultant data set was entered into Microsoft Excel and was then analyzed using the Statistical Analysis Software system (SAS). Inputs were analyzed using the FREQ, MEANS, TTEST and ANOVA procedures, and Fisher's Exact and Chi-square tests were run, with an alpha level of $p < 0.05$.

Summary Results

99% of adults in Chemax are Mayan

30% of the homes have dirt floor, 70% are cement, brick or stone
74% have televisions, 19% have a satellite TV connection (cable)

70% have their cooking area/kitchen apart from living quarters
82% cook with firewood

49% have not had any formal education
45% ended their formal education after primary school

42% have potable water in-home
41% use bottled water

98% of grey water is deposited in the street or in a yard (not reused)

80% have no bathroom facility, and use their backyard as such (*'el patio'*)
88% want to change their situation vis-à-vis sanitation

Of the 241 respondents that use *'el patio'* as their only bathroom, 237 would prefer another system

Of the 11 people that use a latrine, 10 would like something different

Respondents gave a number of different reasons for wanting another type of bathroom. When asked to respond "yes/no" to the importance of several factors in their desire to have a different sanitation system than that which they presently have, more than half of respondents reported that privacy, insects, odor and security were their greatest concerns. In answering an open-ended question, accessibility and hygiene were the most important factors reported.

The majority of respondents see themselves in good to average health. 58% of adults classified their overall health as "good" and 24% classified it as "average." Diarrhea was reported as a health concern by 10% of the adult population. 47% reported some sickness in

the last year, from chest pain (reported by 12%) to a persistent cold lasting for more than 7 days (reported by 27%). Cold-like symptoms were the health issue most often reported. Per the Chemax Community Health Center, the complaints most often reported clinically are diarrhea, respiratory infections (upper and lower), and dermatological conditions. This report is supported by the findings of the RILES/BUSPH study. The study also found difference in health status between sectors of the town.

Conclusions

Chemax is a community with resolvable environmental and sanitation problems. First and foremost is the use of ‘*el patio*,’ or a corner of the backyard, as the bathroom by the majority of the families in town. This fact is most notable because of the large number of may residents who travel with frequency to the costal hotel zone to work in construction. Many of these men are expert masons. Why then do the families choose not to build latrines? The majority of the people interviewed spoke of wanting something “safe and hygienic.” Ordinary latrines are not the answer here – from a geographic, social or ecological viewpoint. It is RILES’ goal, and that of our local and regional partners, in our continued work with the Chemax community, to design and build appropriate, sustainable ecological infrastructure that satisfies the local sanitation needs and desires. This ecological infrastructure will avoid the type of contamination that comes with technologies such as septic tanks and sewers, while at the same time giving the community what they want and need in a way that is esthetically pleasing, economical and ecologically sound.

Addendum

Chemax Survey Team

<u>Surveyors</u>	<u>Position at Clinic</u>	<u>Languages Spoken</u>
Wilberto Balam	Health Promoter and Coordinator	Maya/Spanish
Irene Damas Padilla	Health Promoter	Spanish
Blanca Castro Rodriguez	Health Promoter	Spanish
Hilaria Ciau Puc	Nurse	Maya/ Spanish
Leydi M. Rosado San Miguel	Nurse	Maya/ Spanish
Maria Bartola Och Tut	Nurse	Maya/ Spanish
Eulogio Mejia Arceo	Nurse	Maya/ Spanish

For a full report of all data including all statistical analysis, please contact Laura Orlando at Lorlando@bu.edu