

A Comprehensive
Evaluation of Needs
in Likoni Division, Kenya.

December 2010

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i) List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CBO	Community Based Organization
FGD	Focus Group Discussion
FPE	Free Primary Education policy
HIV	Human Immunodeficiency Virus
IGA	Income Generating Activities
KII	Key Informant Interview
KSH	Kenyan schillings
LICODEP	Likoni Community Development Program
LSF	Likoni Scholarship Fund
MOH	Ministry of Health
NGO	Non Governmental Organization
OVC	Orphans and Vulnerable Children
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

ii) Acknowledgements

I would first like to acknowledge the assistance and guidance provided by Gabrielle Fondiller during my data analysis and writing process. This research would have been impossible without her support. I would also like to thank Henry Nyamoh and Viconsult for their consultant work, for assisting in administering this research, and for providing the data. Additionally, I would like to acknowledge Hatua Likoni, all of the enumerators and supervisors, staff at the TWAAAYF children's center and everyone who worked on this project. Particular thanks goes to Martin Gitonga and Dennis Mugo for their assistance in conducting the study. I hope this resultant report will shed light on important subjects that have been overlooked in this area of Kenya.

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Chapter One: Executive Summary

In December 2009, research was conducted to gain an understanding of their community's specific needs and perspectives on a variety of issues. This survey is the first locally-created examination that reveals residents' opinions about a wide variety of issues, including:

- Demographic Information (page 9)
- Water, Sanitation & Drainage (page 12)
- Comprehensive Maternal Care (page 16)
- Diseases & Health Seeking Behavior (page 17)
- Nutrition (page 19)
- HIV/AIDS (page 20)
- Orphans & Vulnerable Children (page 24)
- Education (page 27)
- Youth (page 32)
- Security & Crime (page 37)
- Business (page 39)
- Savings & Loans (page 41)

This report synthesizes information gleaned from a survey distributed to 900 community members, one-on-one key informant interviews, and focus group discussions with community groups. By formulating a body of research that represents the community perspective, this survey is a significant step forward in understanding the people and the district. The information from these sources offers the first, and currently the only, comprehensive report of attitudes and needs in Likoni, Kenya. Ultimately, these data can be used to shape programs that may directly affect the population. It is hoped that this research will also serve as a model for future research of community level needs.

Chapter Two: Background Information

2.1 Background:

In Likoni, unemployment is high, wages are low, and few can afford to send their children to high school. Since 2003, public primary education in Kenya has been paid for by the government and is available at a relatively low cost to families. However, public primary schools have become overcrowded, often accommodating 60-100 children per classroom. Meanwhile, secondary education is unaffordable for most Likoni families, leaving many gifted and motivated students without the credentials for good jobs. As a result, residents of Likoni are underrepresented in professional fields. Combined with a high unemployment rate, high rates of drug abuse and alcoholism, and a lack of concrete information about the area, many in Likoni are unable to improve their circumstances. It is hoped that this report will provide information to those looking to improve the conditions throughout the area.



Map of Kenya (James Madison University 2010)

Chapter Three: Methodology

3.1 The Sample:

A random sampling of 900 households was chosen throughout the Likoni District. The Likoni District is broken into several smaller Divisions. Divisions within the District include: Timbwani, Likoni, and Bofu. Households were chosen proportionally by population within these divisions.

3.2 Data Collection

An extensive literature review was undertaken to uncover articles, reports, or other published literature related to the measuring of health variables in developing countries. This assisted in the creation of questions, and highlighted topics of importance for the questionnaire and interviews.

A comprehensive questionnaire was prepared by the consultant and given to a random sampling of 900 residents throughout Likoni.

Key informant interviews were used to collect qualitative information that would offer background information to supplement the questionnaire. They utilized a semi-structured interview guide, and consisted of one-on-one interviews. Those interviewed included religious leaders, primary school teachers, provincial administrators, community leaders, leaders of non-profit organizations, private medical practitioners, hospital staff and Ministry of Health staff, among others. A total of 24 interviews were completed in this survey.

Four focus groups were also conducted with such groups as community based organizations (CBOs), women's groups and youth groups. Each focus group contained up to 10 respondents.

3.3 Analysis:

Quantitative data was analyzed using statistical software, checked for completeness, and corrected where necessary. Qualitative data was analyzed by coding responses according to related themes and analyzed according to the most salient topics.

3.5 Limitations:

Data from the questionnaire are confined to the household level, and questions did not incorporate children living outside the house. This was done to avoid confusion among respondents, as it is common for family or friends to share housing for sporadic periods of time. This has left a need to more precisely identify the number of youth who leave school and home at young ages. Because of these reasons, the questionnaire only offers information based on the state of the household at the time of the survey.

Chapter Four: Overview of Questionnaire Findings¹

4.1 Demographic Information

Sex and age of respondent:

Age	Male	Female	Number of Respondents
Above 50 Years	64 (7.1%)	22 (2.4%)	86 (9.5%)
40-49 Years	99 (11.0%)	44 (4.9%)	143 (15.9%)
30-39 Years	183 (20.3%)	104 (11.6%)	287 (31.9%)
20-29 Years	161 (17.9%)	185 (20.6%)	346 (38.4%)
13-19 Years	15 (1.7%)	23 (2.6%)	38 (4.2%)
Total	522 (58.0%)	378 (42.0%)	900

Marital status of respondent:

Marital Status	Number of Respondents
Married (Monogamy)	731 (81.2%)
Single	95 (10.6%)
Divorced/Separated	40 (4.4%)
Widow/ Widower	18 (2.0%)
Married (Polygamy)	16 (1.8%)
Total	900

Faith and location of respondent:

Location	Catholic	Traditional Religion	Protestant	Muslim	Other	Number of Respondents
Likoni	45 (5.0%)	1 (0.1%)	31 (3.4%)	93 (10.3%)	10 (1.1%)	180
Timbwani	140 (15.6%)	4 (0.4%)	119 (13.2%)	195 (21.7%)	22 (2.4%)	480
Bofu	73 (8.1%)	0 (0.0%)	59 (6.5%)	103 (11.4%)	5 (0.6%)	240
Total	258 (28.7%)	5 (0.5%)	209 (23.1%)	391 (43.4%)	37 (4.1%)	900

¹ All percentages calculated out of total number of respondents (n=900), unless stated otherwise.

Overall household composition:²

Relationship	Male	Female	Number of Household Members
Household head	763 (25.9%)	121 (4.1%)	884 (30.1%)
Spouse (Not household head)	55 (1.9%)	748 (25.4%)	803 (27.3%)
Child under 20	479 (16.3%)	356 (12.1%)	835 (28.4%)
Child over 20	115 (3.9%)	88 (3.0%)	203 (6.9%)
Other relative	81 (2.8%)	84 (2.9%)	165 (5.6%)
Other	9 (0.3%)	40 (1.4%)	49 (1.7%)
Total	1502 (51.1%)	1437 (48.9%)	2939

Employment status, age and gender of household heads:³

Age/ Gender	Regularly employed	Casually employed	Own a business	Unemployed	Other	Number of Household Heads
Male Teenager	0 (0.0%)	0 (0.0%)	2 (0.2%)	0 (0.0%)	0 (0.0%)	2 (0.2%)
Female Teenager	0 (0.0%)	0 (0.0%)	1 (0.1%)	1 (0.1%)	0 (0.0%)	2 (0.2%)
Male 20-29	60 (7.1%)	85 (10.1%)	50 (5.9%)	31 (3.7%)	9 (1.1%)	235 (27.8%)
Female 20-29	1 (0.1%)	7 (0.8%)	13 (1.5%)	9 (1.1%)	2 (0.2%)	32 (3.8%)
Male 30-39	108 (12.8%)	61 (7.2%)	67 (7.9%)	18 (2.1%)	2 (0.2%)	256 (30.3%)
Female 30-39	5 (0.6%)	5 (0.6%)	14 (1.7%)	10 (1.2%)	3 (0.4%)	37 (4.4%)
Male 40-49	74 (8.8%)	27 (3.2%)	29 (3.4%)	10 (1.2%)	15 (1.8%)	155 (18.4%)
Female 40-49	5 (0.6%)	3 (0.4%)	12 (1.4%)	7 (0.8%)	3 (0.4%)	30 (3.6%)
Male 50+	22 (2.6%)	7 (0.8%)	25 (3.0%)	14 (1.7%)	19 (2.3%)	87 (10.3%)
Female 50+	0 (0.0%)	0 (0.0%)	5 (0.6%)	0 (0.0%)	1 (0.1%)	6 (0.7%)
Total	275 (32.6%)	195 (23.1%)	218 (25.8%)	100 (11.8%)	54 (6.4%)	842*

*42 Respondents did not answer

Employment status, age and gender of all household members above 20 years of age:⁴

Age/ Gender	Regularly employed	Casually employed	Own a business	Unemployed	Other	Number of Household Members
Male 20-29	76 (3.6%)	121 (5.8%)	59 (2.8%)	114 (5.4%)	10 (0.5%)	380 (18.1%)
Female 20-29	45 (2.1%)	61 (2.9%)	199 (9.5%)	242 (11.5%)	14 (0.7%)	561 (26.7%)
Male 30-39	119 (5.7%)	66 (3.1%)	73 (3.5%)	25 (1.2%)	6 (0.3%)	289 (13.7%)
Female 30-39	32 (1.5%)	24 (1.1%)	119 (5.7%)	72 (3.4%)	6 (0.3%)	253 (12.0%)
Male 40-49	73 (3.5%)	30 (1.4%)	28 (1.3%)	18 (0.9%)	14 (0.7%)	163 (7.7%)
Female 40-49	30 (1.4%)	6 (0.3%)	43 (2.0%)	30 (1.4%)	9 (0.4%)	118 (5.6%)
Male 50+	22 (1.0%)	7 (0.3%)	28 (1.3%)	20 (1.0%)	9 (0.4%)	86 (4.1%)
Female 50+	2 (0.1%)	0 (0.0%)	18 (0.9%)	17 (0.8%)	5 (0.2%)	42 (2.0%)
Total	399 (19.0%)	315 (15.0%)	567 (26.9%)	538 (25.6%)	73 (3.5%)	1892*

*212 household members not included due to no answer from respondent

² Percentages calculated out of total number of household members (n=2939)

³ Percentages calculated out of total number of household heads (n=884)

⁴ Percentages calculated out of total number of household members above 20 years of age (n=2104)

Employment status and age of single mother household heads:⁵

Age	Regularly Employed *	Not Regularly Employed**	Number of Household Heads
13-19 years	1 (1.8%)	1 (1.8%)	2 (3.6%)
20-29 years	8 (14.5%)	6 (10.9%)	14 (25.5%)
30-39 years	11 (20.0%)	9 (16.4%)	20 (36.4%)
40-49 years	9 (16.4%)	6 (10.9%)	15 (27.3%)
Above 50 years	3 (5.5%)	1 (1.8%)	4 (7.3%)
Total	32 (58.2%)	23 (41.8%)	55

*Includes those who own a business and are employed daily.

**Includes those who are unemployed and casually (occasionally) employed.

Current level of education, gender and age of children under 20 years of age:⁶

Level of education	Male under 5 years	Female under 5 years	Male 6-12 years	Female 6-12 years	Male 13-19 years	Female 13-19 years	Total
Not enrolled	97 (11.6%)	75 (9.0%)	13 (1.6%)	9 (1.1%)	32 (3.8%)	27 (3.2%)	253 (30.3%)
Nursery	18 (2.2%)	13 (1.6%)	19 (2.3%)	11 (1.3%)	0 (0.0%)	0 (0.0%)	61 (7.3%)
Lower primary	13 (1.6%)	8 (1.0%)	107 (12.8%)	64 (7.7%)	10 (1.2%)	4 (0.5%)	206 (24.7%)
Upper primary	0 (0.0%)	0 (0.0%)	46 (5.5%)	37 (4.4%)	64 (7.7%)	54 (6.5%)	201 (24.1%)
Secondary	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	50 (6.0%)	46 (5.5%)	96 (11.5%)
University or tertiary	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (0.5%)	0 (0.0%)	4 (0.5%)
Total	128 (15.3%)	96 (11.5%)	185 (22.2%)	121 (14.5%)	160 (19.2%)	131 (15.7%)	821*

*14 Respondents did not answer

⁵ Percentages calculated out of total number of single mother household heads (n=55)

⁶ Percentages calculated out of total number of children under 20 years of age (n=835). This statistic does not include children living outside the household.

4.2 Water & Sanitation

Main source of domestic water:

Source	Number of Respondents
Water vendor	251 (27.9%)
Public tap	199 (22.1%)
Water piped into yard	154 (17.1%)
Water piped into building	109 (12.1%)
Protected well in a dwelling	58 (6.4%)
Borehole	49 (5.4%)
Open public well	36 (4.0%)
Open well in dwelling	27 (3.0%)
Protected public well	12 (1.3%)
Other	5 (0.6%)
Total	900

Distance from water source and location:

Distance	Number of Respondents
Less than 1 Km	755 (83.9%)
1-2 Km	123 (13.7%)
2-3 Km	14 (1.6%)
3-4 Km	5 (0.6%)
More than 5 Km	3 (0.3%)
Total	900

Main problem faced at primary water source:

Problem	Number of Respondents
Pollution and unpalatable or salty water	415 (46.1%)
Long queues and overcrowding	212 (23.6%)
Water shortage or rationing	103 (11.4%)
Breakage of pipes	64 (7.1%)
Long distance	38 (4.2%)
No problem with water source	68 (7.6%)
Total	900

Availability of water throughout the year at the main source:

Availability of water	Number of Respondents
Have unstable source of water the entire year	465 (51.7%)
Have a stable source of water part of the year	280 (31.1%)
Have a stable source of water the entire year	155 (17.2%)
Total	900

Of those with unstable sources of water part of / the entire year (82.8% n=745), alternative source of water:

Alternative source	Number of Respondents
Borehole	336 (37.3%)
Open well in dwelling or yard	63 (7.0%)
Protected public well	61 (6.8%)
Open public well or borehole	50 (5.6%)
Protected well in dwelling/yard	50 (5.6%)
Rain water	48 (5.3%)
Public tap	46 (5.1%)
Piped water into dwelling	29 (3.2%)
Piped water into yard/plot	25 (2.8%)
Dam	4 (0.4%)
Others	1 (0.1%)
Not answered	32 (3.6%)
Total	745

Safety of drinking water at household level:

Safety level	Number of Respondents
Water available in the household safe for drinking	609 (67.7%)
Water available in the household not safe for drinking	291 (32.3%)
Total	900

Primary method of ensuring water safety for drinking:

Method	Number of Respondents
Treat water using water guard	410 (45.6%)
Boil water for drinking	301 (33.4%)
Cover water for drinking	97 (10.8%)
Use all mentioned methods to treat water	8 (0.9%)
Other	3 (0.3%)
Do nothing to treat water	81 (9.0%)
Total	900

Prevalence of water borne disease in past year:

Prevalence	Number of Respondents
Zero members of the household have suffered from a water borne disease in past year	553 (61.4%)
One or more members of the household have suffered from water borne disease in past year	347 (38.6%)
Total	900

Of those who suffered water borne disease in the past year (38.6% n=347), main type of disease:

Disease	Number of Respondents
Diarrhea / Cholera	193 (21.4%)
Dysentery	35 (3.8%)
Typhoid & vomiting	16 (1.7%)
Other	95 (10.6%)
Not answered	8 (0.9%)
Total	347

Hand washing practices after visiting toilets:

Hand washing	Number of Respondents
Wash hands after visiting the toilet	865 (96.1%)
Do not wash hands after visiting the toilet	35 (3.9%)
Total	900

Of those who wash their hands after visiting toilets (96.1% n=865), use of soap during hand washing:

Use of soap	Number of Respondents
Use soap	494 (54.9%)
Use only water	364 (40.4%)
Use ashes	7 (0.8%)
Total	865

Availability of adequate drainage:

Availability	Number of Respondents
Inadequate drainage around household	646 (71.8%)
Adequate drainage around household	254 (28.2%)
Total	900

Flooding during rainy season in house:

Existence of flooding	Number of Respondents
Flooding occurs around house during the rainy season	575 (63.9%)
Flooding does not occur around house during rainy season	170 (18.9%)
Occasional flooding occurs around house during rainy season	155 (17.2%)
Total	900

Primary method of disposing human waste:

Method	Number of Respondents
Pit latrine	683 (75.9%)
Toilet	209 (23.2%)
Bush	5 (0.6%)
In the open	3 (0.3%)
Total	900

Primary method of trash disposal:

Method	Number of Respondents
Organized groups within Likoni dispose of trash	335 (37.2%)
Dispose of trash anywhere outside house	319 (35.4%)
Burn trash	180 (20.0%)
Use dust bins to dispose of trash	64 (7.1%)
Use other unspecified methods	2 (0.2%)
Total	900

Most desires service from the government:

Service	Number of Respondents
Waste disposal	265 (29.4%)
Drainage/sewage system	239 (26.6%)
Clean water provision	189 (21.0%)
Better health services	73 (8.1%)
More schools	33 (3.7%)
Better roads	32 (3.6%)
Other	35 (3.9%)
Do not know	34 (3.8%)
Total	900

4.3 Comprehensive Maternal Care

Location last child delivered:

Location	Number of Respondents
Delivered in health facility	576 (64.0%)
Delivered at home	298 (33.1%)
Do not have children	26 (2.9%)
Total	900

Of those who delivered children (97.1% n=874), use of post natal care:

Use of care	Number of Respondents
Returned for post natal care services at a health facility	577 (64.1%)
Did not seek post natal care services at a health facility	203 (22.6%)
Not answered	94 (10.5%)
Total	874

Use of family planning method:

Use of method	Number of Respondents
Use a family planning method	502 (55.8%)
Do not use a family planning method	398 (44.2%)
Total	900

Of those who use family planning methods (55.8% n=502), most common method used:

Method	Number of Respondents
Contraceptive pills	186 (20.7%)
Injection	151 (16.8%)
Implant (not IUD)	55 (6.1%)
Condom	37 (4.1%)
IUD	26 (2.9%)
Natural methods	23 (2.6%)
Other	8 (0.9%)
Not answered	16 (1.7%)
Total	502

4.4 Disease & Health Seeking Behavior

Most prevalent household disease within last two weeks:

Disease	Number of Respondents
Malaria	382 (42.4%)
Typhoid	70 (7.8%)
Cholera, dysentery, diarrhea	46 (5.1%)
Pneumonia	36 (4.0%)
Other	95 (10.6%)
None	271 (30.2%)
Total	900

Health seeking behavior for diseases:

Behavior	Number of Respondents
Medical attention is sought when family member is sick	580 (64.4%)
Medical attention is not sought when a family member is sick	91 (10.1%)
Medical attention is sometimes sought	229 (25.4%)
Total	900

Of those who seek medical attention (64.4% n=580) location where attention is usually first sought:

Location	Number of Respondents
Health center*	186 (20.7%)
Dispensary [§]	131 (14.6%)
Private practitioner [±]	123 (13.7%)
District hospital [°]	69 (7.7%)
Self medication	47 (5.2%)
Herbal clinic	16 (1.8%)
Witch doctor	6 (0.7%)
Not answered	2 (0.2%)
Total	580

*A health center is larger than a dispensary and private practitioner, but smaller than a district hospital. A health center has adequate resources for most minor problems and surgeries.

§A dispensary is run by registered nurses who provide outpatient services for minor ailments and dispense over the counter and prescription medicines. These are often run by the government as the lowest point of contact with people.

±A private practitioner is a small clinic run by clinical officers. It is smaller than a health center.

°A district hospital provides specialized care for patients when they cannot find adequate services elsewhere. One district hospital exists in Likoni.

Distance to the nearest health facility:

Distance	Number of Respondents
Less than 1 km	239 (26.6%)
2-3 km	434 (48.2%)
4-5 km	144 (16.0%)
Over 5 km	77 (8.6%)
Do not know	6 (0.7%)
Total	900

Level of satisfaction with quality of health services in Likoni:

Level of satisfaction	Number of Respondents
Satisfied	452 (50.2%)
Not satisfied	359 (39.9%)
Sometimes satisfied	89 (9.9%)
Total	900

Most common reason for not visiting a health center when sick:

Reason	Number of Respondents
Cost of services	465 (51.7%)
Poor quality of care	112 (12.4%)
Distance to facility	74 (8.2%)
Attitude of health care workers	48 (5.3%)
Culture and beliefs	23 (2.6%)
Not answered	178 (19.8%)
Total	900

Affordability of healthcare in Likoni:

Affordability	Number of Respondents
Healthcare in Likoni is affordable	580 (64.4%)
Healthcare in Likoni is not affordable	320 (35.6%)
Total	900

4.5 Nutrition

Number of meals eaten per day:

Number of meals	Number of Respondents
Three meals	466 (51.8%)
Two meals	346 (38.4%)
One meal	43 (4.8%)
More than three meals	45 (5.0%)
Total	900

Main content of meals:

Content	Number of Respondents
Carbohydrates, proteins and vegetables	498 (55.3%)
Primarily carbohydrates	211 (23.4%)
Other	93 (10.3%)
Not answered	98 (10.9%)
Total	900

Amount of money (KSH) spent on food per day, per household:

Amount	Number of Respondents
Less than 100 KSH	128 (14.2%)
101-200 KSH	299 (33.2%)
201-300 KSH	289 (32.1%)
Above 300 KSH	184 (20.4%)
Total	900

4.6 HIV/AIDS

Knowledge about HIV/AIDS:

Knowledge	Number of Respondents
Know about HIV/AIDS	875 (97.2%)
Do not know about HIV/AIDS	25 (2.8%)
Total	900

Of those who know about HIV/AIDS (97.2% n=875), learned about HIV/AIDS through:

Method of learning	Number of Respondents
Media	374 (41.6%)
Friends, relatives, and neighbors	118 (13.1%)
Ministry of Health	105 (11.7%)
Chief's baraza*	71 (7.9%)
Teachers	64 (7.1%)
NGOs	55 (6.1%)
Local trainings or workshops	44 (4.9%)
Other	42 (4.7%)
Do not know	1 (0.1%)
Not answered	1 (0.1%)
Total	875

*Meeting conducted at provincial administration office

Perception of magnitude of HIV/AIDS—increasing, decreasing or remaining the same:

Magnitude	Number of Respondents
HIV/AIDS is increasing	699 (77.7%)
HIV/AIDS is decreasing	81 (9.0%)
HIV/AIDS has remained the same	42 (4.7%)
Do not know	78 (8.7%)
Total	900

Of those who report that HIV/AIDS is increasing (77.7% n=699), HIV/AIDS is increasing due to:

Reason for increase	Number of Respondents
Lack of public awareness	241 (26.8%)
Lack of change in attitude	223 (24.8%)
Poverty	147 (16.3%)
Alcoholism/ drugs	76 (8.4%)
Not answered	12 (1.3%)
Total	699

Of those who report that HIV/AIDS is decreasing (9.0% n=81), HIV/AIDS is decreasing due to:

Reason for decrease	Number of Respondents
Public awareness	35 (3.9%)
Change in behavior	13 (1.4%)
Use of condoms	11 (1.2%)
Fear	8 (0.9%)
Treatment of relatives or friends with HIV/AIDS	7 (0.8%)
Not answered	7 (0.8%)
Total	81

Most active group involved in HIV/AIDS:

Group	Number of Respondents
Community groups /CBOs / NGOs	355 (39.4%)
Community members	159 (17.7%)
Ministry of Health	75 (8.3%)
Church	18 (2.0%)
Mosque	13 (1.4%)
Do not know	280 (31.1%)
Total	900

Groups addressing HIV/AIDS mainly involved with:

Area of involvement	Number of Respondents
Awareness creation	544 (60.4%)
Testing and Counseling	138 (15.3%)
Treatment of HIV/AIDS patients	32 (3.6%)
Care for people living with HIV/AIDS and their children	15 (1.7%)
Do not know	171 (19.0%)
Total	900

Main factor that contributes to HIV/AIDS prevalence:

Factor	Number of Respondents
Promiscuity	276 (30.7%)
Negligence	149 (16.6%)
Poverty	135 (15.0%)
Lack of knowledge	110 (12.2%)
Polygamy	72 (8.0%)
Prostitution	64 (7.1%)
Wife inheritance	30 (3.3%)
Drugs	24 (2.7%)
Early marriage	6 (0.7%)
Witchcraft	6 (0.7%)
Forced marriage	5 (0.6%)
Do not know	20 (2.2%)
Not answered	3 (0.3%)
Total	900

Knowledge of where to be tested for HIV/AIDS:

Knowledge	Number of Respondents
Know where to go for HIV/AIDS testing	858 (95.3%)
Do not know where to go for HIV/AIDS testing	42 (4.7%)
Total	900

Of those who know where to go for HIV/AIDS testing (95.3% n=858), location of testing:

Location	Number of Respondents
VCT center	609 (67.7%)
Health facility	230 (25.6%)
Community groups /CBOs / NGOs	8 (0.9%)
Schools	4 (0.4%)
Not answered	7 (0.7%)
Total	858

Best method to prevent mother to child transmission of HIV:

Method	Number of Respondents
Use alternative to breast milk	575 (63.9%)
Delivering in hospitals to reduce rate of infection	242 (26.9%)
Using medication	9 (1.0%)
Prayer	6 (0.7%)
Other	20 (2.2%)
Do not know	48 (5.3%)
Total	900

Existence of acceptance and support of people living with HIV/AIDS:

Existence of acceptance and support	Number of Respondents
Yes	594 (66.0%)
No	129 (14.3%)
Do not know	162 (18.0%)
Not answered	15 (1.7%)
Total	900

Existence of people living with HIV/AIDS in the household:

Existence	Number of Respondents
Not in household	753 (83.7%)
In household	61 (6.8%)
Do not know	86 (9.6%)
Total	900

Of those with people living with HIV/AIDS in the household (6.8% n=61), number who take ARVs:

Prevalence of ARV use	Number of Respondents
Household member takes ARVs	47 (5.2%)
Household member does not take ARVs	9 (1.0%)
Not answered	5 (0.5%)
Total	61

Of those with people living with HIV/AIDS (6.8% n=61), where he/she receives ARVs:

Location	Number of Respondents
Hospital	33 (3.6%)
VCT Centre	14 (1.6%)
Pharmacy	2 (0.2%)
Do not know	2 (0.2%)
Not answered	10 (1.1%)
Total	61

Of those with people living with HIV/AIDS (6.8% n=61), payment for ARVs:

Payment	Number of Respondents
Does not pay	32 (3.6%)
Always pays	11 (1.2%)
Sometimes pays	5 (0.6%)
Do not know	4 (0.4%)
Not answered	9 (1.0%)
Total	61

4.8 Orphans and Vulnerable Children

Perception of prevalence of orphans and vulnerable children (OVCs) in the community:

Prevalence	Number of Respondents
OVCs are prevalent in the community	758 (84.2%)
OVCs are not prevalent in the community	78 (8.7%)
Do not know	64 (7.1%)
Total	900

Existence of OVCs in the household:

Existence in household	Number of Respondents
Do not have OVCs in the household	741 (82.3%)
Have OVCs in the household	159 (17.7%)
Total	900

Of those with OVCs in the household (17.7% n=159), number per house:

Number	Number of Respondents
1-2	98 (10.9%)
3-4	50 (5.6%)
5+	11 (1.2%)
Total	159

Main caregiver of OVCs in the community:

Caregiver	Number of Respondents
Relatives	284 (31.6%)
Orphanages / Community Care Coalitions	130 (14.4%)
Community groups /CBOs / NGOs	72 (7.9%)
Church	69 (7.7%)
Mosque	33 (3.7%)
OVCs themselves	11 (1.2%)
Do not know	301 (33.4%)
Total	900

Main way that Likoni residents believe they can support OVCs:

Support	Number of Respondents
Provide food	336 (37.3%)
Provide clothes	180 (20.0%)
Provide school fees	125 (13.9%)
Guidance & counseling	77 (8.6%)
Offer moral support	72 (8.0%)
Offer spiritual support	24 (2.7%)
Other	20 (2.2%)
Do not know	51 (5.7%)
Not answered	15 (1.7%)
Total	900

Main mentorship and counseling need of OVCs:

Need	Number of Respondents
Career guidance	215 (23.9%)
Skill building	194 (21.6%)
Spiritual & moral guidance	158 (17.6%)
Psychological guidance / counseling	140 (15.6%)
Mentoring & friendship	112 (12.4%)
Other	13 (1.4%)
Do not know	61 (6.8%)
Not answered	7 (0.8%)
Total	900

Main protector of OVCs from abuse and exploitation:

Protector	Number of Respondents
Community groups	233 (25.9%)
Family members	191 (21.2%)
Village elders	117 (13.0%)
Government children's officer	84 (9.3%)
Village chief	42 (4.7%)
Church	31 (3.4%)
Mosque	21 (2.3%)
Head teachers	13 (1.4%)
Do not know	168 (18.7%)
Total	900

Existence of children with disabilities in the household:

Existence	Number of Respondents
Do not have children with disabilities in house	846 (94.0%)
Have children with disabilities in house	54 (6.0%)
Total	900

Of those who have children with disabilities (6.0% n=54), type of disability:

Disability	Number of Respondents
Crippled	13 (1.4%)
Mentally handicapped	9 (1.0%)
Blind	8 (0.8%)
Deaf	8 (0.8%)
Other disabilities	5 (0.6%)
Not answered	11 (1.2%)
Total	54

Of those who have children with disabilities (6.0% n=54), level of support received:

Level of support	Number of Respondents
Do not receive support	28 (3.1%)
Receive support	7 (0.7%)
Receive occasional support	6 (0.6%)
Do not know	4 (0.4%)
Not answered	9 (1.0%)
Total	54

Most prevalent type of child abuse in the community:

Child abuse	Number of Respondents
Child beating/battering	154 (17.1%)
Early marriage	114 (12.7%)
Child labor	132 (14.7%)
Sexual harassment	26 (2.9%)
All of the above reasons	56 (6.2%)
Some of the above reasons	238 (26.4%)
Do not know	180 (20.0%)
Total	900

Main method to reduce child abuse and exploitation:

Method	Number of Respondents
Train the community	475 (52.8%)
Report cases to authorities	207 (23.0%)
Punish those who abuse children	82 (9.1%)
Do nothing	18 (2.0%)
Do not know	118 (13.1%)
Total	900

4.9 Education

For a full explanation of levels in the Kenyan education system, see Appendix A.

Existence of children in school in household:

Existence	Number of Respondents
Children enrolled in school living in the household	643 (71.4%)
Children enrolled in school not living in the household	257 (28.6%)
Total	900

Of those who have children enrolled in school (71.4% n=643), age at which children first enrolled (on average):

Age	Number of Respondents
3 - 6 years	555 (61.7%)
7 - 11 years	35 (3.9%)
12 - 15 years	21 (2.3%)
Other	10 (1.1%)
Do not know	3 (0.3%)
Not answered	19 (2.1%)
Total	643

Of those who have children enrolled in school (71.4% n=643), person who initiated enrollment into school:

Person	Number of Respondents
Parent	614 (68.2%)
Government official	9 (1.0%)
Village chief	2 (0.2%)
NGO	2 (0.2%)
Child him/herself	1 (0.1%)
Not answered	15 (1.7%)
Total	643

Of those who have children enrolled in school (71.4% n=643), respondent's opinions of highest expected level of education to be attained by children:

Expectation	Number of Respondents
University level	495 (55.0%)
Secondary level	64 (7.1%)
Vocational / polytechnic level	27 (3.0%)
Lower primary level	20 (2.2%)
Upper primary level	2 (0.2%)
Do not know	22 (2.4%)
Not answered	13 (1.4%)
Total	643

Of those who have children currently enrolled in school (71.4% n=643), education sponsorship status of children:

Sponsorship status	Number of Respondents
Do not have sponsored children in the household	538 (59.8%)
Do have sponsored children in the household	67 (7.4%)
Not answered	38 (4.2%)
Total	643

Importance of education:

Importance	Number of Respondents
Education is important	874 (97.1%)
Education is not important	26 (2.9%)
Total	900

Importance of education for girls:

Importance	Number of Respondents
Education is important for girls	868 (96.4%)
Education is not important for girls	32 (3.6%)
Total	900

Benefits of education:

Benefits	Number of Respondents
Employment opportunities	471 (52.3%)
Better life	311 (34.6%)
Expand ability to think	85 (9.4%)
Easier to interact with other communities	24 (2.7%)
Do not know	9 (1.0%)
Total	900

Who benefits from a child's education:

Beneficiary	Number of Respondents
Child	515 (57.2%)
Community	143 (15.9%)
Child's relatives	86 (9.6%)
Child's future marriage partner	80 (8.9%)
Child's parents	70 (7.8%)
Not answered	6 (0.7%)
Total	900

Nursery school attendance of last child living in household:

Attendance	Number of Respondents
Last child attended nursery school	580 (64.4%)
Last child did not attend nursery school	196 (21.8%)
Not applicable	91 (10.1%)
Not answered	33 (3.7%)
Total	900

Participation of most children in extracurricular activities:

Participation	Number of Respondents
Most children participate in extracurricular activities	417 (46.3%)
Most children do not participate in extracurricular activities	343 (38.1%)
Do not know	76 (8.4%)
Not answered	64 (7.1%)
Total	900

Of those who report that children participate in extracurricular activities (46.3% n=417), most popular type of extracurricular activity:

Type of activity	Number of Respondents
Outdoor games	287 (31.9%)
Mosque activities	39 (4.3%)
Church activities	35 (3.8%)
Art/drama activities	19 (2.1%)
Computer classes	12 (1.3%)
Music	9 (1.0%)
Other	6 (0.7%)
Do not know	10 (1.1%)
Total	417

Of those who report that most children do not participate in extracurricular activities (38.1% n=343), most important reason why:

Reason	Number of Respondents
No activities nearby	54 (6.0%)
Lack of funds	50 (5.6%)
Children not interested	32 (3.6%)
Children too busy	27 (3.0%)
Other	49 (5.4%)
Not answered	131 (14.5%)
Total	343

Which activity do you most wish was affordable and available for children:

Activity	Number of Respondents
Outdoor games	416 (46.2%)
Computer classes	166 (18.4%)
Mosque activities	73 (8.1%)
Church activities	64 (7.1%)
Art & drama classes	58 (6.4%)
Music classes	36 (4.0%)
Other	28 (3.1%)
Do not know	2 (0.2%)
Not answered	57 (6.3%)
Total	900

Availability of lighting to study:

Availability	Number of Respondents
Have adequate lighting for studying	563 (62.6%)
Do not have adequate lighting for studying	242 (26.9%)
Not answered	95 (10.6%)
Total	900

Knowledge of computers (children):

Knowledge	Number of Respondents
Most children do not have knowledge of computers	612 (68.0%)
Most children have knowledge of computers	239 (26.6%)
Not answered	49 (5.4%)
Total	900

Importance of adult education:

Importance	Number of Respondents
Adult education is important	874 (97.1%)
Adult education is not important	26 (2.9%)
Total	900

Reason adult education is important:

Reason	Number of Respondents
To help older people read and write	543 (60.3%)
To reduce poverty	128 (14.2%)
To help women who never went to school	58 (6.4%)
To help adults find better jobs	60 (6.7%)
To better help children with school	55 (6.1%)
Other	51 (5.7%)
Do not know	5 (0.6%)
Total	900

Respondent's ability to operate a computer:

Knowledge	Number of Respondents
Do not know how to operate a computer	544 (60.4%)
Know how to operate a computer	356 (39.6%)
Total	900

4.10 Youth

Before reporting on data pertaining to youth in Likoni, it is necessary to define the word “youth.” According to the United Nations, a youth is a person between 15-24 years of age. (United Nations 2010) The African Union defines a youth as “every person between the ages of 15-35.” (African Union 2010) Despite these two age-confined classifications, local understandings of youth can be culturally bound and characterized by social roles in addition to numbers.

Main problem faced by youth:

Problem	Number of Respondents
Unemployment	599 (66.6%)
Drug abuse	110 (12.2%)
Insecurity	70 (7.8%)
Idleness	30 (3.3%)
Early marriage	23 (2.6%)
Unwanted pregnancy	21 (2.3%)
Alcoholism	14 (1.6%)
STIs & HIV/AIDS	5 (0.6%)
Prostitution	4 (0.4%)
Other	10 (1.1%)
Do not know	14 (1.6%)
Total	900

Numbers of youth in the home not in school:

School enrollment	Number of Respondents
Youth not enrolled in school	366 (40.7%)
Youth enrolled in school	249 (27.7%)
No youth in the home	285 (31.7%)
Total	900

Of those youth not in school (40.7% n=366), proportion who work:

Employment status	Number of Respondents
Not employed	184 (20.4%)
Employed	174 (19.3%)
Not answered	8 (0.9%)
Total	900

Of those youth who are employed (19.3% n=174), type of job carried out:

Type of job	Number of Respondents
Casually employed	51 (5.6%)
House help	37 (4.1%)
Business	30 (3.3%)
Regularly employed	21 (2.3%)
Other	29 (3.2%)
Not answered	6 (0.6%)
Total	174

Of those youth who do not have a job (20.4% n=184), how they occupy their time:

Activity	Number of Respondents
Search for employment	53 (5.9%)
Spend time with friends	49 (5.4%)
Stay at home/ help with house-work	33 (3.7%)
Idle/ do nothing	7 (0.8%)
Drink alcohol	4 (0.4%)
Other	9 (1.0%)
Not answered	29 (3.2%)
Total	184

Perception of alcohol consumption among youth:

Perception	Number of Respondents
Alcohol consumption common	830 (92.2%)
Alcohol consumption not common	16 (1.8%)
Do not know	54 (6.0%)
Total	900

Most common type of alcohol consumed:

Type of alcohol	Number of Respondents
Mnazi (alcohol from palm tree)	704 (78.2%)
Chang'aa (alcohol from maize & chemicals)	73 (8.1%)
Beer	40 (4.4%)
Wine and spirits	34 (3.8%)
Do not know	49 (5.4%)
Total	900

Perception of prevalence of illicit drug sales in the area:

Prevalence	Number of Respondents
Illicit drugs are sold in the area	698 (77.6%)
Illicit drugs are not sold in the area	41 (4.6%)
Do not know	161 (17.9%)
Total	900

Perception of prevalence of illicit drug use problem:

Prevalence	Number of Respondents
Drug use is a problem	779 (86.6%)
Drug use is not a problem	87 (9.7%)
Do not know	34 (3.8%)
Total	900

Most common type of illicit drug used:

Type of drug	Number of Respondents
Marijuana	511 (56.8%)
Heroin ('brown sugar')	123 (13.7%)
Miraa ('khat')	106 (11.8%)
Cocaine	99 (11.0%)
Other	1 (0.1%)
Do not know	60 (6.7%)
Total	900

Most useful method to prevent drug and alcohol use among youth:

Method	Number of Respondents
Educate youth on risks	502 (55.8%)
Report cases to authorities	219 (24.3%)
Responsible parenting	61 (6.8%)
Keep children in school	40 (4.4%)
Other	40 (4.4%)
Do not know	38 (4.2%)
Total	900

Perception of age at which girls normally get married:

Age	Number of Respondents
12-17 years	360 (40.0%)
18-20 years	297 (33.0%)
21-25 years	128 (14.2%)
26-30 years	26 (2.9%)
31 + years	6 (0.7%)
Do not know	83 (9.2%)
Total	900

Perception of existence of early marriages:

Existence	Number of Respondents
Early marriages common	651 (72.3%)
Early marriages not common	129 (14.3%)
Do not know	120 (13.3%)
Total	900

School dropout rate for girls living in the household:

Dropout rate	Number of Respondents
All girls continued their educations	565 (62.8%)
At least one girl dropped out of school	70 (7.8%)
No girls living in the household	265 (29.4%)
Total	900

Of those whose girl(s) dropped out of school (7.8% n=70), most important reason:

Reason	Number of Respondents
Pregnancy	24 (2.7%)
Lack of school fees	16 (1.8%)
Lack of interest	7 (0.8%)
Early marriage	4 (0.4%)
Distance of school from home	4 (0.4%)
Other	6 (0.7%)
Not answered	9 (1.0%)
Total	70

Of those with girls in the house (70.6% n=635; see chart “School dropout rate for girls living in the household” above), girls with children:

Children	Number of Respondents
Girls do not have children	499 (55.4%)
Girls have children	48 (5.3%)
Not answered	88 (9.8%)
Total	635

Of those whose girls have children (5.3% n=48), average age at which girl gave birth:

Age	Number of Respondents
Below 12 years	4 (0.4%)
13-15 years	7 (0.8%)
16-18 years	15 (1.7%)
19-22 years	17 (1.9%)
22-25 years	2 (0.2%)
25+ years	2 (0.2%)
Not answered	1 (0.1%)
Total	48

4.11 Security and Crime in Likoni

Level of security in the area:

Level of security	Number of Respondents
Area is not secure	694 (77.1%)
Area is secure	115 (12.8%)
Area is sometimes secure	78 (8.7%)
Do not know	13 (1.4%)
Total	900

Most common type of crime:

Type of crime	Number of Respondents
No single common type of crime	426 (47.3%)
Mugging	245 (27.2%)
Pick pocketing	134 (14.9%)
Home breaking/Invasion	31 (3.4%)
Child molestation	26 (2.9%)
Rape	8 (0.9%)
Violent robbery	6 (0.7%)
Other	6 (0.7%)
Do not know	18 (2.0%)
Total	900

Main cause of crime:

Cause	Number of Respondents
Unemployment	535 (59.4%)
Drug abuse	239 (26.6%)
Idleness	52 (5.8%)
Neglect by authorities	16 (1.8%)
Alcoholism	11 (1.2%)
Police harassment	11 (1.2%)
Prostitution	10 (1.1%)
Other	7 (0.8%)
Do not know	19 (2.1%)
Total	900

Most important method to prevent crime:

Method	Number of Respondents
Educate the youth	393 (43.7%)
Report crime to the authorities	254 (28.2%)
Effective law enforcement	130 (14.4%)
Responsible parenting	34 (3.8%)
Keep children in school	19 (2.1%)
Other	47 (5.2%)
Do not know	23 (2.6%)
Total	900

4.12 Business

Business ownership:

Ownership	Number of Respondents
Own a business	470 (52.2%)
Do not own a business	430 (47.8%)
Total	900

Of those who own a business (52.2% n=470), type of business:

Type of business	Number of Respondents
General retail shop	91 (10.1%)
Grocery kiosk	89 (9.9%)
Cooked food kiosk	55 (6.1%)
Fish vending kiosk	47 (5.2%)
Salon	31 (3.4%)
General wholesale shop	30 (3.3%)
Cereal & grain shop	22 (2.4%)
Water vendor	11 (1.2%)
Other	84 (9.3%)
Not answered	10 (1.1%)
Total	470

Of those who own a business (52.2% n=470), profits (KSH):⁷

Profit made in a day	Number of Respondents
Less than 200 KSH	104 (11.6%)
Between 201 – 300 KSH	142 (15.8 %)
Between 301 – 400 KSH	82 (9.1%)
Between 401 – 500 KSH	55 (6.1%)
Between 501 – 1000 KSH	31 (3.4%)
Above 1,000 KSH	36 (4.0%)
Do not know	6 (0.6%)
Not answered	14 (1.6%)
Total	470

⁷ As of December 2010, 100 KSH=approximately \$1.25/ £0.80 / €1.00

Perception of Likoni's suitability for agriculture:

Suitability	Number of Respondents
Likoni is not suitable for agriculture	320 (35.6%)
Likoni is suitable for agriculture	233 (25.9%)
Do not know	347 (38.6%)
Total	900

Ownership of land for agriculture:

Ownership	Number of Respondents
Do not own land for agriculture	668 (74.2%)
Own land for agriculture	232 (25.8%)
Total	900

Of those who possess land (25.8% 232), size of area:

Size	Number of Respondents
Less than 2 acres	60 (6.7%)
2-4 acres	104 (11.6%)
4-5 acres	39 (4.3%)
5 + acres	23 (2.6%)
Not answered	6 (0.7%)
Total	232

Of those who possess land (25.8% 232), number who keep livestock:

Livestock	Number of Respondents
Practice livestock keeping	168 (18.7%)
Do not practice livestock keeping	62 (6.9%)
Not answered	2 (0.2%)
Total	232

4.13 Savings & Loans

Involvement in savings schemes:

Involvement	Number of Respondents
Not involved in savings schemes	490 (54.4%)
Involved in savings schemes	410 (45.6%)
Total	900

Bank accounts:

Bank account	Number of Respondents
Do not have a bank account	546 (60.7%)
Have a bank account	354 (39.3%)
Total	900

Of those without a bank account (60.7% n=546), most important reason for not having one:

Reason	Number of Respondents
Not enough money	388 (43.1%)
Limited knowledge on banking procedures	44 (4.9%)
Do not trust banks	21 (2.3%)
Banks too far away	5 (0.6%)
Not answered	88 (9.8 %)
Total	546

Existence of loan activity:

Existence	Number of Respondents
Have not taken out a loan	655 (72.8%)
Have taken out a loan	245 (27.2%)
Total	900

Of those who have taken out a loan (27.2% n=245), amount of largest loan (KSH):

Amount	Number of Respondents
Below 5,000 KSH	22 (2.4%)
5,001-9,999 KSH	38 (4.2%)
10,000-14,999 KSH	70 (7.8%)
15,000-19,999 KSH	38 (4.2%)
20,000-24,999 KSH	25 (2.8%)
25,000-50,999 KSH	24 (2.7%)
51,000-99,999 KSH	12 (1.3%)
Above 100,000 KSH	12 (1.3%)
Not answered	4 (0.4%)
Total	546

Of those who have taken out a loan (27.2% n=245), purpose of loan:

Purpose of the loans taken	Number of Respondents
To boost business	97 (10.8%)
To start a business	65 (7.2%)
To pay school fees	40 (4.4%)
To pay for health services	23 (2.6%)
Other	19 (2.1%)
Not answered	1 (0.1%)
Total	245

Of those who have not taken out a loan (72.8% n=655), main reason that hinders borrowing of loans:

Reason	Number of Respondents
Fear of failing to repay	240 (26.7%)
Do not qualify	102 (11.3%)
Do not need a loan	68 (7.8%)
Difficult loan requirements	38 (4.2%)
Complicated loan process	34 (3.8%)
High interest rates	29 (3.2%)
Other	47 (5.2%)
Not answered	97 (10.7%)
Total	655

Chapter Five: Focus Groups and Key Informant Interviews

Interviews were conducted with religious and political leaders, teachers, hospital administrators, Ministry of Health staff, and community organizations. Focus groups were conducted with youth groups and women's groups. Twenty-eight interviews and focus group discussions were completed. During the interviews and discussions, conversation was centered on several subjects. In particular, key themes included: (i) education; (ii) the status of health; (iii) HIV/AIDS; (iv) water, sanitation and drainage; (v) youth; (vi) local security.

i. Education

The status of education in Likoni is important to study in light of the Kenyan government's Free Primary Education (FPE) policy, which began on January 6, 2003. Since then, enrollment in primary schools has grown by 70%, yet the infrastructure and size of schools has largely remained the same because funding has not increased. (Mrima Primary School 2009) Interviews with local teachers and leaders of community groups revealed class sizes up to 100 children per room, while "only five in the class may understand what the teacher is saying." Because of this lack of individual attention, students often perform poorly on the national exams which determine to which secondary school they will be admitted, and eligibility for scholarships. (Women's Group at Kisii 2009) It is significant to note that few respondents commented on the curriculum taught in Kenya, which focuses on memorization and standardized testing rather than critical thinking and creativity. Those who perform poorly on exams are not admitted into secondary school, a process which rejects students who excel at subjects that do not require memorization.

Most respondents cited that teachers should not shoulder the entirety of blame, as they face the challenge of educating many students in one classroom. Additionally, teachers cited that they are burdened with an excess of work and they receive little support from the government or outside sources. One elementary school teacher stated that she is allowed only one or two days off each month, and is overwhelmed with the work of marking and teaching. (Mrima Primary School 2009) In addition, most schools lack sufficient resources to employ special education teachers. Because schools struggle to meet basic needs of the overall population, few offer specialized services for students with disabilities. Several respondents voiced concerns that those who require extra support are simply left unattended. Teachers at schools for students with disabilities also cited that they lack adequate resources, which has affected the quality of education. For example, the School for the Blind lacks the financial resources to purchase Braille books for each student. (Likoni Primary School 2009, Puma Primary School 2009, School for the Blind 2009)

Policies surrounding grants and investments have made it difficult for some schools to seek external support. One school leader cited that the school's policies discourage donations and grants, which hinders expansion in infrastructure and development. For that reason, "many lagging developments are stopped because there is no way to implement them." (Mrima Primary School 2009) Another school leader cited that policies allow them to accept grants, but they are mostly sustained by "well-wishers," who are not a guarantee of funds for each year. (School for the Blind 2009)

In addition to changes within the school system, respondents emphasized that the community must actively support education for youth. Although many residents recognize the importance of education, key informants cited that few are enthusiastic about the need for children to stay in school. Several respondents highlighted that cultural beliefs can also hinder education; the persistence of early marriage and high levels of dropouts contribute to a lack of enrollment in higher education. (Licodep 2009, Likoni Secondary School 2009, Constituency Development Fund 2009) Likoni lacks active parent groups and after school programs that encourage children to stay in school. Therefore, effort must be made to confront the reasons that keep youth out of school.

It is significant to note that in nearly every focus group and interview discussion, conversation concentrated solely on primary and secondary education. The general lack of discussion about higher education indicates that very few people have experience with this system. Only one informant cited that a sponsorship program for higher education would stimulate students to stay in school and aspire to advanced degrees. (Likoni Local Administration 2009)

To improve education in Likoni, respondents cited the need for training courses and workshops to help teachers manage large classroom sizes. Coupled with the creation of new schools and employment of additional teachers per classroom, these changes can alleviate the dual burden on students and teachers. (Mrima Primary School 2009, Women's Group at Kisii 2009) In addition, systems must be created to separate those students who require more attention, and those students who are more advanced. Instead of catering to those who perform poorly, classes must be arranged so that students who are further along can be challenged with a more personalized and stimulating education. Furthermore, the policies for accepting grants and investment must be made more flexible so that school leaders can take advantage of opportunities for growth. Education is one of the most fundamental and crucial ways that a society can uplift itself. In order for Likoni to thrive, a transformation in the education system is of critical importance.

ii. The Status of Health:

Focus groups and interviews with workers at health clinics, churches, and women's groups revealed the fragile state of health in Likoni. Rampant bouts of disease are common, with the most prevalent being malaria, diarrhea, and respiratory infections. Waste disposal is a major problem in Likoni because the government does not provide a trash removal service, and residents frequently dispose of waste in the streets. The lack of sanitary disposal intensifies the spread of disease. These problems are heightened during Likoni's rainy season, when poor drainage and stagnant water combined with waste in the streets leads to increased disease rates.

Health seeking behavior was reported as a problem because many residents do not have the financial resources to visit a formal clinic, and instead initially seek herbal medicines or assistance from traditional doctors, called *mganga*. One clinic worker reported that many people seek assistance at a hospital only after herbal medicines or self-medication has failed. This causes an increase in demand for emergency services, and leads to an increase in deaths. In addition, the cost of prescriptions is often too high for residents to pay, and many therefore fail to collect prescription medication, in favor of less costly herbal medicines. (Sau Health Clinic 2009, Likoni District Hospital 2009, Savannah Health Clinic 2009)

Despite the need for more residents to seek assistance before their conditions worsen, the level of care provided at Likoni's district hospital is often poor. Most health care providers in Likoni are titled "clinical officers," rather than doctors, and have received 2-3 years of medical training focused on common illnesses. According to the superintendent of the Likoni District Hospital, she is the only fully-trained doctor working in Likoni. (Likoni District Hospital 2009) In some densely populated neighborhoods, such as Majengo Mapya, there is a complete lack of any trained professional. To reach a fully equipped hospital, residents must cross a ferry to reach Mombasa, a neighbor division with better facilities. However, the ferry crossing is a long process, and there are sporadic reports of Likoni residents dying en route to the hospital in Mombasa. (Sanctuary of Praise Church 2009)

Respondents also cited that nurses and clinical officers who work in health centers do not always fulfill their duties. One group claimed that, "even when they don't attend to their duties, they still get their pay, which is why they don't tend to the patient well." (Women's Group at Kisii 2009) In general, health centers are very poorly equipped, and patients are occasionally forced to "provide their own gloves and sheets" in order to receive care. Family members are also responsible for bathing, cleaning, and providing food for relatives staying in the hospital. (Women's Group at Kisii 2009) Additionally, respondents cited that the delivery of medicines is poor, and pain killers are often the only remedy offered for treatable diseases. Medical care for serious diseases and afflictions such as cancer and heart disease is very limited, and most hospitals do not have the capability to treat patients that suffer these problems.

Moreover, the cost of an ambulance (between 700 and 1,500KSH) is often a deterrent for people to seek help for emergencies. There are frequent stories of residents in need of an ambulance, begging for money from onlookers on the streets. Many consider this to be a form of corruption, as they feel that emergency services should be provided free of charge. (Women's Group at Kisii 2009)

Health care providers cited poverty, ignorance, and lack of education within the community as the most important underlying factors to the poor state of health in Likoni. They also noted that many NGOs and community groups attempt to establish programs that will address health concerns, but these programs are rarely fully implemented. This is likely due to the fact that individual organizations find it difficult to act on their own to address the enormous need for better health services.

Health care providers unanimously recommended that large-scale education programs be put in place for residents through community networks, including village elders, public barazas, and social

workers. By educating the community about key issues: the importance of seeing a doctor before a condition becomes life threatening, preventative care, and basic health protection behaviors (hand washing, safe sex practices), the status of health can retreat from the downward trends facing Likoni in recent years.

iii. HIV/AIDS:

HIV/AIDS has become an increasingly salient problem throughout Kenya in the last decade. Discussions with youth groups and health clinic workers revealed many similar opinions, suggesting that there is general agreement on the reasons behind the HIV/AIDS epidemic and the methods of addressing it. HIV/AIDS is almost universally considered to be increasing; most cited that the increase finds its roots in the persistence of promiscuous behaviors and drug use. It was largely agreed that youth are the predominant community members affected by HIV/AIDS, as they are the ones most often involved in risky behaviors. Most respondents also cited that the majority of residents are aware of free testing centers. (Sau Health Clinic, Savannah Health Clinic 2009)

Low condom use is a problem of particular importance because of overwhelming misinformation regarding their effectiveness. In order to prove their ineffectiveness, some people pour dyed water inside a condom, blow the condom into a large balloon, and submerge the ballooned condom into a bucket of water. Because condoms are not intended to be inflated, the bucket water inevitably turns the color of the dye, and condoms are declared ineffective. These sorts of demonstrations have left an impact on residents; one health clinic worker reported that residents “fear the use of condoms. I had lots of condoms which no one takes, and they expire.” (Sau Health Clinic 2009) This low condom use has had an impact on the spread of HIV/AIDS in Likoni; even though residents may use a method to prevent pregnancy, they often neglect to likewise protect themselves against HIV/AIDS. Research also shows that condom rates in Kenya are low among those both married and unmarried. There is a general unwillingness to acknowledge the high rates of HIV transmission among married couples, and condom distribution is often discouraged out of “fear that the woman would use the condoms in extramarital relationships.” (Miller 1998)

Infidelity is a contributing factor to the spread of HIV/AIDS. Interviews with leaders of women’s groups in the area revealed that infidelity of husbands is incredibly common, and men often do not practice safe sex when engaging in extramarital affairs. (Women’s Group at Kisii 2009) According to those interviewed, most women, particularly those who are married young, do not protest if their husbands seek relations outside of marriage. This is predominantly due to the fact that most women are financially dependent on their husbands. Some women stated that in Kenyan culture, they are expected to simply accept that men will seek multiple partners. Some women who question their husbands are beaten or abused. (Women’s Group at Kisii 2009) While most respondents claimed that promiscuous behaviors are most often practiced by the youth, women’s group members emphasized that it is common with married couples as well. It should be noted that women also seek extramarital affairs and engage in unsafe sex; however, these numbers were cited as low in comparison to men.

Despite high community knowledge about the disease and the need for testing, stigmatization of those who are HIV+ is very high. For this reason, many people refuse to be tested. Fear of knowing their status and negative stereotypes about being tested are widespread, and relatively few people take advantage of testing centers, even if they offer free services. Many residents therefore straddle a thin line between understanding the necessity of testing and the widespread problems caused by HIV/AIDS, and fearing the consequences of being tested. Many would rather live in ignorance about their status than face the potential social exclusion. (Likoni District Hospital 2009)

Additionally, although most respondents expressed the similar opinion that HIV/AIDS is increasing and testing centers are recognized by the majority of residents, there still exists a small but significant divergent view. Leaders of a youth group cited that many young people do not know where they can be tested. One respondent stated that HIV/AIDS does not highly affect the youth, although “we can’t tell since there is no place for testing.” (One World Youth Group 2009) These comments complicate the widespread opinions that the disease is increasing, and residents know where to be tested. Therefore, education about the disease and information regarding testing services are still necessary.

Health clinic workers reported that those who have HIV/AIDS are given the option to receive free ARV treatment and are offered free counseling. Counseling primarily consists of sharing information about the disease and discussing treatment options. Services are health and information focused, rather than psychologically or emotionally focused. Despite the importance of counseling, there exists a lack of professionals in the area. (Savannah Health Clinic 2009)

Finally, the high prevalence rates of HIV/AIDS in the late 1990s have caused an increasing death rate. Therefore, the number of children who are orphaned due to AIDS deaths has continued to rise. (Likoni Police Chief 2009) This has caused problems among orphanages because many children's homes are under-resourced, and therefore refuse to keep children who are HIV+ due to the extra care and medical attention that these children need. There is also a level of fear surrounding HIV+ orphans. Due to these reasons, these children are often transferred among orphanages until they can find one that will accept them. (Neighbors Children's Center 2009)

To mitigate the spread of HIV/AIDS, respondents cited that adequate resources and time are needed to mobilize community efforts. Although negligence is high in Likoni, awareness of HIV/AIDS and methods of contracting the disease are also high. Therefore, efforts must be focused on educating the community about the importance of testing to de-stigmatize the services and encourage residents to be tested often. Centers can also offer free testing throughout the night as a way of remaining mindful of stereotypes but also promoting free testing services. Several schools and children's centers cited that they have begun to educate children above 12 years of age about HIV/AIDS. By starting with the youth and creating awareness without stigmatization, children can grow up with a greater understanding of its severity and importance. (Mrima Primary School 2009, Neighbors Children's Center 2009) This combination of community efforts can help to show that HIV/AIDS is not a problem that can be overlooked due to fear.

iv. Water, Sanitation and Drainage

Information about water, sanitation and drainage was gleaned through conversations with leaders of local schools, women's groups and health clinics. Schools were chosen because of the number of pupils in each building, the importance of proper drainage in heavily trafficked areas, and the importance of educating children about sanitation after using bathrooms. Each of the schools interviewed stated that they had some sort of water inside or nearby the school compound, in either a borehole or water tank. However, the existence of running water on school grounds is rare, and some respondents cited that their water is very salty. On average, the water available inside schools is not suitable for drinking. (Consolata Primary School 2009, Likoni Primary School 2009, Maji Safi Primary School 2009, Mount Sinai School 2009, Puma Primary School 2009, School for the Blind 2009, Timbwani Baptist Primary School 2009)

The adequacy of school toilet facilities was also investigated. Each school expressed its need for more toilets due to the high enrollment of students and the lack of investment in upkeep and development. The school least in need cited that it currently has 6 toilets total, but ideally requires 10 total; the school most in need cited that it currently has 21 toilets total, but ideally requires 50 toilets total. (Mount Sinai School 2009, Likoni Secondary School 2009) The construction of adequate toilets for students would help to maintain cleanliness of the facilities and reduce the spread of disease in schools.

Additionally, schools were asked about the presence of hand washing after using the toilets. Answers were mixed, indicating that there is no general rule followed by schools for hand washing. Adequate taps or sinks to wash hands were reported by some, but one school noted that the taps are located outside the compound and are therefore not regularly used. Another school noted that they have sinks, but they are generally not used because children forget. (School for the Blind 2009, Mount Sinai School 2009) Prevalence of hand washing is therefore not universal.

Water availability in the community was investigated through interviews with the Likoni Police Chief and women's groups. Clean, unsalted water is often scarce because there are few reliable water sources year round. Reliable sources which do exist are often far away and unsafe after sunset. Provision of unsalted water has evolved into a lucrative business, and purchasing water from vendors has become expensive. (Likoni Police Chief 2009) Likoni is also littered with non-functioning open wells. Be they previously operative wells, or incomplete projects, these holes are a danger for residents. It is common to hear news of deaths by falling down empty wells. (Women's Group at Mwananguvuze 2009)

Healthy conditions cannot be achieved without addressing the poor drainage system in Likoni. In those areas where a drainage system exists, it is often blocked by trash, particularly during the rainy season. (Likoni Police Chief 2009) Poor drainage leads to stagnant water, which increases transmission of disease. Therefore, not only must the availability of water be addressed, but every system related to its purification, drainage, and disposal. Perhaps because of these extensive costs, the government has invested little in the system.

To address the need for sanitary toilets and adequate clean water, a simple solution cannot be found without heavy investment. As previously revealed, development in most government schools has been limited in ratio to the rate at which they are growing. Because schools receive little funding, the status of sanitation is likely to remain the same. A solution to this problem cannot come entirely from educating the community about the need for clean water, as it requires financial investment to create the infrastructure for it. However, small steps can be taken that can have an impact on the spread of disease. Hand washing with soap or antibacterial agents is not universal in Likoni, and it is therefore important that children learn to wash their hands with soap after using the toilet. Most schools reported that they have some sort of facility to wash hands, but only half of them reported that

children actively take advantage of these facilities. By educating the community about the importance of soap, proper waste disposal, and the need for sanitation, the spread of disease can be mitigated.

v. Youth

Problems among youth are a noteworthy topic because many the issues in Likoni stem from this population's activities. Early pregnancy, school dropouts, and idleness were highlighted as major problems among youth that affect the community. Each of these topics is interlinked. For example, girls often finish primary school and do not have the funds to attend secondary school; because they are idle, they may get married or pregnant at young ages. The problem of early pregnancy is influenced by Likoni's culture, as early marriage and young mothers are common. Because of this, girls often lack role models who wait to get married and have children; most girls in Likoni are married and have birthed at least one child before age 20. (One World Youth Group 2009)

Additionally, respondents cited that the importance of girl's education beyond primary school is not universally established. Parents may pressure female children to marry and have children at early ages, as their families may not be financially stable and could benefit from one less mouth to feed. Additionally, husbands often support their wives' families financially, therefore further incentivizing marriage. By encouraging young girls to find a husband, parents may ensure that their family can have a more financially stable future, and their child can find security with a partner. This example is one of the myriad reasons for early marriage and pregnancy; idle girls may also feel confined at home and may find marriage an opportune way to leave the parent's house. Whatever their reason, this practice is widespread throughout Likoni, and those who delay until their 20's and 30's for marriage and children are in the extreme minority. (Timbwani Baptist Primary School 2009)

In addition, it is important to tackle idleness in order to address Likoni's problems. Idleness has been linked to an increase in crime, insecurity, transmission of disease, and drug use. Interviews with local youth groups revealed that Members of Parliament promise young people good jobs and employment during elections, but these offers rarely evolve into stable opportunities. This empty promise of employment is common in Likoni; several groups cited that the guarantee of jobs by relatives or government agencies lures youth away from school, but results mostly in idleness. (National Youth Council 2009, One World Youth Group 2009) Respondents generally believed that the government manipulates and takes advantage of youth, pledging employment and funding for youth groups during election seasons, but ultimately ignoring proposals and disregarding the importance of work for those who have dropped out of school. In addition, some respondents stated that "youth in Likoni are idle and like short-cuts." One group cited that youth would rather sit outside a Member of Parliament's house and wait for work than actively find employment on their own. (National Youth Council 2009)

Similar to the contributing reasons for early pregnancy, the problem of role modeling is of paramount importance for idleness. In large part due to unemployment rates of up to 40% throughout Kenya, crowds of men are frequently found idle and loitering in Likoni. (CIA 2010) Because so many residents are unemployed on the streets, it is common for children to follow in their footsteps. Many youth find it difficult to create businesses or programs that can help take them and their peers off the streets because many lack education, leadership skills and inspirational figures to emulate. (Darul-Ulum Secondary School 2009) Because they receive little employment support or training from the government, many youth find themselves in the same position as the older men on the streets.

To disrupt this pattern of pregnancy, dropouts, and idleness, respondents focused on the importance of education and cultivation of leadership skills. The community must stress the fundamental importance of staying in school, despite the rampant idleness throughout much of Likoni. Although a National Youth Council exists in Likoni, it is poorly funded and has difficulty receiving loans from the government. This inability for youth groups to receive loans stems from both the fact that the government is averse to invest in youth services, and many of the youth who have received loans as part of the group have failed to repay them. (National Youth Council 2009) Therefore, those in school require encouragement to stay, and those out of school require counselling on topics such as proper business practices and cultivation of leadership skills. There are few opportunities for youth to become knowledgeable about business, and many do not understand the necessity of accountability and bookkeeping. (Likoni Local Administration 2009) Respondents stressed that these forms of

mentorship and schooling should be provided by locals, rather than outside groups. In this way, youth can find positive role models in Likoni residents, while being educated about topics that can help them with future employment. Church leaders were enthusiastic that networks of religious groups be utilized to make positive contacts between locals and youth. (Sanctuary of Praise Church 2009, Local Priest 2009) Some respondents suggested that youth become involved in waste collection, as this service is not provided by the government, yet is highly needed within the community. Several youth groups have successfully created their own employment by collecting garbage from residents. (One World Youth Group 2009) Overall, most respondents emphasized the importance of forming connections between youth, local elders, village chiefs, religious figures, and residents who can act as helpful role models.

vi. Local Security

All respondents agreed that security is one of the largest problems in Likoni. The most common types of insecurity include theft, spousal quarrels and abuse, mugging, and tribal violence (the latter particularly during election season). Representatives from schools in the area reported that school properties often lack fences and outside walls, which has led to theft of school materials. (School for the Blind 2009)

The problem of insecurity is intimately tied to levels of idleness, drug use, unemployment, and school dropouts. It was reported that youth aged 18-25 are the ones most likely to engage in crime. These are also the ones who have most likely recently dropped out of school and, lacking positive role models and legitimate jobs, are easily pressured to use drugs. A Likoni police chief cited that many drug addicts who are arrested for thievery confess that they are forced into crime to support their drug habits. According to this respondent, theft is most often a means of raising money for drugs. While armed robbery is rare, several respondents reported that they had been mugged recently, indicating that thieves often resort to petty crime. (Likoni Police Chief 2009, Women's Group at Mwananguvuze 2009)

Local insecurity is challenging to confront. The resources given to police stations in Likoni are inadequate for the large population. Within Likoni, there exists one large police station, two small outposts, and one public vehicle to serve the entire division. This lack of facilities and resources ensures that police are unable to patrol most of Likoni. (Likoni District Officer 2009, Likoni Police Chief 2009) Groups with financial resources have reported that it is more cost effective to install alarms and hire security guards than depend on the police. (Tumaini School and Children's Home 2009)

Despite the need to address these widespread problems in Likoni, one youth group remarked that, "We become enemies whenever we try to stop insecurity." (One World Youth Group 2009) Without crime, many in Likoni would be without a source of income. Many residents in Likoni are reluctant to inform the police of criminals because many thieves are neighbors and people they know. Residents are more likely to cope with crime rather than face potential threats if they report to the police. In addition, much of the public has a poor relationship with the police force, as bribery and corruption are frequently reported. (Likoni District Officer 2009, One World Youth Group 2009) This creates an atmosphere that accepts insecurity and gives residents little incentive to report crime.

To solve insecurity, respondents highlighted the importance of collaboration with the authorities and community policing. In several areas throughout Likoni, a neighborhood watch program has been successfully put in place. By involving members of the public, the police in some neighborhoods have been able to enforce constant patrols of areas, which have helped to increase security. (Likoni Police Chief 2009) A potential positive outcome of this arrangement involves building bonds between the community, government authorities and police officers. For public policing to be effective, programs must begin on the basis of partnership and confidentiality, not the idea that the public will assume the role of police. One respondent suggested that village elders and police officers collaborate, as many residents trust elders more than police. (Likoni Police Chief 2009)

Additionally, the problem of insecurity must be addressed at its root source. Respondents overwhelmingly agreed that idleness beginning in adolescence is the main cause of insecurity throughout Likoni. Therefore, to begin to address insecurity, respondents suggested that youth groups and organizations engage those who are idle and give them constructive activities which utilize their talents. This involves creating awareness about alternatives to drugs, the importance of education, and the social problems created by petty thievery. This work can be done through churches, mosques, government ministries, and local organizations. By collaborating together, these groups can give youth guidance and role models necessary to keep them away from the pervasive idleness and crime, which breeds insecurity. (Likoni District Officer, Likoni Police Chief, One World Youth Group 2009)

Chapter Six: Conclusions and Recommendations: Using both the qualitative and quantitative data, a series of recommendations and conclusions has been drafted. This list condenses the previous findings into concise and actionable ways of addressing problems in Likoni.

1. Water, Sanitation and Drainage: The majority of Likoni residents considered it difficult to acquire clean water. Most available ground water is salty and undrinkable. Residents primarily use salty water for cleaning and washing clothing, and purchase small amounts of fresh water for cooking and drinking. 251 (27.9%) respondents reported that they purchase from a vendor, thereby making water an important and lucrative business venture. Interviews confirmed that water is a profitable industry which often comes at the expense of many residents who find it difficult to afford the increasing cost. Fresh water is approximately ten times more expensive than salty water. In addition, water vendors are not compelled to uphold standards of sanitation, and they do not consistently disinfect the jerry cans which are used to transport water to consumers.

462 (51.3%) respondents cited that their primary water source comes from a pipe into the house or yard. Pipes are considered an inconsistent source of water because they often break or do not produce water. The majority of piped water is salty, and most residents purchase fresh water from vendors. When residents experience problems with their piping systems, they turn to ground water as their primary source. 560 (62.2%) residents cited ground water sources as their backup.

Although 755 (83.9%) respondents live less than 1 kilometer from their water source, 745 (82.8%) reported that their source is occasionally or often unreliable. This information coincides with interviews, which revealed that Likoni does not have adequate infrastructure to provide clean water to many of its residents. In a similar vein, inadequate infrastructure for drainage was exposed in both the questionnaire and interviews. 656 (71.8%) respondents cited that they have inadequate drainage around their house, and 730 (81.1%) experience flooding each year. Water levels are typically high, and most residents must wade through calf-high water in many public areas. Interviews revealed that levels of disease have been directly affected by the persistent lack of clean and secure water, lack of adequate drainage, and lack of free trash disposal service. The large trash heaps in the streets often block drainage holes, thereby clogging many drain systems which exist. The two main options for disposal are dumping or burning; both contribute to either poor air quality or excess of trash in the environment.

Additionally, although 865 (96.1%) respondents reported that they wash their hands after using the toilet, only 494 (54.9%) use soap. Interview responses to this question were varied, particularly with reference to children. Though questionnaire respondents overwhelmingly reported that they wash their hands, the interviews revealed that it is likely significantly less in practice.

Recommendations: There is need for collaboration among the Ministry of Water, local businesses and community organizations to explore the viability of new water sources and initiate the protection of unprotected sources. Similar approaches can help residents lobby for a functioning drainage system.

Hygiene projects can be initiated at the community level, emphasizing basic sanitation practices, hand washing and proper water purification methods. It is also important that residents receive education on how to protect themselves against malaria, particularly in the rainy season. Additionally, interviews revealed that garbage collection is a viable business, particularly for youth in the area. More investment may prove to be an important way to generate employment for idle residents, teach residents about proper disposal methods, and ultimately reduce the spread of disease.

2. Comprehensive Maternal Care: Delivery of children in hospital settings is becoming more common, with 576 (64.0%) respondents delivering in a hospital and 577 (64.1%) utilizing post-natal care services at the hospital. These numbers reveal that women are increasingly turning to professional environments to deliver children. The consistent decrease in infant mortality in Kenya, currently 54.8 out of every 1,000 live births, has benefitted from this change in behavior. (World Bank 2009) Despite these positive numbers, interviews revealed that women must pay at least 500 KSH to deliver in a hospital, and facilities can be understaffed and underequipped. Interview respondents expressed their frustration that pregnant women are sometimes expected to bring gloves and sheets to the hospital when delivering a child. Both of these factors drive some women to birth at home.

Family planning methods are utilized by 502 (55.8%) respondents, although condom use is low among those both married and unmarried, and reported by only 37 (4.1%) respondents.

Recommendations: To improve maternal care, change must be multifaceted. Awareness must be created within the community on the importance of utilizing health facility services during all stages of pregnancy. This can help mothers protect their newborns against disease and mortality, and can be particularly important for pregnant mothers who are HIV+.

In addition, hospitals and health facilities must be better equipped to accept more deliveries.

One method of integrating traditional systems with hospital standards is to involve traditional birth attendants in the current reproductive health system and train them in safe delivery techniques. This would increase the safety of those 298 (33.1%) respondents who deliver at home.

3. Disease & Health Seeking Behaviors: Malaria constitutes the most prevalent disease in Likoni, with 382 (42.4%) respondents citing that at least one person in the household has suffered from malaria in the past two weeks. This is largely due to the fact that this survey was undertaken during the rainy season. The high number of malaria cases evidences the health problems that arise due to stagnant water and unsanitary conditions. Although 580 (64.4%) respondents cited that they seek medical attention when a family member is sick, 229 (25.4%) respondents inconsistently seek assistance. Interviews support this suggestion, as respondents revealed that many people seek medical attention only after self-medication or herbal medication has failed. The high cost of services was cited by 465 (51.7%) respondents as the primary reason why they do not visit the health center. Yet even though half of respondents claimed that they do not visit the hospital due to the cost, 320 (35.6%) of respondents felt that healthcare in Likoni is unaffordable. This may suggest that some residents feel themselves too poor to pay what they perceive as reasonable rates for healthcare. In addition, interview respondents expressed their frustration at the poor state of health facilities, the lack of trained doctors, and the negative attitudes of some health workers in Likoni. They cited that many organizations which attempt to address the poor state of health in Likoni find the task overwhelming to address on their own. For these reasons, there has been little positive change in recent years.

Recommendations: The health care system in Likoni requires a transformation in its facilities, attitude of staff, and services for those who are unable to pay. Because it is difficult for community groups alone to achieve great change in health care, it is important that groups collaborate to lobby larger organizations. It is also important that systems be put in place for those who are too poor to utilize services or pay for such essential services as ambulances. The Likoni district hospital is small and there are few resources for those who need treatment for serious problems. To meet the needs of its residents, Likoni requires a larger full-scale hospital, consistently funded by the government to make it sustainable. These recommendations involve heavy investment into a system which is often poorly resourced, and therefore must involve higher bodies such as the Ministry of Health. On the ground, education programs can be set up to lessen the spread of disease. Hand washing, use of mosquito nets, and proper waste disposal are all actions that can lead to a considerable reduction in disease. Residents must also be educated about preventative measures to keep their households healthy, instead of waiting until an emergency to visit the hospital. If local organizations and health clinics work in partnership to educate the community about the simple ways people can stay healthy, an impact can be made without systemic change. Health facility workers must also be trained to improve their relations with the community. By requiring staff to complete sessions on improving communication skills, workers can be educated on acceptable ways of treating patients. Health facilities must therefore be improved in tandem with increased health seeking behaviors.

4. Nutrition: The questionnaire revealed that a slight majority of respondents (511; 56.8%) eat three or more meals per day, while only 43 (4.8%) respondents eat one meal per day. Through interviews, it was revealed that malnutrition is not Likoni's most pressing problem, although it exists among poorer groups. This may be due to the fact that food staples in Likoni are very basic and accessible to most people. Ugali (flour and water) and beans are inexpensive foods that offer a calorie dense diet for most people. That said, only 498 (55.3%) respondents reported that they include a variety of carbohydrates, proteins, and vitamins in their meals. 211 (23.4%) respondents primarily include only carbohydrates, suggesting that proteins and vitamin rich foods are too expensive for some. This is reflected in the amount of money spent per day on food, with 716 (79.5%) spending less than 300KSH for the household.

Recommendations: Although the level of malnutrition is low in Likoni, proper nutrition practices are nonetheless important, particularly for children. One way to ensure that children receive proper nutrients is to guarantee that each school offers a lunch program. There exists no free lunch system in Likoni schools. However, given the importance of ensuring the nutrition of children, it is crucial that these programs be kept in place. It would also be beneficial for a free lunch system to be put in place as a way of ensuring that children who cannot afford feeding programs can receive food.

5. HIV/AIDS: Knowledge about HIV/AIDS is high; 875 (97.2%) respondents reported that they have heard of HIV/AIDS, and interview respondents affirmed that most people know how it is spread. ARVs are also available free of cost to many people who have AIDS. Yet despite these positive facts, HIV/AIDS continues to be one of the biggest problems in Likoni. 699 (77.7%) respondents believed that HIV/AIDS is increasing, although statistically the disease prevalence has fallen throughout Kenya from a 1999 rate of 13.9% to 7.8% in 2008. (UNAIDS 2009) Residents likely consider prevalence to be increasing because the death rate continues to climb from the previously high transmission rates. Researchers estimate that the death rate will continue to increase until the year 2030, when it is predicted that it will level. (Foster 2000) Although transmission rates have fallen, the community will still be highly affected for decades to come. 544 (60.4%) respondents cited that most groups which address HIV/AIDS within Likoni focus on awareness creation, and only 138 (15.3%) respondents cited that testing and counseling are a focus. Yet as highlighted by interviews, due to stigmatization around testing and those who are HIV+, the majority of residents refuse testing. 858 (95.3%) respondents reported that they know where to go for testing, but interviews revealed that a much smaller number likely take advantage of these services, even when offered for free.

Recommendations: Although it is important to keep awareness of HIV/AIDS high, there is a greater need for community organizations and the government to emphasize the importance of testing and counseling services. Residents should be persuaded to be tested, regardless of whether they believe they are HIV+. Along with education to de-stigmatize testing services, facts about condom use and preventative measures must be emphasized by local community groups. Prevalent misunderstandings about the effectiveness of condoms have contributed to its low usage rate. If local groups can collaborate to host free testing days and nights at local clinics, while also exposing the facts about condoms versus other methods of family planning, the community can be better educated.

6. OVCs: According to the Kenyan Central Bureau of Statistics (CBS), 60% of children in Kenya, over 10 million, are considered OVCs. (Thurman 2007) This coordinates with the fact that 758 (84.2%) believe that OVCs exist in the community. However, the term “OVC” is vaguely defined, as exemplified by the fact that only 159 (17.7%) respondents believe that they house OVCs. There is a widespread lack of understanding about the issue, in part because the term potentially encompasses such a large scope of children. The Kenyan CBS definition loosely includes any child living in poverty. Conversely, OVCs in Likoni are generally defined in relation to family; children whose parents or family cannot care for them are considered OVCs. Therefore, most OVCs are considered to be children on the streets or in orphanages, populations with which many residents are not familiar. This unfamiliarity with locally-defined OVCs was illustrated in the questionnaire answers. 301 (33.4%) respondents could not cite the main caregiver for OVCs. When asked what mentorship and counselling needs are most needed by OVCs, 409 (45.4%) cited career development and skill nurturing, both fields related to employment. This highlights the importance of ensuring that OVCs and orphans living outside of family settings (such as orphanages and children’s homes) are given the same ability to find employment as others. Additionally, it is important that the growing numbers of orphanages are integrated into the community to ensure that these children are not isolated.

Recommendations: With the numbers of orphans and OVCs increasing with the death rate from HIV/AIDS and high levels of poverty, it is important that community organizations focus on this population to ensure that they find appropriate housing and services, and do not resort to an uneducated life of idleness on the streets. For the most part, kinship networks have assumed the role as carers if a parent is unable to care for a child. However, these networks are becoming increasingly stressed due to the increased cost of living, high rates of unemployment and death from disease. It is therefore important that support be provided to children’s homes and alternative care settings. Work must be done between community organizations and orphanages to ensure that OVCs who are not living with family members are integrated into the community and not stigmatized. Both orphanages and community groups can work together to host activities which bring youth together to form connections in a positive atmosphere.

7. Education: The poor quality of education in free government schools was well documented in interviews. Respondents cited few resources, lack of development, large class sizes, and poor support for teachers as the primary problems. Despite the magnitude of these concerns, 495 (55.0%) respondents reported that they expect their children to reach university level education. This opinion is also interesting when compared to the interviews, during which time higher education was not discussed, and this statistic likely reflects a hope, rather than a concrete expectation. Questionnaire respondents almost unanimously agreed on the importance of education, with 874 (97.1%) respondents agreeing that education overall is important, 868 (96.4%) agreeing that education is important for girls, and 874 (97.1%) agreeing that adult education is important. Computer education was deemed valuable, as 612 (71.9%) respondents felt that most children do not have knowledge of computers. 166 (18.4%) respondents in turn cited computer classes as the most needed activity for youth. Yet despite these numbers, interview respondents repeatedly stressed that many in the community do not advise their children to stay in school, and they must be made more aware of education's importance. Consequently, there exists a gap between understanding education's importance, and acting on those sentiments to keep children in school.

Recommendations: With the high dropout rate after primary school and resultant idleness, the community must actively advocate for children to continue beyond primary levels. This involves staying involved in children's education, creating after-school programs, and applying for sponsorships or investing in secondary school. Schools and local groups can educate the community about the variety of sponsorship programs that exist in Likoni, although these resources are limited. In addition, programs should be put in place for teachers to be given training on guidance, counseling, and different methods of teaching, particularly for those in overcrowded schools. Some changes in the education system cannot be made solely at the community level. Overcrowding, poorly resourced schools, and inadequate infrastructure were cited as common issues in most primary schools throughout Likoni. These problems can only be eradicated by investment at the government level to build new classrooms and toilets, and employ more teachers to reduce the large class sizes. Finally, investment in the education system to allow for free secondary school would ensure that youth who are idle in their teenage years would have the ability to stay in school until they reach their 20s. This would not only keep them off the streets during vulnerable years, but also provide them with more training to acquire employable skills once they graduate. If secondary school was offered free of charge, more youth would remain in school and have a greater chance of proceeding to college or university level. Despite its importance, this goal cannot be achieved by the community alone; the Ministry of Education must be involved in both extending the policy and providing resources for development of schools.

8. Youth: The main problems facing youth in Likoni were cited as idleness, school dropouts, drugs, crime, early marriage, and early pregnancy. 599 (66.6%) respondents considered unemployment the major problem among the youth, which was corroborated by interviews. Interviews reported that rather than investing in employment opportunities for youth, the government exacerbates the problem by promising employment during election season and failing to deliver in practice.

In addition, it is common for girls to drop out after primary school due to poor exam grades or the cost of secondary school. Many girls then marry and become pregnant at young ages. 651 (72.3%) respondents considered early marriages common, and 360 (40.0%) respondents reported that girls are normally married between ages 12-17. Interview respondents highlighted this practice as one of the most detrimental to the continuation of a girl's education. Of those girls who have dropped out of school, pregnancy was cited as the top reason.

Closely linked to unemployment, the problem of drug and alcohol abuse is prevalent throughout Likoni youth. 830 (92.2%) respondents considered alcohol consumption by youth to be common, and 779 (86.6%) considered drug use a problem among youth. Interviews cited the links between drug use, idleness, and crime, citing substance abuse as a substantial cause of the insecurity throughout Likoni.

Recommendations: To address problems among the youth, the community must understand their root causes and be educated on the ways to deal with the source of these problems. Idleness, substance use, alcohol abuse, and crime are caused in large part by school dropouts. By keeping children in school, parents can better assure that youth will find employment, stay drug free, and resist crime. Community organizations must also advocate for youth to become involved in groups and organizations which can develop their talents and keep them from idleness. This is important because most youth lack positive role models.

Business education and training on banking and loan procedures can also help youth understand proper business practices in order to create their own employment. With such basic services as garbage collection offering profitable ways of creating jobs, an understanding of business practices can help youth take advantage of these opportunities.

These opportunities should be available to females as well as males, as a way of discouraging girls from early marriage and showing that they can also create their own employment. This is particularly significant because roadside food stands are predominantly run by women; therefore, those who know business practices can take advantage of this common occupation.

9. Security & Crime: With 772 (85.8%) respondents reporting that their area is insecure, this topic is crucial to address within Likoni. Residents are aware that problems of security and crime are intimately tied to unemployment, drug use, and idleness. All are enormous issues that significantly shape insecurity in Likoni. 393 (43.7%) respondents suggested that the primary way of addressing insecurity is by educating the youth. This tactic corresponds with interview discussions, which highlighted that positive role models for youth are largely absent in Likoni, and youth are likely to contribute to the cycle of high rates of school dropouts, drug use, and eventually insecurity. Violent robbery was considered a low form of crime in Likoni, with only 6 (0.7%) respondents considering this the most prevalent form of crime. Therefore, most crimes consist of small robberies and muggings. Although insecurity stems from adult age groups as well, it is in the youth where negative habits are formed. Once youth have joined the circle of other unemployed drug users, it is difficult to extricate themselves from that group as an adult, and insecurity therefore grows.

Recommendations: Security issues stemming from the youth can be addressed with collaboration among youth groups, schools, and parents. Parents should pressure children to stay in school, and schools should offer programs to keep students occupied after school. Interviews cited that youth groups are often poorly funded in part because the groups have been unable to properly handle finances, and the government is hesitant to invest in them. Therefore, in addition to standard classes, youth need education on business practices to ensure that programs can continue to keep people off the streets, away from negative role models, and away from crime. Additionally, both youth and adults who are addicted to drugs require rehabilitation programs and counseling, both of which are lacking in Likoni. Finally, community policing was referenced in interviews as a positive way that residents have been working with local police to reduce insecurity. Community elders should therefore work with neighborhoods and the police to create neighborhood watch systems.

10. Business: Business is a central aspect of employment in Likoni, with 470 (52.2%) respondents reporting that they own their own business. Retail shops, grocery stores, and food kiosks were reported as the most common types of business. This is due to the fact that most families spend the majority of their income on food. Many women run these stores, especially cooked food kiosks, which fill the downtown streets from morning until night. Yet despite the high numbers of self-employment, there are few training courses on business and profit making. This has ensured that most businesses stay small ventures. Of those 470 respondents who run a business, 246 (27.4%) earn less than 300 KSH profit each day. When compared to the 473 (52.6%) residents who spend over 201KSH on food each day, it is clear that most businesses are small, one-person operations. It is important that the youth receive training on business practices and the process of creating a business, as there are few other viable opportunities.

The demographic section also provides information on the levels of employment in Likoni. Of all household members above 20 years of age, 538 (25.6%) are unemployed and 315 (15.0%) are casually employed. Added together, these two categories total 853 (40.6%), a percentage which mirrors the estimation that 40% of Kenyans are unemployed. (CIA 2010)

Recommendations: In order to improve the quality of business and the amount of profits, training courses should be offered by local organizations. Classes can be a crucial tool for all working members of society—men, women, and youth are all involved in small business creation, and they can all benefit from classes which teach them how to grow their ventures. Few of these opportunities currently exist in Likoni. Within the international development sphere, NGOs in the last few decades have spent a great deal of focus on supporting IGAs within African communities; it is therefore important that business knowledge increase in order to fully take advantage of potential opportunities. (Due 1990)

11. Savings & Loans: Given the importance of local business, savings and loans are a crucial topic of study. For those who wish to start a small business, many must apply for a loan. In order to grow that business, savings schemes and bank accounts are essential. Despite this, 490 (54.4%) respondents reported that they are not involved in savings schemes, and 546 (60.7%) do not have a bank account, predominantly due to a lack of money. This fact shows that although business is the primary occupation for 470 (52.2%) respondents, many of those workers do not have bank accounts and have not taken loans to grow their business. The main reason for not taking a loan is fear of failing to repay, cited by 240 (26.7%) respondents.

In late 2010, the first bank opened in Likoni. Before this, residents who wished to access a bank account were forced to cross the ferry into Mombasa. It will be interesting to see how these numbers change now that Likoni residents are able to more easily access bank services.

Recommendations: Community groups must collaborate to offer residents the opportunity to take courses in microfinance to help them start and grow business. Lessons can include education on business and loan practices, tips on how to apply for and repay loans, computer lessons, and the importance of bookkeeping and banking. For Likoni business to thrive, residents must learn how to expand their business and profits. There is a widespread perception that opening a business bank account and applying for a loan are complicated processes. Proper education can demystify these practices.

In addition, follow up research on the rate of bank account ownership and knowledge of banking practices may reveal how residents have been affected by the convenience of a local bank branch.

Overall Conclusions and Recommendations: This research is intended to fill gaps in the published knowledge about Likoni, and to motivate others to utilize this information. This comprehensive database of information can be utilized by those looking to further investigate themes, apply for funding, or lobby organizations. With all of these efforts working together, it is possible for change to spread throughout Likoni.

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Chapter Eight: Appendix

Appendix A: Explanation and Hierarchy of Kenyan School System

Hierarchy:

No education
Primary school
Secondary school
Certificate
Diploma
Degree
2 Degrees (Masters)
3 Degrees (PhD)

Explanation:

1. **Nursery:** Children who are below 5 years of age are not eligible for primary school, and therefore are enrolled into nursery school. Grades in nursery school are often designated as KG1, KG2, KG3. This is not provided free of charge, however, and many families cannot afford the expense.
2. **Lower Primary:** Lower primary school consists of grades 1, 2, 3 and 4. Under the 2003 Kenya Free Primary Education Policy, lower and upper primary government schools are provided free of charge; lower and upper primary are located in the same school. Although age ranges in lower primary vary, children ideally attend lower primary school between 6 and 9 years of age.
3. **Upper Primary:** Upper primary school consists of grades 5, 6, 7, and 8. Like lower primary school, upper primary government schools are also provided free of charge through the 2003 policy. Although age ranges in upper primary also vary, children ideally attend upper primary school between 10 and 13 years. However, a large portion of students in upper primary school are often older.
4. **Secondary:** Secondary schools are not provided free of charge by the government. Secondary schools are four years in length, and age ranges are ideally from 14 to 18 years, though students can range into their 20's.
5. **College:** Colleges in Kenya award certificates and diplomas for short courses taken. This is most similar to an associate's degree in international colleges.
6. **Polytechnic:** A polytechnic school awards mostly diplomas and some certificates. Courses focus predominantly on science, mathematics, and technology. Students can choose between a two year course or a four year course. Courses generally include such topics as: engineering, business, hospitality & tourism, and graphic design. Courses at polytechnic schools are generally perceived as direct training for a future occupation.
7. **University:** A university focuses on awarding degrees, such as bachelors, masters, or PhD in a variety of subjects. It also awards certificates and diplomas. To attend a top university, students must either be admitted based on test scores, or have adequate resources to attend as a self-funded student.