ZIMBABWE AHEAD

Impact Evaluation Report

Gutu and Mberengwa 2012

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Introduction

The public health promotion phase of the ZimAHEAD-ACF project in Gutu and Mberengwa districts began in February 2012. Before implementation of the community health club intervention, eleven sensitization meetings were held in the two districts during the month of February. ZimAHEAD and ACF met with the District Water and Sanitation Subcommittee, local leadership, and community members to discuss the project. During the sensitization meetings, the communities recruited a total of 154 community based facilitators to lead community health clubs in Gutu and Mberengwa districts.

In March 2012, the community based facilitators attended five day training workshops led by ZimAHEAD project officers. Following the training workshops, CBFs provided feedback to their communities about the nature and objectives of the project. Following the CBF training, a total of 17,514 members were recruited into 450 clubs. Baseline household inventories of sanitation and hygiene indicators were conducted during the months of April and May.

The project included 20 health club sessions on topics such as general hygiene, water sources, malaria, water storage, and fecal-oral transmission. Community based facilitators held weekly club meetings and attended monthly meetings with ZimAHEAD field staff and the other CBFs in their ward. Project areas consisted of Wards 23, 25, 26, 27, and 36 in Gutu and Ward 5, 6, 7, 19, 23, and 24. Club members graduated in November 2012 (a total of 12, 460 graduates in the two districts) and another round of household inventories were completed in December 2012. This report compares the baseline household inventory results to the post-intervention household inventory data.

Survey Objectives and Methodologies

The household inventory survey aims to assess changes in household sanitation and hygiene pre and post intervention. Community based facilitators conducted spot observations of the following indicators: use of a refuse pit, potrack, hand washing facility (with soap), clean bedding, protected water source, covered water container, ladle, family utensils, mosquito net, BVIP, bathing room, fuel efficient stove, and nutrition garden. The inventory also measures knowledge of sugar/salt solution, if the house has proper ventilation, and if the children in the household have been immunized and are free from worms and skin diseases.

This analysis includes household inventory data from Wards 23, 25, 27, and 36 in Gutu and from Wards 5, 6, 7, 19, and 24 in Mberengwa. Gutu Ward 26 was excluded from the analysis due to challenges in collecting the baseline household inventory data. The analysis uses the percent of total club members asked about each hygienic enabling structure or practice who were using that particular structure or practice at the time of data collection. Descriptive statistics were generated using Excel and SPSS.

Survey Findings

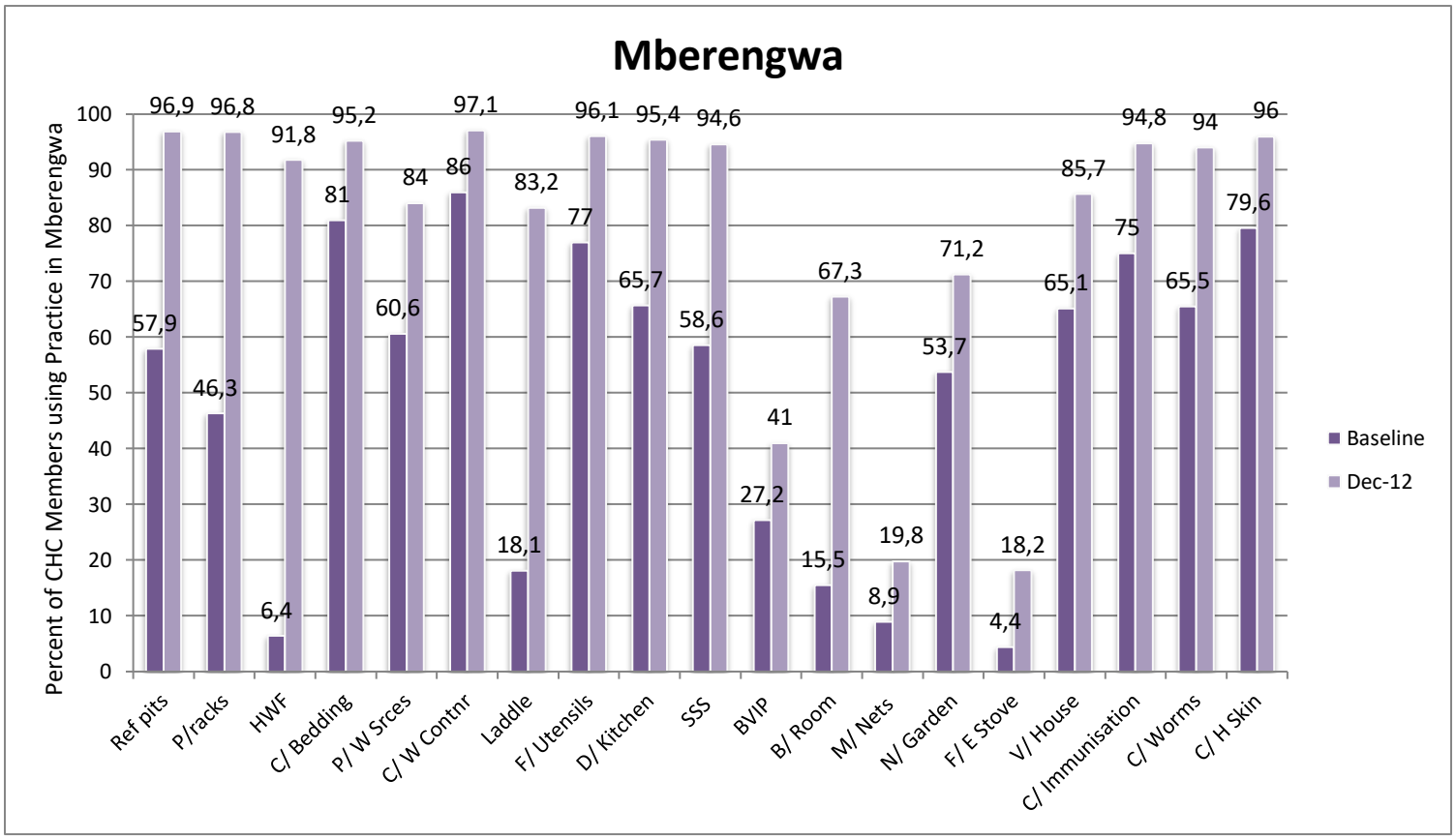
Mberengwa

Mberengwa saw the biggest change in the use of hand washing facilities (6.4% of CHC members used a hand washing facility at baseline compared to 91.8% post intervention). Mberengwa also saw over a 20% increase in the use of the following: ventilated housing (65% compared to 86%), bathing rooms (16% compared to 67%), decorated kitchens (66% compared

to 95%), ladles (18% compared to 83%), protected water sources (61% compared to 84%), potracks (46% compared to 97%), and refuse pits (58% compared to 97%).

Post intervention, over 80% of the CHC members in Mberengwa used the following: refuse pit, potrack, clean bedding, protected water source, ladle, decorated kitchen, ventilated housing, hand washing facility, covered water containers, and family utensils. In addition, over 80% of CHC members knew how to make SSS solution, had immunized and dewormed their children, and had made sure their children had no skin diseases.

Use of mosquito nets and fuel efficient stoves increased by 11% and 14% respectively, however less than 20% of CHC members were using either structure in December. Use of a BVIP increased by 14% with 41% of members using the BVIP at post-intervention. Use of a bathing room increased by 52% with 67% of club members using a bathing room post-intervention.



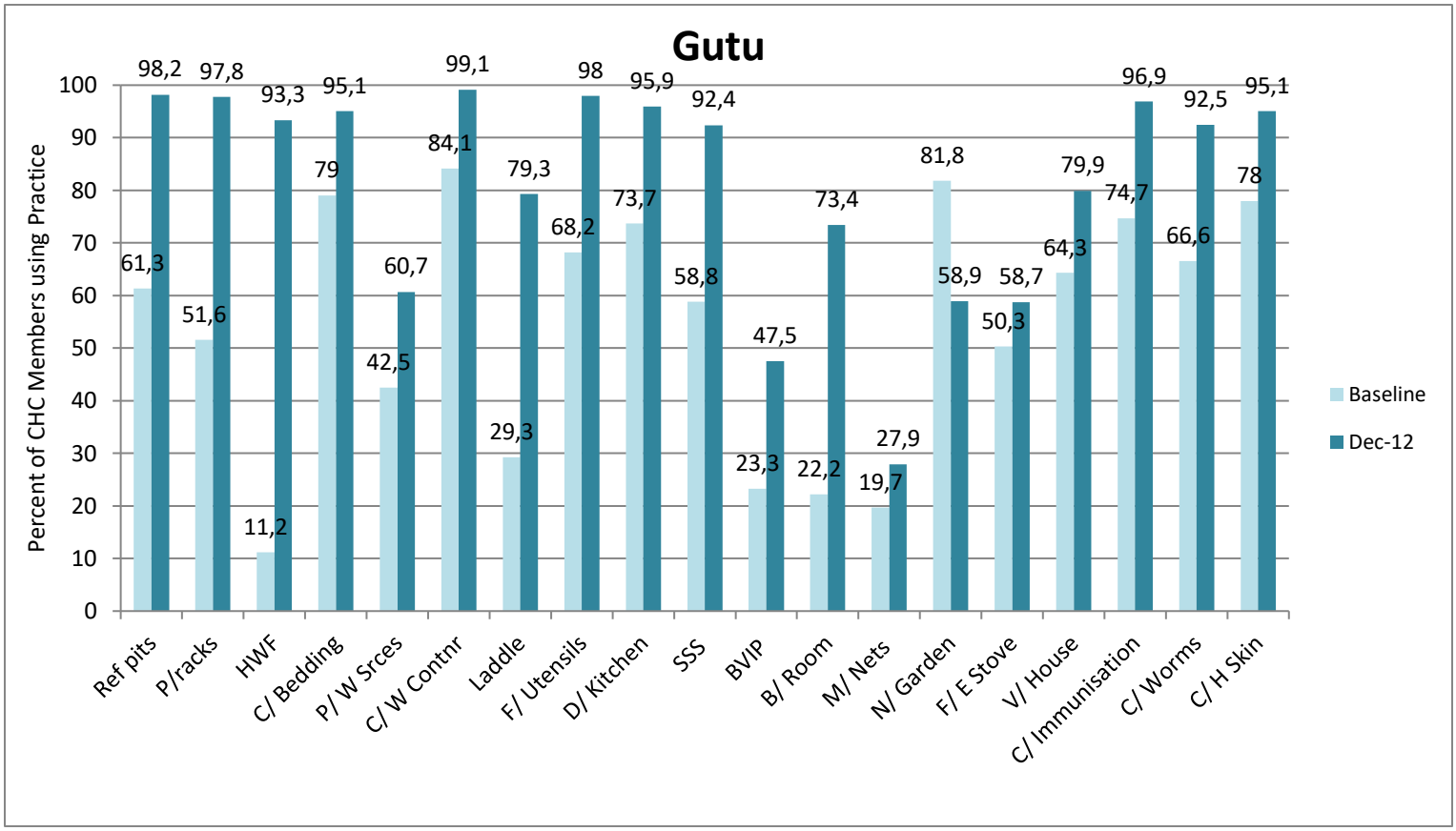
Gutu

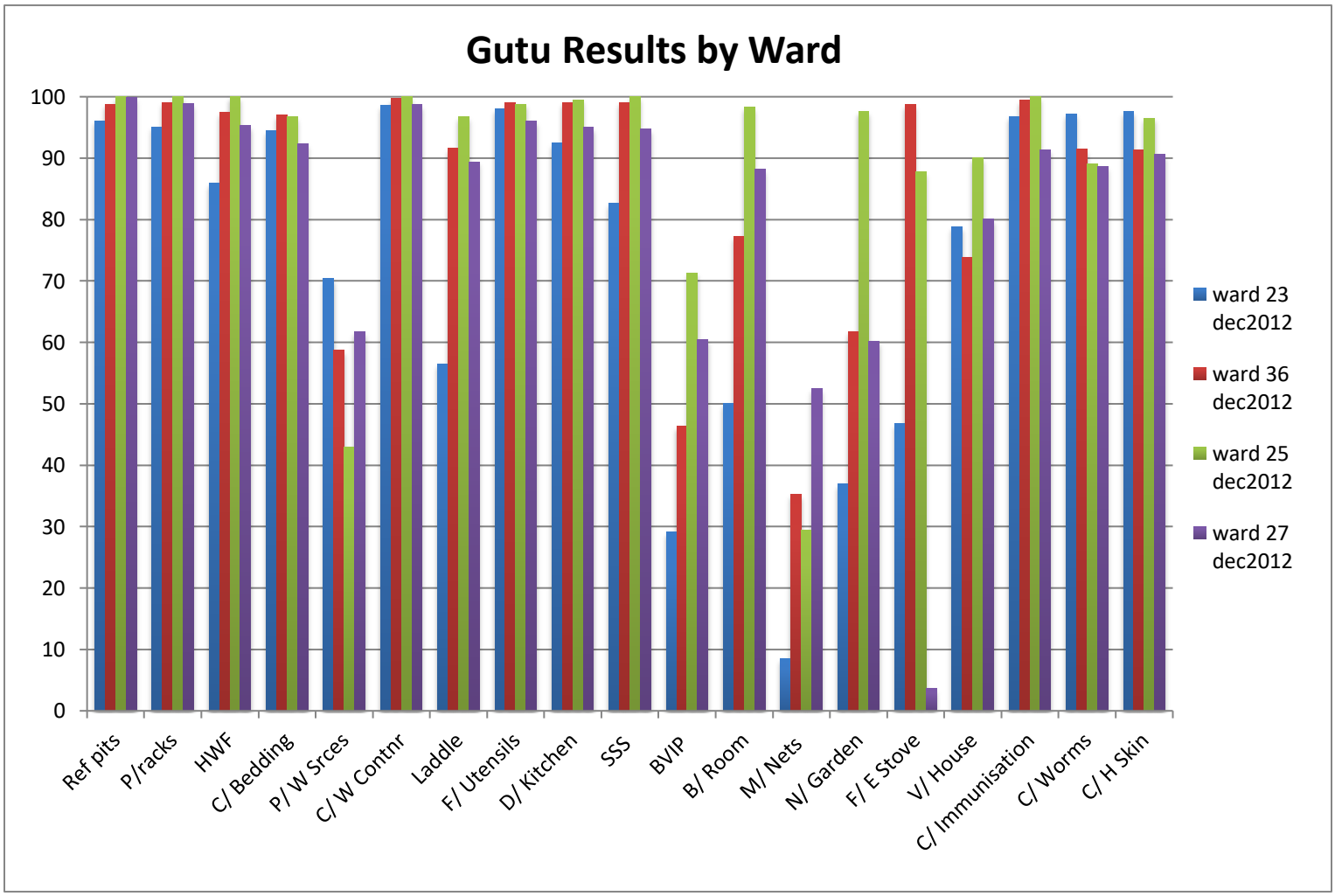
Similar to Mberengwa District, Gutu saw the biggest change in the use of hand washing facilities (11% of CHC members in Gutu used a hand washing facility at baseline compared to 93% post-intervention). In addition there was a 20% increase in use of each of the following: refuse pits (61% compared to 98%), potracks (57% compared to 98%), protected water sources (43% compared to 61%), ladles (29% compared to 79%), family utensils (68% compared to 98%), decorated kitchens (74% compared to 96%), SSS (59% compared to 92%), BVIP (23% compared to 48%), bathing rooms (22% compared to 73%), fuel efficient stoves (50% compared to 59%), child immunizations (75% compared to 97%), and child deworming (67% compared to 93%).

Post intervention, 80% or more of the CHC members in Gutu used the following: refuse pit, potrack, clean bedding, decorated kitchen, ventilated housing, hand washing facility, covered water containers, and family utensils. In addition, over 80% of CHC members knew how to make SSS solution, had immunized and dewormed their children, and had made sure their children had no skin diseases.

Use of BVIP toilets and protected water sources increased by 24% and 18% respectively (48% of CHC members were using a BVIP by December, and 61% were using a protected water source). Use of a bathing room increased by 51% and 73% of club members were using one post-intervention.

Only 28% of club members were using a mosquito net in December, compared to 20% at baseline, and only 59% were using a fuel efficient stove compared to 50% at baseline. The use of a nutrition garden actually decreased from 82% to 59% of club members.

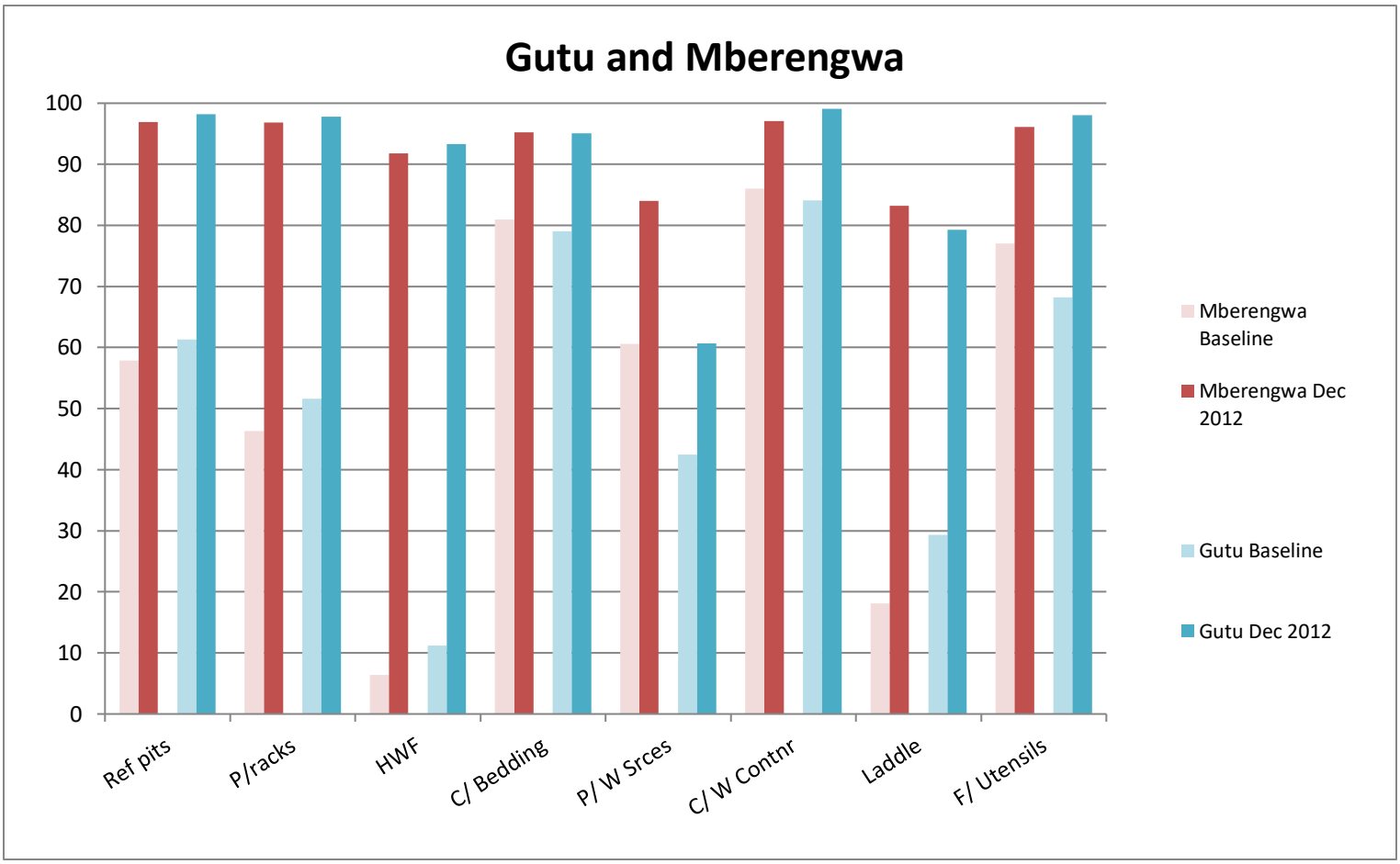

Gutu
Percent of CHC Members using Practice
100
90
80
70
60
50
40
30
20
10
0
98,2
97,8
93,3
95,1
79
84,1
99,1
79,3
98
95,9
92,4
73,7
68,2
58,8
61,3
51,6
11,2
42,5
60,7
29,3
23,3
47,5
22,2
73,4
19,7
27,9
81,8
58,9
50,3
58,7
64,3
79,9
74,7
96,9
66,6
92,5
78
95,1
Ref pits
P/racks
HWF
C/ Bedding
P/ W Srces
C/ W Contnr
Laddle
F/ Utensils
D/ Kitchen
SSS
BVIP
B/ Room
M/ Nets
N/ Garden
F/ E Stove
V/ House
C/ Immunisation
C/ Worms
C/ H Skin
Baseline
Dec-12

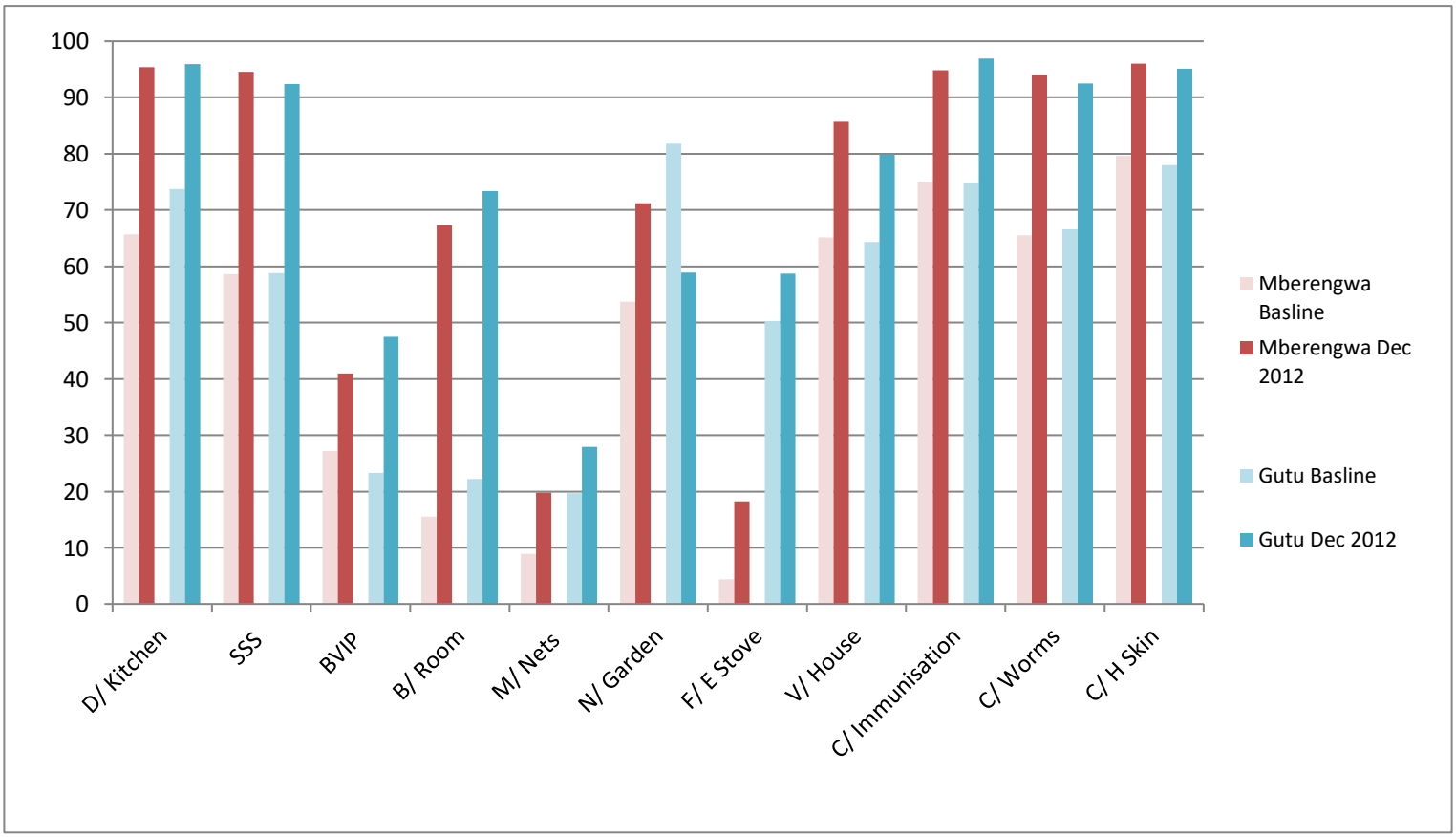

Gutu Results by Ward
100
90
80
70
60
50
40
30
20
10
0
Ref pits
P/racks
HWF
C/ Bedding
P/ W Srces
C/ W Contnr
Laddle
F/ Utensils
D/ Kitchen
SSS
BVIP
B/ Room
M/ Nets
N/ Garden
F/ E Stove
V/ House
C/ Immunisation
C/ Worms
C/ H Skin
ward 23 dec2012
ward 36 dec2012
ward 25 dec2012
ward 27 dec2012

Comparing Gutu and Mberengwa

By the third round of household inventories in December, Gutu and Mberengwa had reached similar percentages of CHC members using each practice (See Gutu and Mberengwa graph below). Similar to baseline, a higher percentage of CHC members in Mbergenwa were using a protected water source than CHC members in Gutu post-intervention (84% in Mberengwa compared to 63% in Gutu). Conversely, a higher percentage of club members in Gutu had a fuel efficient stove post-intervention compared to Mberengwa (74% vs. 18%).

As seen on the graph, Mberengwa started out with a lower percentage of club members using some practices compared to Gutu, but Mberengwa either caught up or surpassed Gutu by the end of the sessions. At baseline, for example, 18% of CHC members in Mberengwa were using a ladle to serve drinking water compared to 29% of club members in Gutu, but by December, 83% of club members in Mberengwa were using a ladle compared to 77% in Gutu. The opposite also occurred. For example, Mberengwa had a higher percentage of CHC members using family utensils and BVIP toilets at baseline, but post-intervention, Gutu had higher percentages of use.


Gutu and Mberengwa
100
90
80
70
60
50
40
30
20
10
0
Ref pits
P/racks
HWF
C/ Bedding
P/ W Srces
C/ W Contnr
Laddle
F/ Utensils
Mberengwa Baseline
Mberengwa Dec 2012
Gutu Baseline
Gutu Dec 2012


100
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10
0
D/ Kitchen
SSS
BVIP
B/ Room
M/ Nets
N/ Garden
F/ E Stove
V/ House
C/ Immunisation
C/ Worms
C/ H Skin
Mberengwa Basline
Mberengwa Dec 2012
Gutu Basline
Gutu Dec 2012

Discussion

District Differences

Most of the recommended practices saw large increases in use from baseline to the end of the intervention. In studying the Gutu and Mberengwa results, it is apparent that certain practices were easier for CHC members to adopt than others. In Mberengwa, for example, use of a BVIP toilet, bathing room, mosquito nets, and a fuel efficient stove increased among members, but the district did not see the same level of improvement as it did in the use of a hand washing facility. It is likely that the hand washing facility required materials CHC members had on hand while the other structures required materials that were harder to procure.

Gutu shows similar trends. CHC members in Gutu District, however, had a much higher percentage of fuel efficient stoves at baseline and in December compared to Mberengwa. On the other hand, Gutu had lower percentages of protected water sources compared to Mberengwa. This difference between districts may be explained by previous interventions that included borehole drilling or elephant pump construction in Mberengwa.

While the differing rates of fuel efficient stove use between the two districts could be a result of district culture or a random district trend, data collection methods may also play a role. Data collectors in Mberengwa may have understood “use” of a fuel efficient stove differently than data collectors in Gutu. The Gutu Results by Ward graph shows Ward 27 to have a much lower percentage of CHC members using a fuel efficient stove post-intervention (only 3.6% compared to nearly 100% of CHC members in Ward 36). The Project Officer for Ward 27 explains that the discrepancy may be a result of inconsistency in data collection, especially considering that in Wards 23 and 27, the use of a FES actually decreased from baseline to Dec

2012. While some Community Based Facilitators may have marked “yes” to use of a fuel efficient stove on their household inventory forms simply if a FES stove was present at the homestead, others may have investigated the actual use of the structure. Thus, inconsistent data collection may have skewed the results of this variable.

Seasonality

In addition, Gutu District saw a higher percentage of nutrition gardens at baseline than it did post-intervention (82% at baseline compared to 59% in December). After discussing this decrease with the Gutu Ward 36 Project Officer, the results may be due to data collection inconsistencies and seasonality. Baseline data was collected in April while post-intervention data was collected in December. In April, water tables are high compared to the months of November and December when post-intervention inventories were completed, which means it is possible to hand water nutrition gardens, compared to when the ground water sinks and is conserved. In addition, Nov/Dec is the season of planting maize and all hands are out in the fields. It is only when the staple crop is established that the women turn their attention to planting a nutrition garden. Mberengwa saw an increase instead of a decrease in nutrition gardening, which again is counter-intuitive. More research is needed to ascertain this trend, but inconsistencies in data collection may have skewed these results. CBFs in Mberengwa may have accounted for seasonality while CBFs in Gutu used a more literal meaning of “use of nutrition garden” when completing household inventories. Observing use of a nutrition garden during the same season pre and post intervention may be a better way to measure the variable. It should be noted that this year these CHCs will be moving into the FAN (Food, Agriculture

Nutrition) stage which is being implemented by ACF and not Zim AHEAD, so these inconsistencies will be rectified.

Insights from Implementation Research

During interviews and focus groups with club members in May and June 2012, a lack of protected water sources, construction of permanent and temporal latrines, and a lack of affordable/available resources were among the challenges brought up by club members in both Gutu and Mberengwa. As mentioned, the post-intervention results reflect these challenges.

Based on the club members' understanding of the fecal-oral transmission of disease during interviews and focus group discussions in May and June 2012, it is not surprising that over 90% of club members in each district were using a hand washing facility, potrack, refuse pit, and covered water container post-intervention. Club members also described these structures as uniform in their villages, and observations of homesteads confirmed the descriptions from CHC members.

Data Limitations

One potential bias for this data set includes data collection inconsistencies. Those collecting data learn the importance of consistent data collection and definitions of each variable for which they collect data. However, considering the results for such measures as nutrition garden use and conversations with project officers, ZimAHEAD staff may need to increase efforts to make sure every individual completing household inventory forms understands the definition of each variable, and those definitions used must be consistent

between districts and villages involved in the project. This will ensure reliable and valid measures of each variable.

Total numbers of club members fluctuated between baseline and Dec 2012. In addition, missing data at baseline did not always match missing data in the post-intervention inventories. Therefore, it is important to note that the baseline and end line data do not necessarily include all of the same club members. The analysis uses the percent of total club members asked about each hygienic enabling structure or practice who were using that particular structure or practice at the time of data collection.

Conclusion

Although there are potential data collection biases for one or two variables, the Gutu and Mberengwa results are quite consistent with qualitative data collected in May and June. In addition, the analysis includes total club members in each village involved in the intervention. Despite missing data points, the survey consists of over 5,000 club members in each district and aims to capture the true results of sanitation and hygiene behavior among club members rather than a representative sample.

The household inventory results show outstanding increases in sanitation and hygiene behavior in both Gutu and Mberengwa ($p>0.001$) . It should be noted that Club members in Gutu and Mberengwa achieved a nearly 100% success rate for some practices like using a covered water container. Despite impressive increases from baseline, practices and structures that required more materials, such as a BVIP, were used by less than 50% of club members

post-intervention. As club members mentioned in focus groups and interviews, having certain materials locally available at an affordable price could help increase use of some practices.

The major increase in household sanitation and hygiene, particularly the increase in hand washing with soap (over 80% more club members washing hands with soap post-intervention compared to baseline), has the potential to substantially reduce morbidity and mortality from WASH related diseases and provides support for the low cost community health club intervention.