# Impact of the Integrated Care Model in improving health care seeking behaviours in Mashonaland East, Zimbabwe

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## ABSTRACT

**BACKGROUND OR OBJECTIVES**: Poor access and utilisation of health care services remains a big challenge in rural communities in low to middle income countries leading to high prevalence of preventable childhood illnesses and death. There is a dearth of qualitative information to explain the poor health care seeking practices by caregivers in Zimbabwe. The purpose of this study was to examine the usefulness of the Integrated Care Model in predicting and promoting positive behaviour change in Mashonaland East, Zimbabwe.
**METHODS**: This was a qualitative study that employed an interpretive case study approach at 2 health centres in Zimbabwe. Twelve audiotaped in-depth interviews with care-givers, community health worker and healthcare professionals were conducted from the catchment area for the two health centres. Descriptive statistics were used for the sample demographics. Transcripts were analysed through thematic analysis.
**RESULTS**: The mean age of the participants was 32 years (SD=3.4). In this study, poverty, gender inequality and negative norms, cultural practices and religious practices were reported to be the major barriers to uptake of maternal and child health services. The perceived benefits of the Integrated Care Model included increasing the knowledge on maternal and child health, increasing uptake of recommended maternal and child health practices and improving maternal and child health outcomes. The participants recommended continual supportive visits, promotion of recommended practices through small awards to the positive deviant households and recognition of the work of community volunteers. Integration of education sessions with income generating activities was proposed to promote high retention rates in the learning groups.

**CONCLUSION**
The Integrated Care Model is an effective model that has potential to improve maternal and child health outcomes in low resource settings. Countries in low resource setting can improve their child health outcomes through this low-cost high impact initiative.

**Key words:**
Integrated Care Model; social behaviour change; maternal and child health

## 1. INTRODUCTION

### *1.1 Background of the Study*

Effective social behaviour change communication approaches are critical in public health programming to promote uptake of maternal and child health care service. They can improve the quality of life of women and children and reduce morbidity and mortality through promoting correct knowledge on maternal and child health care which should translate to uptake of recommended practices. There are different ways of knowing, different lenses for viewing reality and different realities to be known[1]. Many studies have commented that health promotion programmes typically lack a theoretical foundation or are based on a conceptual model that does not conform to the current values and norms of health promotion practice[2].

Given the complexity of health promotion practice, multilevel comprehensive interventions are needed to develop effective programmes. It is essential to consider psychological, organisational, cultural, community level, political and policy driven factors that influence health[3-4]. This can only be achieved if a pragmatic approach to health research is used to assess effectiveness of a community health approach[5]. By definition, pragmatism is a philosophical movement or system having various forms, but generally stressing practical consequences as constituting the essential criterion in determining meaning, truth, or value[6].

This philosophical movement claims that an ideology or proposition is true if it works satisfactorily, that its meaning is found in the practical consequences of accepting it. Pragmatism originated in the United States in the late 19th century. William James (1842-1910) was the first person to coin the term 'pragmatism' and use it to designate a philosophical outlook. Pragmatic approach to evaluative research emphasises on the need for better understanding of the context[2]. It allows for vigorous responses to evaluation questions raised by those implementing complex public health interventions and is useful in analysing the effectiveness of interventions.

Globally, there has been a demand for pluralist acceptances of the variety of health related knowledge and yet there has also been a need to improve health outcomes by choosing between opposing forms of knowledge. This dilemma in health programming calls for a pragmatic approach in solving the epistemological problem. In this study, knowledge is viewed as a tool for action and as such it should be evaluated as to whether it serves the desired interest. The pragmatic approach avoids problems of realism and relativism by enabling both critique and action[7].

In this study, we claim that practical action is the solid foundation and true test of knowledge. Knowledge is rated by its results or effects in action[8]. This study aimed at testing whether knowledge of maternal and child health translates into practice and adoption of recommended healthcare activities. Being an effectiveness trial, the study measured the degree of beneficial effect under 'real world' clinical settings[9]. In this study, we argue that knowledge should guide action and should inform knowledge generation. Knowledge is only useful when it achieves the intended or given interest. Programme designers need adaptive and flexible knowledge to guide them through novel situations.

Theories and models can provide that environment for such flexible knowledge yielding positive results. The philosophy of pragmatism emphasizes the practical application of ideas by acting on them to actually test them in human experiences[10]. However, causal pathways for programmes in poor resource settings can be complex and multidimensional.

This study claims that behaviour change processes and promotion of recommended care practices occur in a system with inputs, processes and outcomes. The study conceptual model was developed using an eclectic approach. This model has roots in models such as the systems model, the logic model, the Health belief model and Knowledge, Attitude and Practices models.

Inputs in this study are inherent capabilities and the potential that the individuals and social groups bring to the cycle or system for behaviour change. These include strengths and weakness. Inputs can either be positive or negative attributes that individuals and communities have. A higher proportion of negative inputs result in a higher probability for child morbidity and poor maternal health outcomes. Inputs are moderated by the processes of behaviour modification.

Behaviour modification in this study refers to interventions that are designed and employed to promote positive behaviour change thereby increasing the likelihood of use of recommended healthcare practices.

Processes work by either boosting or enhancing the existing positive attributes in the individuals and community groups/cohorts. Processes also convert negative inputs into positive energy by critiquing, questioning and challenging negative practices. This is done in a contextual and morally acceptable way and is achievable through the use of participatory approaches such as sharing of experiences both good and bad, sharing best practices, testimonials and discussions of recommended practices.

The behaviour modification phase also makes use of 'positive deviancy'[11]. This is an approach that makes use of the existence of early adopters of recommended practices who are successfully maintaining good health status for their children through good childcare[12]. These mothers act as role models and also share their practices and demonstrate them to colleagues.

Such an environment is expected to address some community barriers such as religion since care-givers deliberate on issues pertaining to their own health and that of their children in their neighbourhood and in the context of what they can do by themselves, learning from each other with guidance from trained community health workers. When successfully implemented processes should increase individual's and communities' perceived susceptibility, perceived threat, perceived severity of diseases if not prevented or managed and they should also increase perceived benefits by mothers. Effective processes should ultimately reduce the level of perceived barriers to recommended action.

Outputs are the immediate results when the inputs have been injected into the behaviour change system and processed. In this framework outcomes can be immediate, intermediate or ultimate outcomes. Immediate outcomes include: increased knowledge about recommended community management of childhood illnesses, timely referral of sick children to the health facility,

increased number of home visits, increase in the proportion of children vaccinated and attendance of health education and promotion sessions. Intermediate outcomes include: Improved childcare practices, reduction in the incidence and prevalence of preventable child morbidity.

The ultimate goal includes reduction in maternal and child mortality and improvement in the quality of health and life women and children 0- 59 months in the targeted communities. Figure 1 below is a graphical presentation of the conceptual framework for this study.

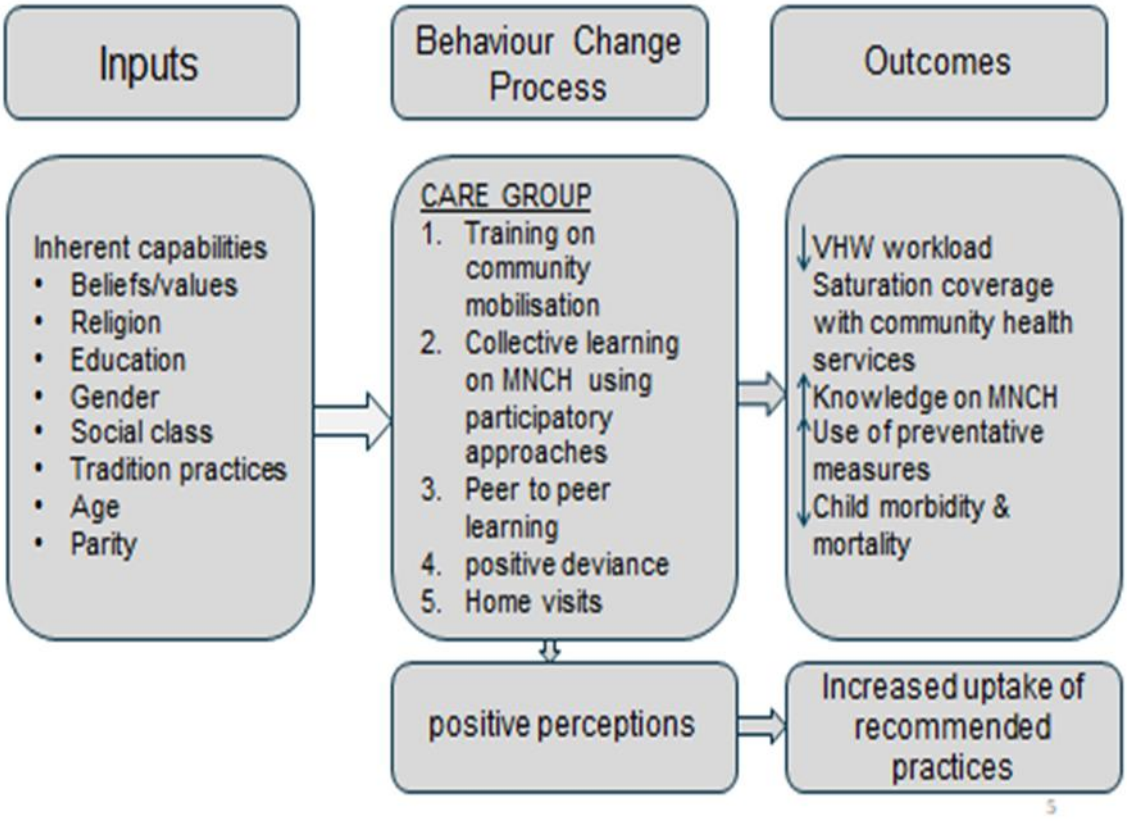


Figure 2. 1: Study Conceptual Framework

This framework was employed to predict its ability to determine how positive behaviour change towards uptake of maternal and child health services can be achieved in rural communities in Zimbabwe.

### *1.2 Objectives of the Study*

This study to determine the perceived impact of the ICM community mobilisation model and evaluate the extent to which this model predicted behaviour change in the targetted communities.

## 2. METHODS

An interpretive qualitative case study approach was adopted in which a case comprised of a nominated caregiver, community health workers or professional health service provider. This was deemed appropriate because it built a comprehensive picture and allowed for in-depth understanding and explanation of life experiences and observations of participants from different perspectives. The involvement of caregivers, community health workers and service providers facilitated a diverse and independent understanding of the changes facilitated by the intervention model. In-depth interviews were conducted with participants from Murewa Polyclinic and Macheke clinic in Murewa District. Participants were purposively selected from the catchment area of these two health centres. Data was collected from 12 cases through in-depth interviews and analysed using within-case and cross-case approaches. Six women per site who comprised of 5 caregivers/community health workers and 1 nurse who participated in the study from its inception to the end were interviewed.

Data collection involved in-depth individual interviews using a guide and were digitally recorded. Interviews with care-givers were in Shona and translated and transcribed into English by the investigator. Interviews for Health Care professionals were in English. Probes and prompts developed as the interviews progressed to encourage the respondents to think more deeply and facilitate openness for the complexity and uniqueness of individual experiences, challenges and perceived impact of the community mobilisation approach on care seeking behaviours.

The investigator's familiarity and closeness with the study settings over the 18 months of implementation and the ability to engage in regular conversation in the local language also catalysed the effective process of data collection through informal interactions that occurred in the whole research process. The researcher wrote detailed field notes in the process of data collection and the interview scripts were read contemporaneously to facilitate decision about data saturation and on-going sampling. Each interview took 30 minutes to one hour.

### *2.1 Analysis*

A multiple- step process that involved inductive thematic analysis within and across cases was used and this produced contextually grounded, transferable findings. A focus on the individual accounts within each case was critical in reviewing each case within its own context and in maintaining compliance to the case study approach. Cross-case analysis was then undertaken to identify similarities, differences, relationships and contradictions.

Data was sorted, coded and categorised for detailed analysis and comparison of cases. The themes were derived from the data and the investigator coded the data. Each case was analysed separately before subsequent in-depth interviews were conducted. This iteratively continued until saturation was achieved as evidenced by consensus between 2 coders. After the 12th interview, no more new themes were emerging. The rigour of the interpretive process was enhanced through discussion of the emerging themes with selected respondents. Participant validation exercise was conducted through virtual meetings with all participants who commended on that researcher's interpretation of the data was consistent with their personal experiences and observations.

### *2.2 Ethical Approval*

The study was approved by the Joint Research Ethics Committee of the University of Zimbabwe College of health Sciences and Parirenyatwa Group of Hospitals and the Medical Research Council of Zimbabwe. Written informed consent was obtained from participants and participation was voluntary. Participants received a sum of $ 5usd as transport reimbursement and lunch allowance.

## 3. RESULTS

The twelve participants had a mean age of 32 years (SD=3.4).

**Barriers faced by caregivers in accessing maternal and child health services**

***Religious and traditional beliefs***

The participants cited that some religions such as the Apostolic sect still discourage women from accessing modern medicine and encourage their members to seek for spiritual solutions and make use of religious midwives for delivery and child care services. The religious leaders also use some form of intimidation and death threats to force women and households to shun modern medicine. Some households subscribe to traditional medicines in line with their norms and cultural practices and these include giving newborns concoctions and herbal medicine at birth:

*"Culturally, women must not tell anyone that they are pregnant when the pregnancy is in its early stages as it is seen as taboo and can bring bad luck hence expecting women are booking late for ANC. By booking late they will be exposing themselves and their unborn babies to a lot of dangers e.g. HIV/AIDS, syphilis, malaria, eclampsia" (Murewa clinic nurse)*

A volunteer at Murewa health centre had this to say:

*"Vamwe vachiri kutenda zvekushandisa mishonga yechivanhu"*

A Village Health Worker from Macheke clinic has this to say:

*"Tiri pazvitendero ipapo kunevo maporofita vanoporofita vana amai votoregedza kunorapwa nekutya rufu runenge rwataurwa nemuporofita. Mamwewo madzimai ndoanoteedza tsika nemagariro edu echinyakare ekushandisa mishonga yekuvhura masuvo kana vakunozvara, neimwe yekugarira yavanopihwa ichinzi ndeye kudzinga mhepo nekusimbisa mumuviri kana vachangobva kunozvara, imwe vachiisa mubota vodya. Kana vari vana, vanosungirirwa tambo dzine mishonga muchiuno vachikweshwa nhowa".*

**Poverty**

The interviewed women reported that they fail to take their children to the clinic and fail to seek maternal health care services due to financial constraints. The women cited lack of money for transport and with the advent of the COVID-19 pandemic the transport woos have worsened. The average distance from the health centres was estimated to be 11 km and a one way trip would cost 2 usd per head.

A Village Health Worker from Macheke clinic said:

*"Zvinowanzotadzisa vana amai kuenda kuchipatara inyaya yekuti pamwe vanenge vasina mari ndizvo zvinoda kunetsa"*

Due to poverty, the priorities of the rural women are inclined towards income generating activities, hence if they do not feel sick and they feel the child has casual illness they do not seek medical care.

One participant from Murewa had this to say:
*"Vana amai vanowanzokoshesa tumabasa twekutsvaga mari uye mapostori anokoshesa kuyereswa kuchurch kwavo, havazonzwi shungu nechipatara".*

**Gender inequality**
Participants reported that power dynamics and poor male involvement in maternal and child health care hinder access and utilisation of health services. This was reported to result in gender based violence, restriction of movement and freedoms of women from accessing health care services for themselves and their children.

One of the care-givers from Macheke had this to say:
*"Women are also not empowered when it comes to family planning since male partners are the decision makers".*

A Village Health Worker from Murewa said:
*"Mhirizhonga pakati pamai nababa vanorwa vokuvadzana vozogadzirisana votya kunorapwa nekuti panenge pakuda police report kana panga pane mwana aifanira kudonhedzerwa vitamin A kana kubaiwa haatokwanisa kubatsirwawo".*

**Barriers that were faced in the initial role out of the Integrated Care Model**
The volunteer lead mothers, village health workers and the rural health centre nurses cited several challenges and obstacles that were faced in rolling out the intervention model. Negative perception of the program at inception level by some influential men and women, mainly politicians who thought these were political gatherings and scrutinised the sessions leading to a minimisation of sessions. Some men despised the education sessions labelling them as gatherings for promiscuity and some women were sceptical to attend because they wanted to know what material gains they will get in participating in the sessions.
A Nurse from Murewa health centre had this to say:
*"One of the challenges we faced were questions on material returns from participating mothers for participating in the project, they are used to food and material handouts"*

A Village Health Worker from Macheke had to this to say:

*"It is always very difficult to start the process of mobilising women and convince them on the benefits of a health education program"*

**Perceived benefits and impact of the model on maternal and child health outcomes**
**Increased the knowledge of women on maternal and child health**

The participants concurred that the Integrated Care Model increased not only mothers' but household knowledge on maternal and child health.

A nurse at Macheke clinic had this to say:

*"Mothers now have correct and comprehensive knowledge on their health and child care. They now know how to correctly feed infants and young children, inclusive of the frequency of feeding, the variety to give, correct thickness, amount of feed that is age appropriate, active and responsive feeding and recommended hygiene practices."*

One care-giver had this to say:

*"Dzidziso ndoochinhu chakakoshera nharaunda yedu kuwana zivo kwaana amai kwaita kuti vana vakure zvakanaka uye utsanana chaihwo mudzimba dzavo, vana amai vavakuziva zviratidzo zvenjodzi kuna amai vakazvitakura, pakuzvara, vachangozvara uye zviratidzo zvenjodzi zvinowanikwa kuvana vadiki"*

**Increase in uptake of recommended practices**

A village Health Worker from Murewa had this to say:

*"Many care-givers are now coming to the sessions and adopting recommended maternal and child health care practices following the programs and many households are now reachable through a network of volunteers. Thus has increased family/household ties and social cohesion"*

One caregiver said:

"*Caregivers are encouraging each other to take good care of their children using locally available solutions and resources. There is visible good sanitation and hygiene practices in all households"*

A Village Health Worker from Macheke had this to say:

*"In my village, all the mothers with children below six months are practicing exclusive breastfeeding in the first 6 months and continued breastfeeding for at least 2 years and this has reduced diarrhoeal diseases. Mothers who are practising exclusive breastfeeding are reporting minimal cases of childhood illnesses"*

A Village Health Worker from Murewa reported this:

*"We have realised an increased uptake and demand of condoms by women especially during breastfeeding whether HIV positive or negative. The shame of demanding for them is gone and women are accessing them through outreach activities and clinics".*

A nurse from Macheke said:

*"Home deliveries among pregnant women significantly went down and we have witnessed an upsurge in early and timely bookings by pregnant women at the clinic and an improvement in male involvement along the continuum of care. This has significantly increased vaccination coverage in the villages where the model is being implemented"*

**Positive maternal and child health outcomes**

The participants interviewed in this study reported a couple of positive maternal and child health outcomes the model brought.

A community volunteer in one of the villages in Macheke said:

*"Reduction in maternal and child morbidity and mortality, we have many mothers and children living in good health"*

Another community volunteer mother said:

"*Chirongwa ichi chakonzera kuti vana vakure zvakanaka, muvillage medu hamuchawanikwa kana mwana one ane malnutrition".*

A nurse from Murewa district had this to say:
*"From our anecdotal data at this health centre, we have found a consistent trend showing that villages are participating in the program have low cases of illnesses compared to those not covered"*

A nurse working in the family and child health department at Murewa health centre had this to say:
*"This model is helping us in the achievement of the elimination of mother to child transmission of HIV by tracking defaulters, bringing them to the clinic fostering PMTCT compliance"*

## 4. DISCUSSION

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### *4.1 Discussion*

The study findings revealed that negative norms, cultural practices and attitudes are a deterrent to positive health care seeking practices and these need to be addressed through a strong social behaviour change communication approach. The existence of the influential women and men, opinion leaders, the sage and early adopters of recommended practices is a great opportunity to get the buy-in of a targeted community. The findings also revealed a possibility of tapping from the positive deviants to promote good maternal and child care practices. Participants reported that there are mothers from very remote villages who are marginalised and very vulnerable due to poverty, and distance who still value their health and that of their children, who had their children fully vaccinated and demonstrated good maternal and child care practices. Understanding their drive and tapping on their motivation can encourage other caregivers to take up recommended practices.

The findings also revealed that the Integrated Care Model enhanced social cohesion. Social cohesion creates a conducive environment for sustainable and cost-effective health and development outcomes. In Nepal, success has been achieved through health partnerships [13]. Greater community involvement in the health promotion activities resulted in greater impact and more sustainable gains of a community intervention [13].Through the social networks, collective monitoring of maternal and child care practices is fostered leading to a reduction of harmful practices such as home deliveries which pose a great risk to both pregnant women and their newborns, about three in every ten rural children in Zimbabwe are delivered at home under unsafe conditions leading to high prevalence of child morbidity and mortality.

The findings revealed an upsurge in early and timely bookings by pregnant women at the clinic. This is very critical in Zimbabwe with the advent of the PMTCT program which requires early screening for HIV, and early treatment in the first trimester. Early booking allows for various screenings for co-morbidities which have been associated with maternal and neonatal morbidity and mortality. An improvement in male involvement along the continuum of care was also reported. Male acceptance and support of MNCH activities result in more positive outcomes. Patriarchal communities in Zimbabwe restrict women's access to resources, control, decision making and restrict movement and freedoms of women. This has negative ripple effects on child and health outcomes. Lack of appreciation of the need to seek health care services has been the key cause of Gender Based Violence. Child and maternal morbidity in developing countries is rooted in women's powerlessness and their unequal access to employment, finance, education, basic healthcare, and resources [14]. Poor quality of health services, socio-cultural factors, and access issues related to the poor status of women have been associated with low utilisation of health and nutrition services in developing countries [15]. Religion, intention to take up a practice, traditional practices, time constraints, lack of family and community support, place of residence, transportation and poor care seeking behaviour have been reported in various studies as other factors that determine access and utilisation of services

To a greater extent the conceptual framework for the study which was developed using an eclectic approach was supported. Participants in all learning groups brought a mixed bag of perspectives, both negative and positive which emanated from the way they have been socialized and their level of empowerment at the time of commencement of the intervention significantly varied. The level of empowerment was also a function of the individuals' level of level of exposure to correct health information. Group members were heterogeneous in terms of personal beliefs and values, religion, attitudes, education, rearing and carrying practices.

The group sessions became a channel for behaviour modification and participatory approaches, allowed women to freely share their knowledge, indigenous or acquired on maternal and child health through testimonials. The village women would challenge each other about their differing views on healthcare practices and anyone who presented their practices were supposed to justify and provide rationale for the practice, citing its merits and possible demerits, if any, in promoting positive health outcomes. The learning platform provided a conducive environment in which women could use their reflexive thinking skills and, in the

process, there was fusion of ideas in which women collectively decided to maintain or alter certain behaviours after considering the benefits and/or consequences of a given practice.

The cross pollination of life-saving ideas resulted in a significant improvement in the eagerness to learn and increased the knowledge levels of women on maternal and child care practices in a contextual and culturally accepted manner. This made them more prompt in seeking for healthcare at the community and primary healthcare level. This in the long run can reduce the health care costs one incurs through different referral levels when they present late at a health facility and the costs the government incurs in subsidizing specialized care.

In the study, it was discovered that even adults benefit through edutainment intervention such as role plays, simulations, telling stories, demonstrations, dramas and testimonies. Women composed interesting and innovative songs and dramas that brought out clearly the recommended take home messages and unveiled the hidden practices that were context-specific which had negative consequences to maternal and child health. The groups served as vehicles for behaviour modification and were also effective in promoting peer-to-peer education and behaviour monitoring. The 'Hawthorne effect' worked very well in the cohorts of households, where all participating women were motivated to excel by the mere fact that they knew they were being observed and hence compelled to model good health practices.

In the same vein, home visits by cluster volunteers and VHWs were critical in mentoring, role modeling and strengthening learnt behaviours. Village health workers made use of 'positive deviant' women in home visits and exchange visits to encourage mothers to take up simple recommended practices. It was evident in these activities that women were challenged to take up recommended practices if they found that their peers in the neighborhood were modeling it and testifying of its benefits. Community women are not motivated to adopt certain behaviours when they feel that these have been imposed by external agents through a top-down approach. However, if they are given time to conceptualize behaviour and own it, there is an increased likelihood that they will adopt the behaviour and sustain it.

Anecdotal data collected during monitoring and supportive visits revealed that VHWs were satisfied that their workload had significantly reduced with the advent of cluster volunteers. This in turn improved their efficiency and effectiveness in facilitating health programmes at community level. VHWs were also motivated by their recognition and active discovery that their relevance and impact in community health was well acknowledged by the community and traditional leaders. There was increased competitiveness between clusters and a strong desire to have better health outcomes for mothers and children, since the health matters became a community responsibility with collective accountability.

With increased knowledge, and perfection of benefit and significant reduction in perceived barriers to recommended action, more women took up the recommended measures for management of childhood illnesses. The study revealed that social learning is the outcome for both health promoters and the local people which results in mutual understanding and better quality of life.

### *4.2 Limitations*

The study be qualitative in nature could not directly measure and quantify effect, hence could not directly infer causality. More studies employing a mixed methods aproach will be needed for better triangulation of data and for easier generalisation to the wider populations.

### *4.3 Recommendations*

The Village Health Workers recommended consistent and regular support from higher levels to maintain the momentum of the activities at cluster level.

Material incentives and promotional material such as hats and shirts with key messages and other small gifts given as rewards for good practices were reported to have a dual effect where in one end they will keep the momentum to regular attenders of sessions and on the other hand lure those who were not attending at all (the sceptics).

The community health workers recommended the show-casing of educational activities in community public gatherings through short dramas to continuously enhance the buy in of all community stakeholders.

There is need to combine educational sessions with income generating activities such as Village Savings and Lending Schemes or health nutritional gardens among other possible initiatives.

The community volunteers need some form of recognition such as certificates, acknowledgement of their work or small tokens to keep them motivated for the hard work they do.

## 5. CONCLUSION AND IMPLICATIONS FOR TRANSLATION

The study sought to assess the perceived impact of the study model, the Integrated Care Model on health care seeking behavior in Zimbabwe. The results showed that,indeed the model positively impacted on the targetted communities fostering positive behaviour change and improving health outcomes of women and children. Going forward, governments from low to medium income conutries should consider scaling up such low cost high impact initiatives to save lives of vulnerable women nd children.

### *COMPLIANCE WITH ETHICAL STANDARDS*

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### *Key Messages*

- Saturation coverage in community mobilisation is critical in improving health outcomes

- Participatory approaches using different methodologies increase uptake of key messages in maternal and child health
- Motivation should be explored in all its different facets in health promotion to maintain momentum of community health promotion programs

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