



Evaluation of World Vision's East Africa Maternal, New born and Child Health Project (EAMNeCH)

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ACRONYMS	
7-11: 7 interventions for mothers, 11 for children under 2 (see Annex 2)	MDG: Millennium Development Goal (2000 – 2015)
AACES: Australia Africa Community Engagement Scheme	MTE: Mid-term evaluation (survey)
ANC: Ante-natal care	MoH: Ministry of Health
BLE: Baseline evaluation (survey)	MNCH: Maternal, newborn and child health (note: nutrition integrated with health)
CBO: Community-based organisation	m-Health: Mobile Health (see Annex 2)
CF: Complementary feeding	OECD-DAC: Organisation for Economic Cooperation and Devt. - Development Assistance Committee
CHW: Community health worker	PNC: Post-natal care
CVA: Citizen Voice and Action (see Annex 2)	PSG: Parents' Support Group (Uganda)
DFAT: Department of Foreign Affairs and Trade (Australia)	PWD: Person with disability
DoH: Department of Health	SDG: Sustainable Development Goal (2016 – 2030)
EAMNeCH: East Africa Maternal, Newborn and Child Health (program)	ttC: Timed and targeted counselling (see Annex 2)
EBF: Exclusive breastfeeding	U5: Under 5 years old
EIBF: Early initiation of breastfeeding	VCNC: Village Child Nutrition Centre (Rwanda)
EOPE: End of project evaluation (survey)	VHT: Village Health Team (Uganda)
FGD: Focus Group Discussion	WASH: Water, sanitation, hygiene
IFA: Iron Folic Acid (supplement)	WV: World Vision
INGO/NGO: (International) non-government organisation	WVA: World Vision Australia

Contents

Executive summary	1
Section 1: Introduction	5
Structure of this report.....	5
About the program.....	6
Evaluation rationale and objectives	7
Methodology	8
Statistical program rationale	12
Participation and measures.....	14
Ethical considerations; data storage and privacy	15
Limitations	15
Section 2: Program strategy and supporting factors	17
Strategy overview	18
Supporting factors.....	20
Section 3: Impact Evaluation (meta-evaluation).....	23
Introduction.....	24
Summary of results	25
4 or more ante-natal visits.....	28
Post-natal health checks	29
Births attended by skilled health personnel	30
Iron and folic acid supplement (IFA)	31
Diphtheria, pertussis, tetanus (DPT) immunisation	32
Current use of any family planning method	33
Exclusive breastfeeding (EBF)	34
Early initiation of breastfeeding (EIBF).....	35
Complementary feeding (CF)	36
Prevalence of stunting.....	37
Prevalence of underweight	38
Prevalence of wasting.....	39
Prevalence of handwashing with soap.....	40
Section 4: Country contexts and key achievements	41
Kenya.....	42
Rwanda	46

Tanzania.....	50
Uganda.....	54
Section 5: Discussion and analysis of results.....	58
Impact.....	59
Gender impact.....	60
Effectiveness.....	61
Efficiency.....	63
Relevance.....	65
Sustainability.....	66
Section 6: Conclusions and recommendations.....	67
Conclusions.....	68
Recommendations.....	70
Annex 1: EAMNeCH Theory of Change.....	72
Annex 2: Description of common models.....	73

Executive summary

The aim of the East Africa Maternal Newborn and Child Health (EAMNeCH) Program has been to improve maternal, newborn and child survival, through health system strengthening and access to quality services, including health, hygiene and sustainable nutrition.

The program spanned five years between July 2011 and June 2016, in Kilifi County in Kenya, Gicumbi District in Rwanda, Kitgum District in Uganda and Kilindi District in Tanzania. It aimed to reach 36,250 beneficiaries directly and just over 70,000 indirectly with policy and community-based solutions to reduce maternal and child mortality.

Projects in the four settings evaluated the results of their efforts in early 2016, as the project prepared for closure and transition.

EAMNeCH was found to be:

IMPACTFUL: Pooled analysis of survey results including questionnaire and anthropometric measures showed increases in almost all indicators, though with widely variant results at local levels. Of particular note, women were significantly more likely to seek ante-natal and post-natal care, and to give birth either in a health facility or at home with a skilled birth attendant.

EFFECTIVE: EAMNeCH applied a Theory of Change using several evidence-based models including Community Voice and Action for social accountability, Timed and Targeted Counselling and capacity building of Community Health Workers (CHWs) for household influence, and Village Banks for economic collaboration. At the same time, the projects tried new ways of working, particularly effective in their adaptation of peer-based nutrition models to overcome previous limitations.

EFFICIENT: The program's focus on partnerships, with government and also with local and international agencies, connected expertise and drive with community needs in MNCH, SRH and a number of associated sectors including WASH, livelihoods and gender. The emphasis on policy and government accountability kept the model relatively low-cost, while government uptake of CHW models and budget adjustments expanded the reach of benefits well beyond the initial geographic project areas. Process efficiency, however, was dependent on partners working to the same goals and timelines, which added complexity and at times delay.

RELEVANT: The program's goals and strategies remained relevant to the settings of rural health and nutrition needs throughout the five years, benefiting from realignment after the 2014 mid-term review. Because of the focus on integration of health outcomes with social and economic improvements, the program was able to enhance the relevance of MNCH within the community, signified through increased dialogue and commitment from male-dominated community structures including faith congregations and traditional village leaders.

SUSTAINABLE: The projects have built community resources that are recognised and valued by local groups and government. These include CVA, ttC and nutrition clubs or livelihoods cooperatives. In project areas and more broadly, governments are implementing Timed Targeted Counselling and the role of CHWs is better formalised. These decisions will have impact short term, but any government commitment requires ongoing monitoring and, in the case of shifts of power or priority, renewed efforts to protect what has been achieved.

Kenya

Impact

- ANC visits rose twofold (34% to 69%)
- EBF rates tripled (22% – 63%) and EIBF increased by 2.5 (28% to 68%)
- Family planning nearly doubled (from 16% to 28%, though still lower than any other context)
- Wasting reduced by one third (15% to 10%)
- Birth attendance rose by 50% (44% to 68%)

Challenges:

- Stunting remains well above Global Acute Malnutrition (GAM) rates
- Low family planning rates indicate maternal risk and also challenges with women's status and deliberation

Rwanda

Impact

- Post-natal care more than quadrupled to reach near-universal rates (20% to 90%)
- Family planning strategies rose around four-fifths (59% to 97%)
- Stunting reduced by around one fifth (49% to 41%) and underweight by more than one third (8% to 5%)

Challenges:

- In a landscape of largely positive national/international comparisons, ante-natal care and nutrition (IFA supplements) are not following the trend, with IFA reduction of particular concern

Pooled results

Impact

- Child malnutrition (stunting, wasting and underweight) has reduced slightly compared to baseline
- ANC and PNC consultations have increased by more than one-third overall, directly attributable to Community Health Worker increased activity
- Breastfeeding has increased from 44.9% to 66%, and early initiation of breastfeeding from 46.1% to 72.2%

Challenges:

- Seasonal food insecurity continues to affect rates of wasting and undernutrition
- Women are accessing maternal nutrition supplements (iron folate) at less than baseline rates

Tanzania

Impact

- Exclusive breastfeeding, though still too low, quadrupled (10% – 40%)
- Early initiation of breastfeeding more than doubled (26% - 68%)
- Rates of handwashing rose nearly one quarter (65% to 85%)
- The project halved rates of underweight (30% to 14%) and wasting (6.8% to 3%)

Challenges

- Low starting points for ANC/PNC and breastfeeding have not been sufficiently addressed.

Uganda

Impact

- ANC visits have increased by nearly one third (60% to 84%), and PNC by over a half (58% to 88%)
- Though current indicators of wasting and underweight remain relatively unchanged, the longer term indicator of stunting has reduced by around one fifth (29% to 23%)

Challenges:

- Community food resilience, including seasonal and in the face of local unrest.

Success factors

Community Health Workers; community health systems strengthening: The program's foundation was the increase in number and quality of Community Health Workers (CHWs), formalising the roles and responsibilities of these vital community assets. By 2015, the program had trained and equipped 897 CHWs to support mothers at household level with health and nutrition knowledge and advice for behaviour change. This included healthy timing and spacing of pregnancy (family planning), age-appropriate feeding of infants and young children, and the importance of ante-natal and post-natal checkups. World Vision's CHW-AIM monitoring tool provided benchmarks for quality and availability of service in all project locations, and has been taken up by governments in Kenya and Uganda.

Community-government partnerships for integrated health improvements: Parallel to CHW influence, the Community Voice and Action model of social accountability brought government together with community to identify and fill gaps in healthcare systems and structures. CVA resulted in multiple improvements: better transportation options, increased opening hours and staffing at clinics, and appropriate budget in line with national policy.

Inclusion of women and people with disabilities in community decisions: All projects worked with traditionally male-dominated structures of governance to increase the participation and status of women. Community structures were open to change and inclusion of women, who rapidly proved their value in leadership and planning. The program also supported the start-up and strengthening of disability groups, who were then able to access income generation and village bank schemes and to reiterate the urgent need for disability-friendly public services including health services.

Policy influence for sustainability of results: The emphasis on government partnership to strengthen health service capacity and accountability added complexity but reaped rewards in collaboration and ownership of proven models. Ministries of Health produced strategies for continuing household Timed Targeted Counselling, while Ministries of Agriculture partnered formally with income generation groups on livelihoods and farming.

Livelihoods integration for community development and food security: The livelihoods component of the program connected naturally to health outcomes because groups formed under goals of food security and diet diversity. Approaches were inclusive and adaptable to each group's priorities and interests. Stakeholder feedback showed that the ability to self-organise and innovate in agriculture and small business was a popular attribute of the program. Though participants launched a wide range of entrepreneurial activities, they continued to identify themselves as 'nutrition groups' or similar.

The value of AACES partnership: EAMNeCH, as part of the Australia Africa Community Engagement Scheme (AACES), benefited from learning objectives and partnerships with other agencies involved in AACES throughout the program's lifespan. The emphasis on regular reflection, innovation and sharing of practices gave the program scope to respond and improve. The evaluation did not explore the project's Objective 2, 'Policy and programs are strengthened through learning, collaboration and exchange'; however, it should be acknowledged as a pivotal element in setting and delivering strategies for change.

Summary recommendations:

- Continue to increase the number, skills and quality of CHWs.
- Focus support to health centres on sustainable community resources including CHWs and accreditation models
- Look at transport to increase access to health centres in remote areas
- Promote integrated health, nutrition and food security models
- Continue CVA and ttC, through World Vision and with government/community partners
- Enquire further into poor results in IFA supplements among pregnant and lactating mothers
- Learn from private sector partnership pilots to increase private sector engagement
- Closer integration with WASH providers and services, particularly in water supply
- Closer integration with agriculture and markets to reduce seasonal food insecurity
- Return to measure rates of stunting and maternal/child mortality in the future, for more accurate indicators of impact

The evaluations, centrally coordinated through the East Africa Regional Office, drew on four different types of information to inform their conclusions:

- 1. A household questionnaire, focusing on households where a woman had given birth within the last two years, to identify levels of change in important health and nutrition indicators.*
- 2. Direct (anthropometric) measurement of children in communities to determine rates of stunting, underweight and wasting.*
- 3. Interviews with communities and government representatives who had been part of the projects, and who could provide alternative perspectives of project outcomes and impact.*
- 4. A 'positive enquiry' case study to identify how World Vision's inputs connected to changes for children and their mothers.*

Section I: Introduction

Structure of this report

This introductory section of the report gives an overview of AACES EAMNeCH, its history and structure, and the research methodology chosen to evaluate this complex multi-site program.

Section 2 of this report breaks down program strategy into a more detailed operational description, including key project approaches and supporting factors to World Vision's own actions.

Section 3 summarises the quantitative results of outcome meta evaluation using 13 development indicators that are known to contribute to health, nutrition and survival of mothers and their children.

Section 4 briefly describes the specific context and interim achievements in the four different project locations that are likely to have contributed to the positive outcomes identified in meta-evaluation, including a detailed case study from each project.

Section 5 discusses the implications of evaluation results in terms of program quality and lessons under the OECD-DAC principles, before delivering conclusions and recommendations to support further health system strengthening and access in vulnerable locations across East Africa.



“...At the hospitals we deliver free and there are benefits. Like, when we delivered at home we deliver while standing but at hospital you lie on a delivery bed comfortably...once we deliver we are given some tea and also we are tested at this local facility. They bring the nurse here to serve us.”

Mother, focus group, Bamba, Kenya, where the proportion of women delivering in a health facility has risen from 21% at the start of the project to 69% by the end.

About the program

Project outcomes:

- *Improving the quality, supply, and equitable community access to Maternal Newborn and Child Health (MNCH) services;*
- *Promoting the adoption of positive MNCH practices;*
- *Contributing to a more favourable policy environment that facilitates MNCH improvements in Africa.*

World Vision is one of 10 Australian NGOs operating programs under the AACES framework. Each addresses in some way the three priority sectors for AusAID at the time of design: food security, water and sanitation, maternal and child health. The main focus of World Vision's EAMNeCH under AACES has been to strengthen systems and institutions that can promote maternal and child survival long-term.

The aim of the East Africa Maternal Newborn and Child Health (EAMNeCH) Program has been to improve maternal, newborn and child survival, through health system strengthening and access to quality services, including health, hygiene and sustainable nutrition. The program spanned five years between July 2011 and June 2016, in four health-vulnerable contexts of East Africa: Kilifi County in Kenya, Gicumbi District in Rwanda, Kitgum District in Uganda and Kilindi District in Tanzania. It aimed to reach 36,250 beneficiaries directly and just over 70,000 indirectly with policy and community-based solutions to reduce maternal and child mortality.

EAMNeCH was a partnership led by World Vision Australia (WVA), coordinated through the East Africa Regional Office and implemented by World Vision and its local partners in the four countries in close collaboration with the various Ministries of Health, Agriculture and Livestock. Project inputs enhanced the roles of government, healthcare workers and community members in protection and promotion of mothers' and children's health. For World Vision, the program was an opportunity to embed knowledge and action of the organisation's '7-11' interventions for maternal and child survival. Health system strengthening and equitable access began with the expansion of Community Health Worker numbers and roles, complemented by community and local government action to ensure availability of necessary nutrition, vaccinations and treatment of common childhood illnesses. Because of the interlinked causes of health vulnerabilities, the program's Theory of Change visualised positive shifts not only in healthcare but also in associated challenges such as food security and livelihoods, WASH and hygiene, community empowerment, women's empowerment and disability inclusion.

The project was funded by the Government of Australia through DFAT, then AusAID. As part of the Australian Government's broader Australia Africa Community Engagement Scheme (AACES), the program aligned with DFAT cross-sector strategies for sustainable improvements in the lives and opportunities of marginalised people, namely:

- Supporting marginalised communities to have their basic needs met – with a view to forming groups and taking collective action;
- Increasing the awareness and voice of marginalised groups to hold service providers and other responsible people to account; and
- Supporting public and private service providersⁱ.

Evaluation rationale and objectives

As the project draws to a close by June 2016, projects are accountable to explore and report its results. Beyond this, the evaluation phase represents an opportunity for greater understanding of how change comes about in different African socio-political contexts, and what components of the program were particularly significant in bringing change or assuring its sustainability.

Cross-sector and multi-country, EAMNeCH is a complex program with many layers of efforts, actors and dependent results. Pinpointing the exact role of the four projects in measurable improvements for maternal, newborn and child health requires not only rigorous examination of health and behaviour indicators, but also the construction of causality through analysis of stakeholder perspectives and programming models. Understanding why variations to MNCH statistics are occurring will help to identify key policies and programmatic approaches that others, including government and NGOs/CBOs, could further implement and refine to improve MNCH in the region.

Specifically, the research questions for this evaluation are:

- What evidence is there of improved and equitable access to MNCH services (Outcome 1) leading to improved MNCH in the four implementing contexts?
- What evidence is there of adoption of positive nutrition and WASH practices at community level (Outcome 2) leading to improved MNCH in the four implementing contexts?
- What evidence is there of an improved policy environment (Outcome 3) leading to improved MNCH in the four implementing contexts?
- What is the significance of EAMNeCH inputs in these improvements?
- To what extent, and in what way, has EAMNeCH met its objectives for inclusion, empowerment, participation and public-private partnerships?

The evaluation consultant, Dr Kingsley Agho, has been asked to address these questions in a way that also considers the overall value of the project to its beneficiaries across the four contexts. Though elements of OECD-DAC principles are not specifically articulated in the research questions, they form an important subtext to consultation and analysis of differing perspectives.

World Vision and its partners have a genuine interest in learning the current situation for maternal and child health in these vulnerable areas, as an assessment of program quality and effectiveness, and to provide guidance on priority areas for future health investments. This requirement generated a methodology that examined a broad range of health-seeking and anthropometric indicators, not only those specific to project or program monitoring.

Commonly used as pillars of program quality in international response and development, the OECD-DAC quality principles are: relevance, effectiveness, efficiency, impact and sustainability.

Overview

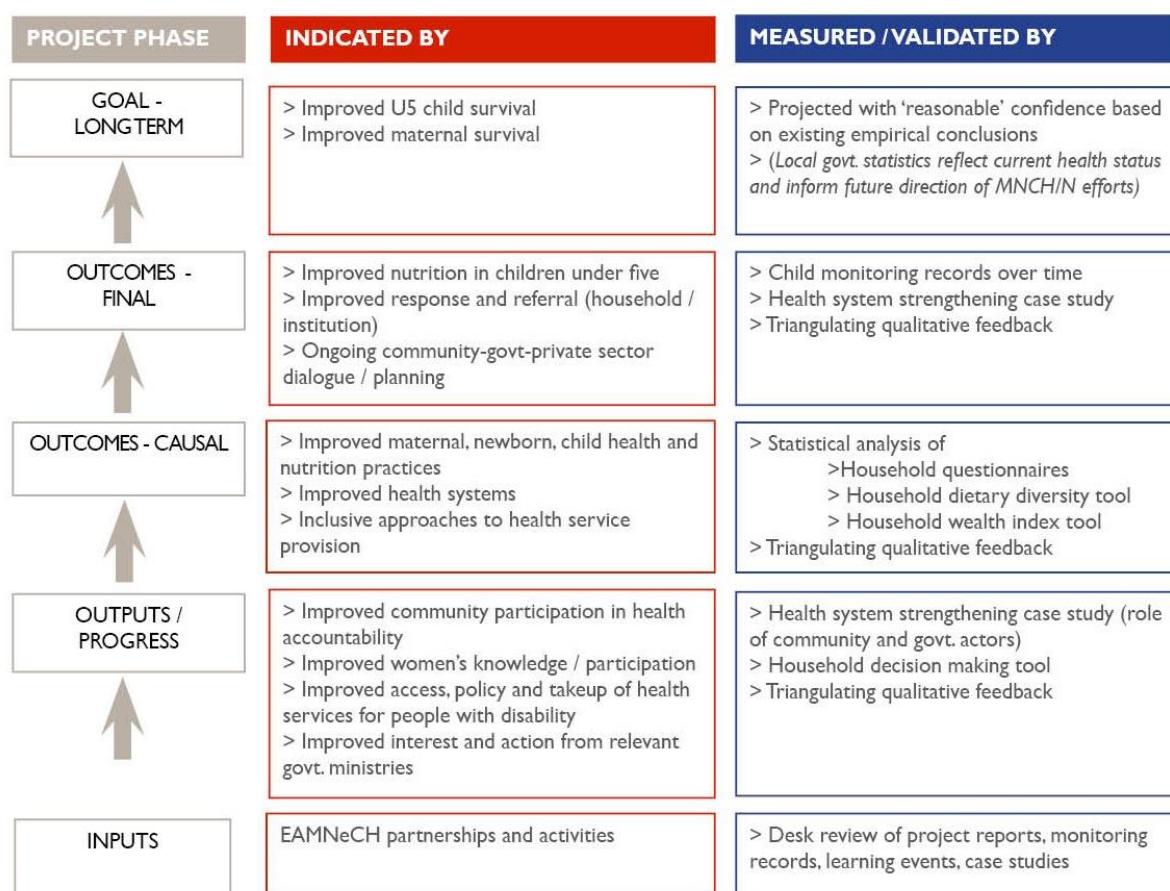
The research methodology is mixed (qualitative and quantitative) method, with a variety of data collection and analysis approaches used to satisfy the requirements of the research questions. It is guided by the program Theory of Change (see Annex I), which places the implementing agency (World Vision) as an instigator and enabler of change rather than a direct actor. This approach creates a level of interim achievements brought about by government, local organisations and the public, that sits between World Vision's own inputs and externally measurable health outcomes. The focus on improving services now for health outcomes in the future limits the relevance of census or similar demographic data. Instead, an evaluation of program results will learn most by examining the policy, service and behaviour landscapes for health, and how they have been influenced by the last five years of AACES EAMNeCH. For many maternal, newborn and child health practices, sufficient empirical evidence already exists to state with confidence that their increase leads to improved child survival, so that achievements at an output or outcome level can be interpreted as contributors to future goal level impact. However, as stated previously, the additional purpose of the evaluation in assessing current health status and opportunities merits the inclusion and consideration of standard health indicators such as nutrition status and mortality rates, with acknowledgement that the program is just one of many mechanisms contributing to this broader social change.

To undertake local evaluation in four countries (namely, Kenya, Rwanda, Tanzania and Uganda), national consultants, along with World Vision staff and volunteer data collectors, received a standardised set of methods which would allow comparison of health status quo from baseline (2011) to endline (2016), or where baseline information was not available, from mid-term review (2014). The resulting country-level reports could then be drawn into an aggregated analysis of results in sectors of maternal and child health while still retaining contextual relevance to inputs and outcomes at local level.

The surveys and data comparison are quasi-experimental in their approach, comparing demographically alike samples over time, rather than comparing target and 'control' scenarios using data from communities outside project areas. It is worth noting in this regard that the projects were working in districts where health indicators were usually below the national average due to the poverty and social vulnerabilities of the location, so that comparing like for like is the logical approach to mapping change.

Figure I on the next page shows the evaluation framework and the different approaches used to measure results at different phases of the project's momentum.

Figure 1: Evaluation framework



Tools used

Quantitative:

- Household survey:** Statistical evidence sought through closed-question household surveys on a range of childcare, dietary, health-seeking and sanitation/hygiene practices. This included using power calculation to get the required sample size for the study. The sampling frame process of the survey was based on each country's Population and Housing Census projection. In the sampling frame, villages were randomly selected; all selected villages were visited and none was replaced. Selection of households was also random so long as they included a mother of a child under five.
- Health and nutrition indicators:** Additional data on anthropomorphic indicators for children was collected through trained enumerators based in the community or through existing growth monitoring records at health centres. Also, basic statistics on sub-district levels of maternal and child mortality were sourced from government records.

- **Statistical comparison:** Using STATA12, the data collected was then compared against baseline and mid-term review figures for the same or similar indicators to generate evidence of change at different levels of the project: district and also for the four countries overall. The district level results have been reported separately in four country-based evaluations. The pooled analysis contained in this report provides program-level change indicators.

Qualitative:

- **Desk review** of project documentation including annual reports, learning events, mid-term results and other relevant planning or reporting files.
- **Key informant interviews / in-depth interviews:** Interviews took place with a number of individuals purposefully chosen for their knowledge of the project and the target communities. These included government officials, health workers and World Vision staff. The information was used to validate the likelihood that EAMNeCH had contributed to statistical change identified through survey and data analysis. Based on feedback around program quality and stakeholder satisfaction, the information also formed key evidence for organisational recommendations.
- **Focus group discussions:** In the four countries, consultants brought together groups of between 8 and 12 people who had participated in activities generated or supported by the project including community health workers, Community Voice and Action (CVA) committees, nutrition group members, pregnant or breastfeeding mothers and people living with disabilities. The results of these discussions were used similarly to data from key informant interviews, with a particular emphasis on exploring satisfaction, relevance and positive change for beneficiaries and target groups.
- **Case study analysis:** Consultants and staff worked together to produce and validate a case study describing an element of these complex projects with particular weight in terms of innovation, results or social value.

Standard tools and guidance for data collection were used by the consultants in-country, with some contextualisation of sample size and informant selection. Table I on the next page compares the data sources, sampling methods, tools and sample sizes for the country-level evaluation.

Table 1: Comparison of data collection methods

	Kenya	Rwanda	Tanzania	Uganda
# Villages / locations	46	20	7	Not stated
# households per village / location	14	32	Varied	Not stated
Total # households	623	660	682	615
Criteria for inclusion	Households with mothers / caregivers of children under 5			
Confidence interval	95%			
Primary data collection on stunting, wasting and underweight	Y			
Standardised tools for household questionnaire	Y			
FGD/KII with				
CHWs	Y	Y	Y	Y
CVA team	Y	Y	Y	Y
Education representatives		Y		
Government leaders (local)	Y	Y	Y	Y
Village committees / nutrition committees	Y	Y	Y	Y
PWDs	Y	Y	Y	Y
Health centre managers / MNCH coordinators		Y		Y
Implementing partners	Y	Y	Y	Y
Project staff	Y	Y	Y	Y
Faith groups		Y		Y
U5 Mothers groups	Y	Y	Y	Y
Husbands or male partners		Y		Y
Vocational groups	Y	Y	Y	
Youth groups	Y			

Statistical program rationale

The consultant used a primary health indicator, proportion of pregnant mothers receiving 4 or more antenatal checkups (ANC), to determine minimum sample size. This was based on the following assumptions:

- The average proportion of underutilisation of ANC (less than 4 times ANC) in rural in the four countries is 63%.
- 95% power and 5% two-sided alpha.
- Design Effect (DEFF) of 3.2 [based on the average of 32 children per cluster and expected relative difference of about 10%]
- Precision of ± 2.1 [95% confidence intervals within point estimate]

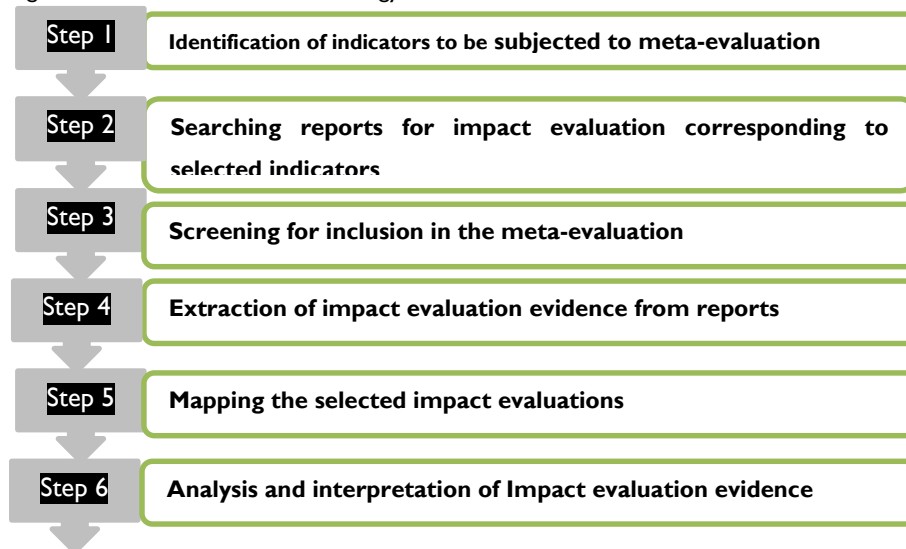
This produced the formula:

$$n = \left[z^2 * \frac{p * q}{d^2} \right] * DEFF$$

where; n = sample size; z = linked to 95% confidence interval; p = proportion of non-use ANC; q = 100-p, d = relative desired precision and DEFF = design effect. This ensures statistical significance.

Figure 2 below shows the sequential procedure for the impact evaluation that was adapted in this study.

Figure 2: Meta evaluation methodology



The baseline evaluation (BLE) conducted for each country project did not include all indicators relevant to drawing conclusions on improved health in project areas. In order to determine the unknown data point based on the values of known data points, mid-term evaluation (MTE) and end of project evaluation (EOPE), linear interpolation between two indicators was carried out. This method assumes a straight line (linear) relationship between the known points; it essentially means averaging the two rates over the interpolation period. The linear interpolation formula used in this study is described below:

$$R_{BLE} = R_{MTE} + \frac{(R_{EOPE} - R_{MTE})}{(t_{EOPE} - t_{MTE})} * (t_{BLE} - t_{MTE})$$

Where,

R_{EOPE} = known EOPE rate;

t_{EOPE} = years EOPE was conducted;

R_{MTE} = known MTE rate;

t_{MTE} = years MTE was conducted;

R_{BLE} = Unknown rate between R_{MTE} and R_{EOPE} or the vice; and

t_{BLE} = years BLE was conducted

Data analysis used the commands of Stata version 13.1ⁱⁱ. Data sets were extracted by each country consultants and meta-evaluation analyses were conducted summarising the prevalence of the 13 key MNCH indicators. All studies were stratified by district within each country using the metaprop command with random-effects model in Stata. Metaprop was used to pool proportions and their corresponding confidence intervals.

Participation and measures

Field-based research was planned and delivered in participation with community stakeholders including CHWs, CVA groups, livelihoods groups and health centre workers. Together, these groups directed evaluators to appropriate sampling of qualitative informants, helped with focus and tools of enquiry, and directly participated as informants either individually or in groups. Project staff were also closely involved with the evaluation, as guides and as informants contributing their own perspectives and learning from the process.

Three demographic groups contributed to indicator (quantitative) measurements:

- **Women aged 15-49 years who had given birth to a child in the previous two years:** These respondents were visited in their homes to collect memory-based information on their experiences of maternal and child health services and behaviour. In many cases, other family members were also present to contribute perspectives. The respondents included people living with a disability; however, the results from these surveys were unfortunately not able to be disaggregated. Questionnaires for these women included enquiry on the following: the woman's background and situation; child under-five mortality; volume of ANC; quality of ANC; place of delivery; family planning and child spacing; sexual behaviour and HIV (human immunodeficiency virus).
- **Children under two years of age:** Enquiry for this group also took the form of a memory-based questionnaire for mothers or carers. The questions covered age, birth registration, infant and young child feeding practices including breastfeeding, new born care, prevalence of malaria and diarrhoea, DPT immunisation and knowledge of ORT.
- **Children under five years of age:** This group took part in direct anthropometric measurements, either during the household visits or as part of other ongoing monitoring services in the community. The team measured children's height, weight and mid-upper arm circumference with assessment for oedema. Each enumerator carried a SECA scale and measuring boardⁱⁱⁱ. Children under age 2 were measured lying down on the board (recumbent length), and standing height was measured for all other children. Additional anthropometric data comes from monitoring records at health centres within project catchment areas, and overarching statistics on maternal and child deaths from government records.

Qualitative enquiry focused on World Vision's contribution to indicator outcomes, stakeholder satisfaction with the projects and their value, and unexpected positive or negative results. To collect this information, evaluators conducted a series of interviews with community and government representatives, based on shortlists provided through community and project staff consultation.

Ethical considerations; data storage and privacy

Participants were given informed consent to sign before taking part in the survey, including assurance of anonymity and a description of how the data would be used. For illiterate participants, informed consent information was read aloud and signed.

The evaluation has been intended to form part of feedback loops between World Vision and partner communities. Findings and conclusions from both national and meta evaluations have been shared with participating communities and stakeholders for validation and contextualisation. The information will be used now and in the future to shape programming for MNCH in similar contexts.

The data was collected using tablet, written forms, tape recorder, session notes and transcripts. Survey data was posted daily to a central online database, while data from key informant interviews and focus groups was collated and translated over time. This data is now stored in electronic form securely with each WV office.

Limitations

The research methodology's focus on quantitative evidence of change as a result of the program is sufficient to deliver reasonable findings, yet with several acknowledged limitations to both data accuracy and to resulting logical conclusions. They include:

1. **Discrepancies between baseline, mid-term and endline surveys:** The baseline was conducted using a smaller sample size (and thus decreased confidence level), and with a focus on health and nutrition indicators. It did not provide starting levels for associated causes of poor health and nutrition such as livelihoods, diet diversity, WASH and food security. Thus, while these aspects of the project were measured in 2016, no comparison to 2010 rates was available. The choice to estimate missing indicators using linear interpolation bears some risk in under/over-estimation.
2. **Mistiming of field research:** Particularly in food-insecure areas, seasonal discrepancies in nutrition levels and diet diversity are common. While the baseline and endline occurred at around the same time of year, similar data collected for the mid-term review was sampled at a different time of year, and its comparison value is reduced as a result.
3. **Limitations of quasi-experimental comparisons in complex and contextual change:** A full experimental approach, comparing target groups with control groups, is rarely relevant, or even ethical, in social change survey. The importance of context in health and nutrition barriers reduces the significance of comparing one geographical area against each other, even in the same district. The selection of districts considered particularly health-vulnerable also decreases relevance of comparison of local data with national. The only option left, to compare beginning with end in the same location, is a common and accepted approach to project impact evaluation, but produces results and lessons that may also be less relevant outside the local area.

4. **Sample bias:** Random sampling on a single criterion (as well as the willingness of the household to take part) precludes further demographic sampling from being applied. Though weighting has been applied based to the results to ensure proportional representation of different types of people where relevant, the possibility of sample bias remains.
5. **Recall bias:** The household survey has been based on self-reporting, which is subjective and often based on how an individual remembers something, rather than how it was. Some tools produced a score based on multiple questions to reduce this bias; however, it cannot be fully avoided.
6. **No variable for disability:** Though people living with a disability provided qualitative feedback, a variable for disability was not included in household surveys. This makes quantitative results for disability inclusion in healthcare are less conclusive than other indicators.
7. **Uganda's elections:** At the time of data collection in Kitgum, preparation for elections was leading to increased travel, particularly for those involved in or motivated by politics. It is likely that random sampling of households during this time would have different demographic patterns from the baseline undertaken in a period of low mobility.
8. **Challenges in quantifying policy partnership significance or results:** A significant proportion of project efforts in each country focused on improving and strengthening partnerships that could contribute to policy improvement longterm. These improvements sit within the lower phases of the Theory of Change (see Annex I; also Figure 1) and are not easily evidenced or quantified. To overcome this, case studies based on triangulated perspectives will be included^{iv}; however, a proportional improvement will not be reportable.
9. **Determining cause and effect:** The cross-sectional design of the meta-evaluation shows results, but does not describe cause and effect behind these results. Attempts have been made to address this through the inclusion of simple case studies to support case-based change theory, which in turn supports the achievement of the program's Theory of Change.
10. **Data collection challenges:** Enumerators reported that their mobile phone batteries did not last through a days' work, affecting their ability to upload data in real-time as planned. In addition, underestimation of the resources required for quality translation reduced qualitative data availability, with the possibility of misinterpretation of questionnaires and viewpoints.
11. **Weighting towards under-2s:** The primary focus of community review was on households with children born in the last two years. This resulted in the anthropometry being focused on children aged 0-23 months.

Section 2: Program strategy and supporting factors

Working with fathers and male decision-makers in community-based structures has been a strategy for change in all project contexts. Interviews during evaluation found that men's involvement in maternal, child and reproductive health had increased in all contexts. Husbands were more likely to accompany their wives to ante-natal and post-natal visits, and to discuss family planning more openly. Committees had a greater female membership, including women leaders or chairs, and their input and ideas on livelihoods, community development and health systems were having clear influence.



Strategy overview

EAMNeCH Objective 1:

- *Marginalised people have sustainable access to the services they require*

EAMNeCH Outcomes:

1. *Improved and equitable access to MNCH services*
2. *Adoption of positive nutrition and WASH practices at community level leading to improved MNCH.*
3. *Favourable policy environment for improved MNCH.*

EAMNeCH Objective 2 (Not included in research scope:

- *Policy and programs are strengthened through learning, collaboration and exchange'*

The EAMNeCH program is a strengths-based approach, ensuring that appropriate partners including CSO/CBO and government have what they need to understand, participate in and own positive health outcomes. The integration of advocacy and programming to improve not only policy but also implementation of policy emphasises the accountability of service providers and the community benefits of changed behaviour towards women and marginalised groups.

EAMNeCH implementation has been a series of interlinking initiatives, each led and joined by different groups or agencies based on their relevance and significance within different community sectors. World Vision's role in this has been to ensure the skills and resources are available for these initiatives to be successful and sustainable. World Vision provided technical expertise and reach on health and public health techniques suited to a rural African setting, beginning with community-level health systems and the enhanced capacities of CHWs but also branching out to policy, equity and accountability through building community-level advocacy and direct partnerships with local governments. This occurred within a framework of stakeholder engagement aiming to resolve peripheral issues such as gender and disability exclusion, youth vulnerabilities, livelihoods and markets, all of which were known to be contributing to the prevalence of poor health and nutrition.

A full Theory of Change is available at Annex I.

Table 2 on the next page summarises the key approaches taken in each context to achieve the Theory of Change, and shows that while many were common to all four, others were strategically viable in fewer locations.

Table 2: Summary of key approaches

	Kenya	Rwanda	Tanzania	Uganda
Citizen accountability (CVA)	Y	Y	Y	Y
Support and advocacy to policy implementation	Y	Y	Y	Y
Training professional health workers (nurses, doctors)	Y	Y	Y	Y
Advocating for inclusive services	Y	Y	Y	Y
Building or providing inclusive services	Y	Y	Y	Y
Community-based nutrition programs (PD Hearth, nutrition centres)	Y	Y	Y	Y
ttC and family planning for CHWs	Y	Y	Y	Y
Support to maternal, obstetric and baby-friendly services for hospitals	Y	Y	Y	Y
mHealth technology and systems support	Y	Y	Y	Y
Training CHWs	Y	Y	Y	Y
Support groups – mother-to-mother	Y	Y	Y	Y
Birth registration	Y	Y	Y	Y
Hygiene and childcare campaigns	Y	Y	Y	Y
Training and capacity building of health ministries/ associated duty bearers	Y	Y	Y	Y
Women’s empowerment and market share	Y	Y	Y	Y
Food security and improved livelihoods	Y	Y	Y	Y
Parental knowledge; father/partner responsibilities	Y	Y	Y	Y
Agricultural practices and networks	Y		Y	Y
CHW-AIM	Y	Y	Y	Y
Youth participation / youth services	Y			
Public private partnerships on health service	Y			

Supporting factors

As a program focused on social change and empowerment, the EAMNeCH program operated within a complex map of supporting factors and actors, including the Ministry of Health as a key driver. This increased the complexity of operations but was central to the Theory of Change and the program's approach to holistic and sustainable social value outcomes. The pooled analysis of results in Section 3 of this report is presented in full acknowledgement of the contribution of these other actors, and recognises that where externally measurable change has occurred, EAMNeCH is just one part of the full range of mechanisms behind that change. Case studies in Section 4 explore a selection of 'value for money' outcomes in terms of their causal mechanisms, for a better understanding of the way different factors and actors have come together through the EAMNeCH strategy.

World Vision supporting factors:

- **Global strategy:** Maternal, newborn and child health is a core aspiration for World Vision's child wellbeing targets globally. In East Africa, improvements to maternal and child health are clearly articulated in the regional strategy along with a number of models for bringing about these improvements. This project happened at a time when World Vision was seeking ways to make the evidence-based '7-11' MNCH/N package^y operational. This stimulated innovation and learning around the application of new models (see Annex 2). As a result, EAMNeCH project managers in the four countries were able to call on centralised expertise from the regional office, global health and nutrition teams, and World Vision Australia's subject matter experts in MNCH.
- **Existing World Vision presence:** In three out of four contexts the project took place in areas where World Vision was already operating sponsorship programs, and the fourth (Uganda) in a World Vision grant-funded area rehabilitation project location. Health approaches in these programs, supported by national and regional technical advisors, were also included in or enhanced by EAMNeCH design and annual planning: for instance, mobile health technology, contribution to UN's 1 Million CHW campaign, community-based nutrition clubs and adoption of the 7-11 approach by local and national government.

- **Parallel health campaigning:** In all countries where EAMNeCH took place, the national offices were also implementing a globally coordinated advocacy campaign on maternal and child survival, Child Health Now. Many of the local activities including CVA, Citizens' Hearings and health fairs were delivered in partnership between the two initiatives and their shared goals.

Figure 3 below shows the interconnecting strategies and goals of the four World Vision interventions in place in the AACES EAMNeCH countries.

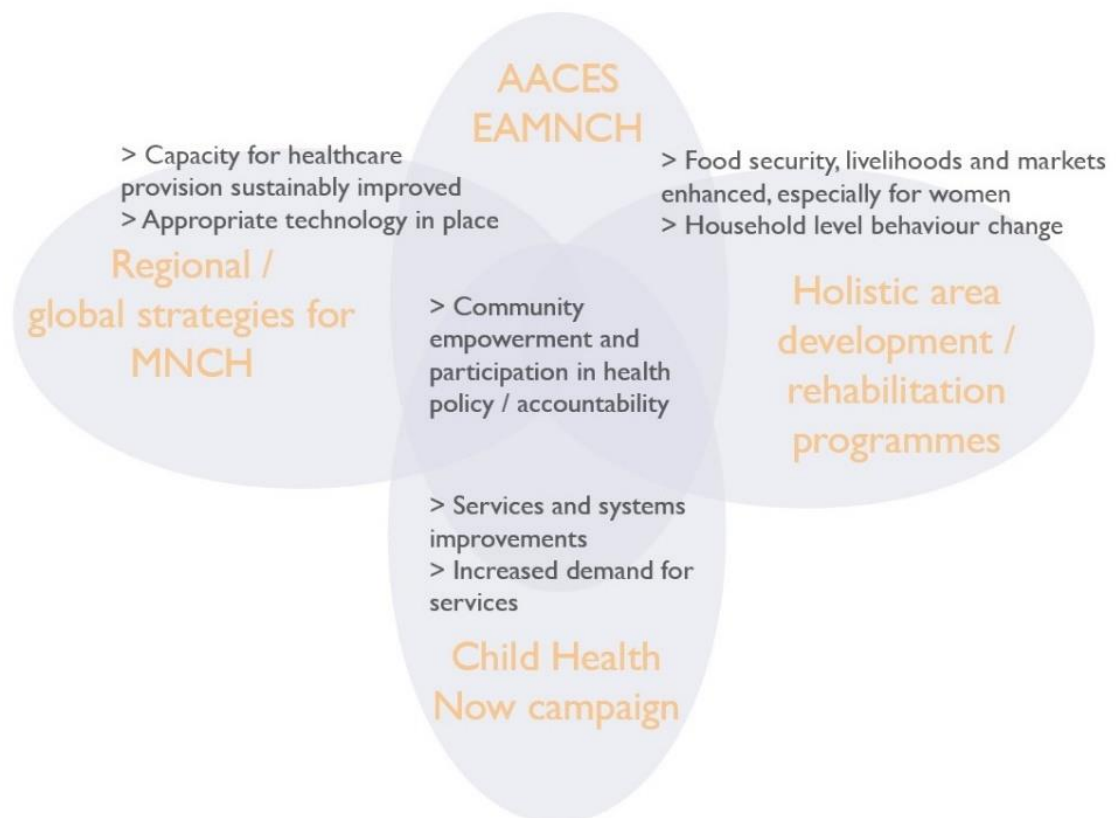


Figure 3: Interconnecting World Vision strategies and operational goals

External supporting factors:

- **Positive partnerships with government agencies:** The project's emphasis on policy innovation and implementation brought partnership to the forefront of activities. Baselines for each project found national strategies and often strong policies in place. All four countries were stable democracies reporting regularly on progress towards the MDGs including in maternal and child survival. Challenges existed in translating national commitments into local solutions where government could take appropriate responsibility for health services and public health initiatives.

Thus, one of the most important supporting factors to project outcomes was the engagement and contribution of local governance systems including relevant ministries and healthcare providers. The Ministries of Health in all four countries were key actors and leaders of EAMNeCH strategy. Not only in healthcare services but also in birth registration, agriculture and livelihoods, government partners were already seeking ideas and partnerships that could help them deliver results.

- **The NGO space:** A variety of local and international actors were also engaged locally or nationally with maternal and child mortality and its causes including under-nutrition, poor sanitation and hygiene, lack of support for family planning, unsafe birthing practices and low rates of clinic attendance. Many of them, such as Marie Stopes International, ActionAid and Plan International, became formal project partners in more than one context, bringing technical expertise and networks that might otherwise have been challenging for World Vision.
- **AACES, DFAT and learning:** The role of DFAT and other AACES partners in EAMNeCH merits acknowledgement as a trigger for learning and reflection on solutions to inequity in East Africa. An objective of the program design (not included in the evaluation scope) is the increased capacity for effective and targeted international assistance through AACES learning. Having this included in the project logframe enhanced efforts for joint innovation and learning between health, WASH and livelihoods networks. It also encouraged a specific focus on learning about approaches to disability and gender programming, both essential for meeting longterm DFAT objectives to reach the most marginalised.

Section 3: Impact Evaluation (meta-evaluation)

Indicators of stunting, wasting and underweight rates in children can be interpreted as goal-level outcomes because of the overwhelming evidence that good nutrition is crucial to child survival. The meta evaluation found that though all indicators had improved between baseline and endline in pooled analysis, individual results varied and seasonal food insecurity remains a challenge in some contexts.



Introduction

For this discussion, indicators have been grouped loosely by program outcomes, but with acknowledgement that in several cases, indicator improvements will contribute to both outcomes.

Contributing to Outcome 1: Improved and equitable access to MNCH services

- *Antenatal care visits*
- *Post-natal health checks*
- *Iron and folic acid supplementation*
- *Immunisation (diphtheria, pertussis and tetanus, DPT)*
- *Family planning*

Contributing to Outcome 2: Adoption of positive nutrition and WASH practices

- *Exclusive breastfeeding (EBF)*
- *Early initiation of breastfeeding (EIBF)*
- *Complementary feeding (CF)*
- *Stunting*
- *Wasting*
- *Underweight*
- *Handwashing with soap*
- *Births with skilled health personnel*

Relevance of indicators

This section provides pooled data and summary analysis of 12 health indicators key to the objectives of EAMNeCH.

Indicators were selected because of strong existing evidence that they lead to reductions in maternal and child mortality. Nutrition for pregnant and lactating mothers is enhanced by **iron folate supplements** which reduce anaemia and increase chances of survival for both mother and child. It is known that **family planning, ante-natal care, skilled birth attendance and early initiation of breastfeeding** will save children's lives, and that ante-natal care will also decrease the likelihood of perinatal/postnatal maternal mortality. **Post-natal care** protects mother and child within the first 28 days, when around 45% of all under-five deaths currently occur^{vi}. After this, survival is enhanced by immunisation (in particular the universally available **DPT immunisation**), by good hygiene including **handwashing with soap**, and by appropriate feeding practices: **exclusive breastfeeding** to six months, and balanced **complementary feeding** afterwards. **Stunting** prevalence is an indicator of longterm under-nutrition, often starting in gestation, while **wasting** and **underweight** indicate more immediate and reversible conditions, sometimes linked to seasonal food insecurity.

Based on empirical evidence, applying World Vision's '7-11' intervention package for mothers and children will reduce the prevalence of stunting, wasting and underweight, and so this indicator can be interpreted not only as a marker of decreased risk for children but also of the effectiveness and reach of '7-11' as a MNCH strategy.

At project level, consultants researched several more indicators. The results for these are available in separate project reports. However, not all were relevant across all contexts. The final list chosen for the meta evaluation reflects cross-context significance as well as availability of data from all four projects.

Each indicator has been followed over the space of three timeframes: baseline in 2010/2011, mid-term in 2014 and end of project in February 2016.

Summary of results

Pooled comparison for results: is change evident?

Charts 1 and 2 below show two alternatives for viewing the results of the questionnaires and measures. Chart 1, percentage change, looks at the increase in percentage points comparing baseline to endline. Chart 2, proportional change, takes into consideration the starting point to look at the volume of change. For instance, a reduction in underweight children of 3.7% becomes more significant when the starting point of 18.4% is taken into consideration; this actually represents around one in four fewer children exhibiting underweight symptoms.

Chart 1

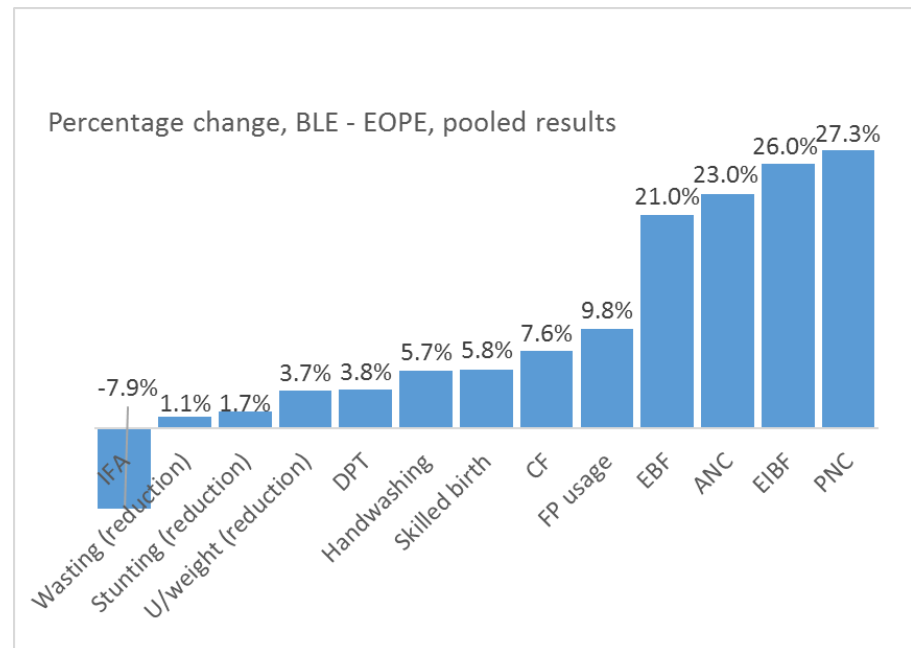
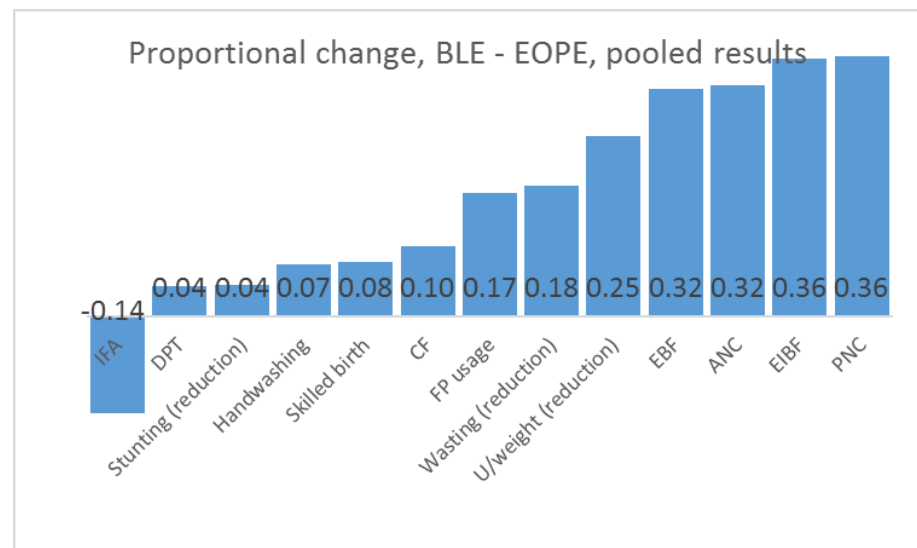


Chart 2



The charts provide high level insight into the following:

- Both percentage and proportional change of ANC and PNC have seen significant increase over the five years of the program, a result which can be linked to better systems and quality service as well as to the influence of the CHWs with women who are expecting a baby.
- Considering the low baseline rate of early initiation of breastfeeding, we see that this practice has increased by over one third, a result that indicates quality care and advice for mothers giving birth in health facilities or with the assistance of trained birth attendants. Exclusive breastfeeding has also increased by 13 percentage points, meaning that over 20% more women are now aware of and acting on sound nutritional advice.
- Rates of complementary feeding, handwashing and DPT immunisation have all increased, but as baseline levels on these were already high, not in significant proportions. DPT immunisation is nearly universal in these locations and handwashing in children also much higher than the national average.
- Anthropometric indicators – stunting, wasting and underweight – do not exhibit ‘magical’ levels of change but show signs of slowly reversing. The pooled baseline for stunting of around 40% reveals a significant nutritional shortfall in these areas to start with. Reduction of underweight and wasting is proportionally significant, though more can and must be done.
- Both charts show the decrease in women accessing iron folate supplements (IFA) despite an increase in usage measured at the mid-term evaluation. No explanation has been offered for this in national evaluations, and it is a key recommendation of this report to find out more about this trend.

Pooled prevalence for benchmarking: is it enough?

In the absence of specific rates of improvement in the project logframe indicators, the pooled analysis cites a median prevalence rate (PR) using the full five years of change: so, baseline, mid-term and endline rates, in all four locations, pooled together. The result, a historical median, gives a benchmark for a reasonable current rate. If a project’s current rate falls below the benchmark then it is fair to say that more needs to be done, while a project indicator above the benchmark implies reasonable progress or achievements within the timeframe. Levels of heterogeneity are also relevant to understanding this. If most or all prevalence rates fall below the benchmark, it can be read as evidence of an entrenched and particularly difficult barrier. Because of the diversity of context between the four settings, this becomes a generalised result which is likely to be relevant across other contexts in East Africa also.

Analysis of results against the historical median (the lowest rhombus in graphs following) shows that in general the indicators for behaviour change (ANC/PNC, EBF, EIBF, CF) show consistent and appropriate levels of improvement, while nutrition indicators (wasting, stunting) are not consistent. However, it is widely recognised that age-appropriate breastfeeding and complementary feeding protects children as they develop. Underweight rates are declining, with positive results in mothers' infant and young child feeding practices a likely contributor. Rates of stunting may reasonably be expected to decrease in the future, as children born in or after 2015 are cared for in different ways than previously.

The following pages provide detail of project-level and program-level results (meta-analysis). For each indicator, the range and historical median is specified and the significance of this discussed in terms of impact and implications for current and future programs.

4 or more ante-natal visits

Figure 4 reveals that the pooled prevalence of four or more ANC visits at the EOPE increased to 70.8% (95% CI: 58.1-83.6), compared with that at BLE of 47.9% (95% CI: 32.7-63.1), and at MTE of 50.8% (95% CI: 34.1-67.4).

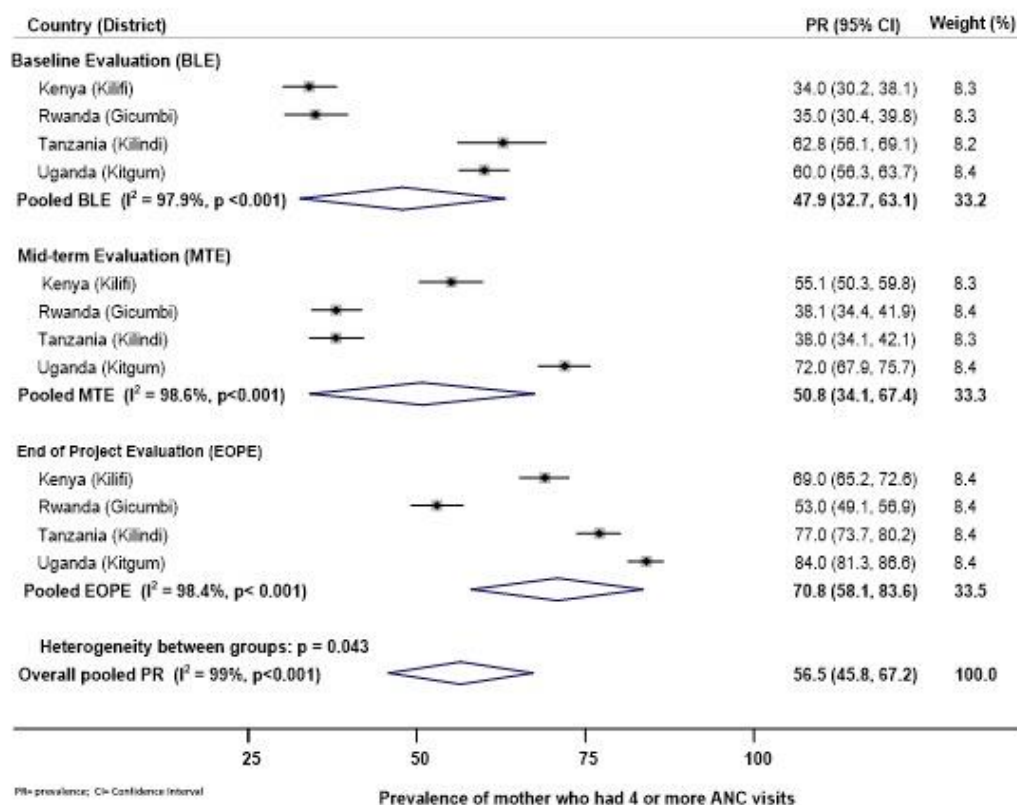
Impact and implications

Increases in this indicator in all four contexts imply positive impact in two closely linked areas: the uptake of existing services by expectant mothers, and improvements to services to reach more expectant mothers. The 22.9% rise in the prevalence of four or more ANC visits implies that there has been an increased awareness of the importance of establishing contacts with health professionals during pregnancy among women in the four East African locations. This can be linked in particular to the effective household influence of CHW with ttC, as well as to the improved facilities brought about through local action planning including CVA. Increased ANC visits will reduce the rate of maternal mortality, as well as birth complications with corresponding decrease in child mortality and congenital disability. Achieving an appropriate balance of quality services and uptake of those services in impoverished settings remains a core challenge for resolution by healthcare providers and programming partners.

Comparing with national rates

At EOPE, the prevalence of mothers who received or attended four or more ANC visits was higher in Kilifi (69%), Gicumbi (53%), Kilindi (77%) and Kitgum (84%) compared with 2010 RDHS (55%); 2014 KDHS (58%), 2010 TDHS (43%) and 2011 UDHS (48%).

Figure 4. Prevalence (%) of 4 or more ANC visits, by baseline, mid-term and end of project evaluation.



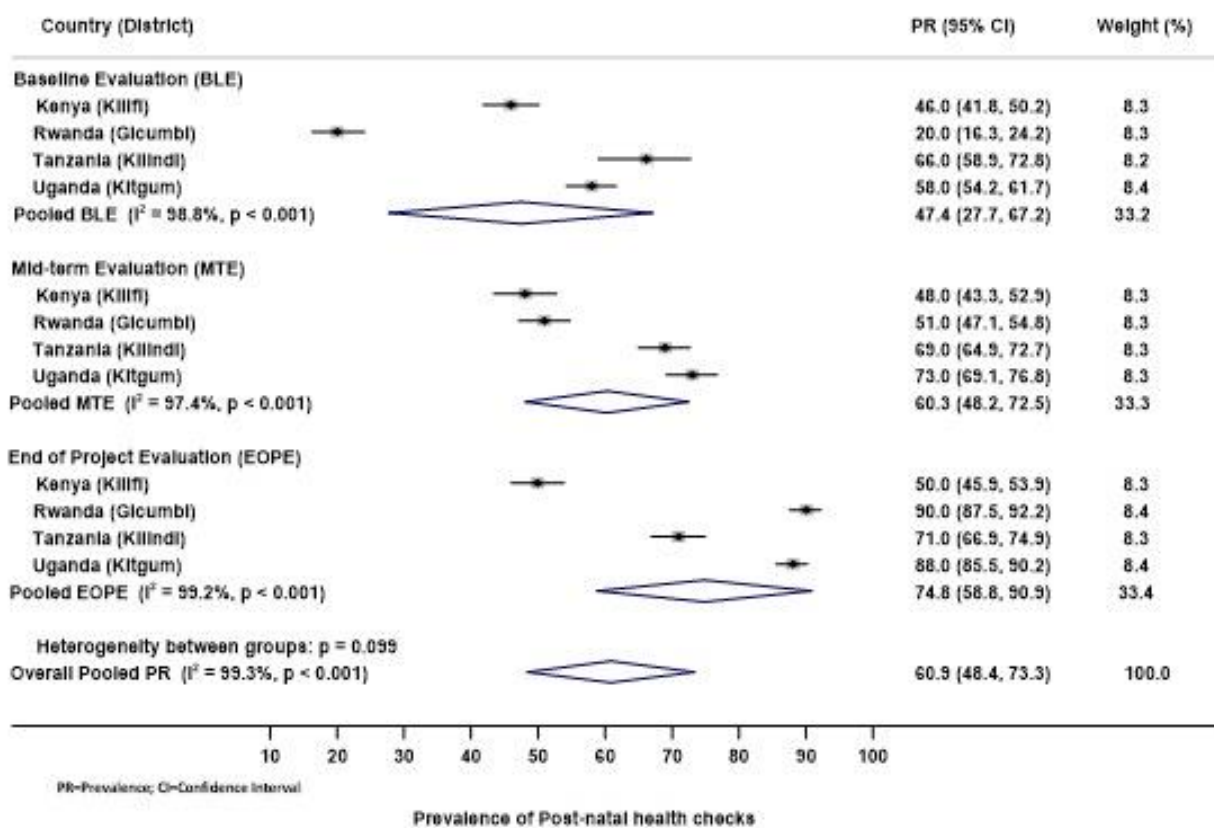
Post-natal health checks

Figure 5 shows the prevalence of post-natal health checks has increased in all EAMNCH contexts. The evaluation observed pooled prevalence increase of 78.4% (95% CI: 58.8-90.9) at EOPE compared with MTE 60.3% (95% CI: 48.2 –72.5) and BLE 47.4% (95% CI: 27.7 – 67.2).

Impact and implications

Compared with the BLE, there was a 27% rise in the prevalence of post-natal health checks by EOPE, which indicates an improvement in attendance and possibly also in availability of services (see Uganda case study on baby-friendly health facilities). Some of the factors that discourage mothers from attending postnatal checks have been found to include proximity, access to transportation and religion^{vii}. Projects have worked in these areas including with district and local governments and faith leaders. Comments from mothers and health workers also acknowledge the vital role of CHWs in highlighting the necessity of ANC/PNC for all mothers. The increase has significance not only for mothers but also in newborn survival, a key theme for current MNCH strategies globally^{viii}.

Figure 5: Prevalence (%) of post-natal health checks, by baseline, mid-term and end of project evaluation



Births attended by skilled health personnel

Figure 6 shows pooled prevalence of births attended by skilled health personnel at the EOPE increased to 75.4% (95% CI: 57.2-93.5), compared with that at BLE of 69.6% (95% CI: 48.3-90.9), and at MTE of 69.1% (95% CI: 45.4-92.8).

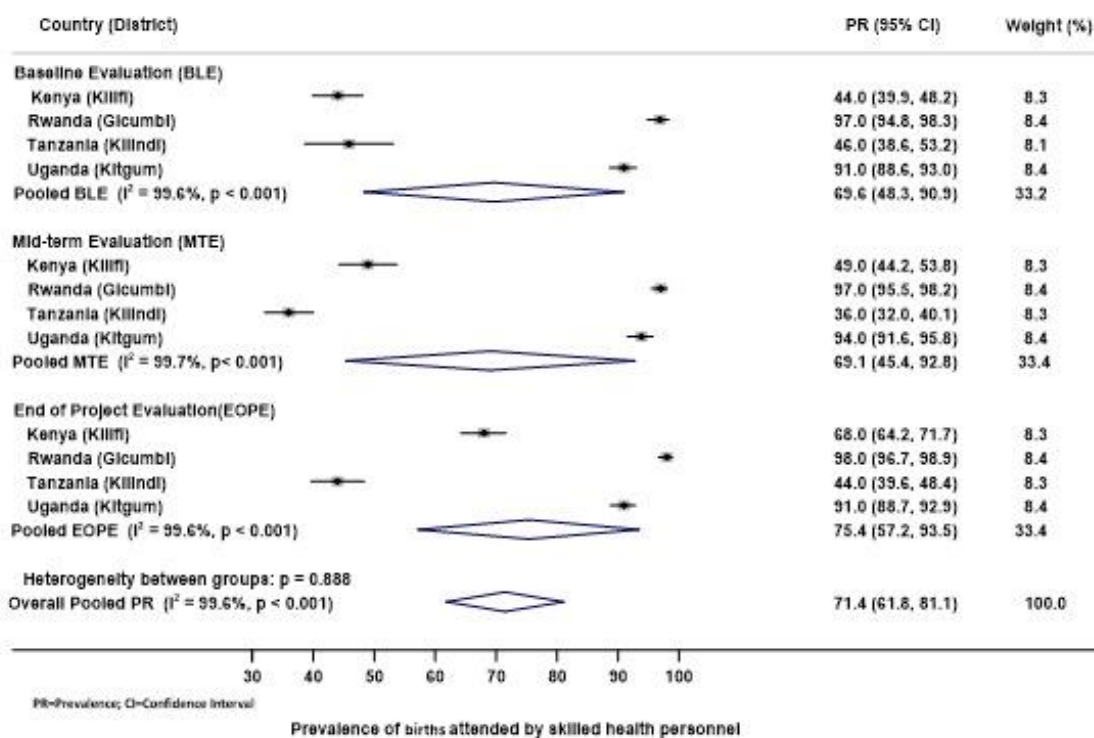
Impact and implications

The trend of home birth attended by a family member or local traditional midwife, who have never received information on safe sterile delivery and aftercare, is reversing across the developing world through concerted efforts to raise the profile of trained birth attendants. Globally around 70% of women had an assisted birth between 2006 and 2013^{ix}. Kenya and Tanzania started with less than 50% of births assisted by skilled attendants, while Rwanda and Uganda both had baseline rates of over 90%. The resulting shift in pooled analysis, an increase of around 6 percentage points, is due largely to improvements in Kenya; Tanzania's results show a slight reduction. Because these statistics appear discrepant with some of the stakeholder observations reported in Section 4, it is useful to note that the data is about women who have given birth any time in the last two years. Qualitative findings from end of project interviews imply current rates of assisted births at health facilities are higher in Kenya than indicated here, and at 100% (anecdotal) in both Rwanda and Uganda.

Comparing with national rates

At EOPE, the prevalence of births attended by skilled health professional was above national average in all contexts except for Kilindi in Tanzania: Kilifi (68%); Gicumbi (98%), Kilindi (40%) and Kitgum (91%) compared with 2014 KDHS (62%), 2010 RDHS (70%); 2010 TDHS (50%) and 2011 UDHS (52%)

Figure 6: % Births attended by skill health personnel, by baseline, mid-term and EOPE



Iron and folic acid supplement (IFA)

Figure 7 revealed that the pooled prevalence of IFA supplementation at the EOPE decreased to 58.4% (95% CI: 30.5-86.6), compared with that at BLE of 66.3% (95% CI: 50.5-82.1), and at MTE of 75.8% (95% CI: 60.6-90.1).

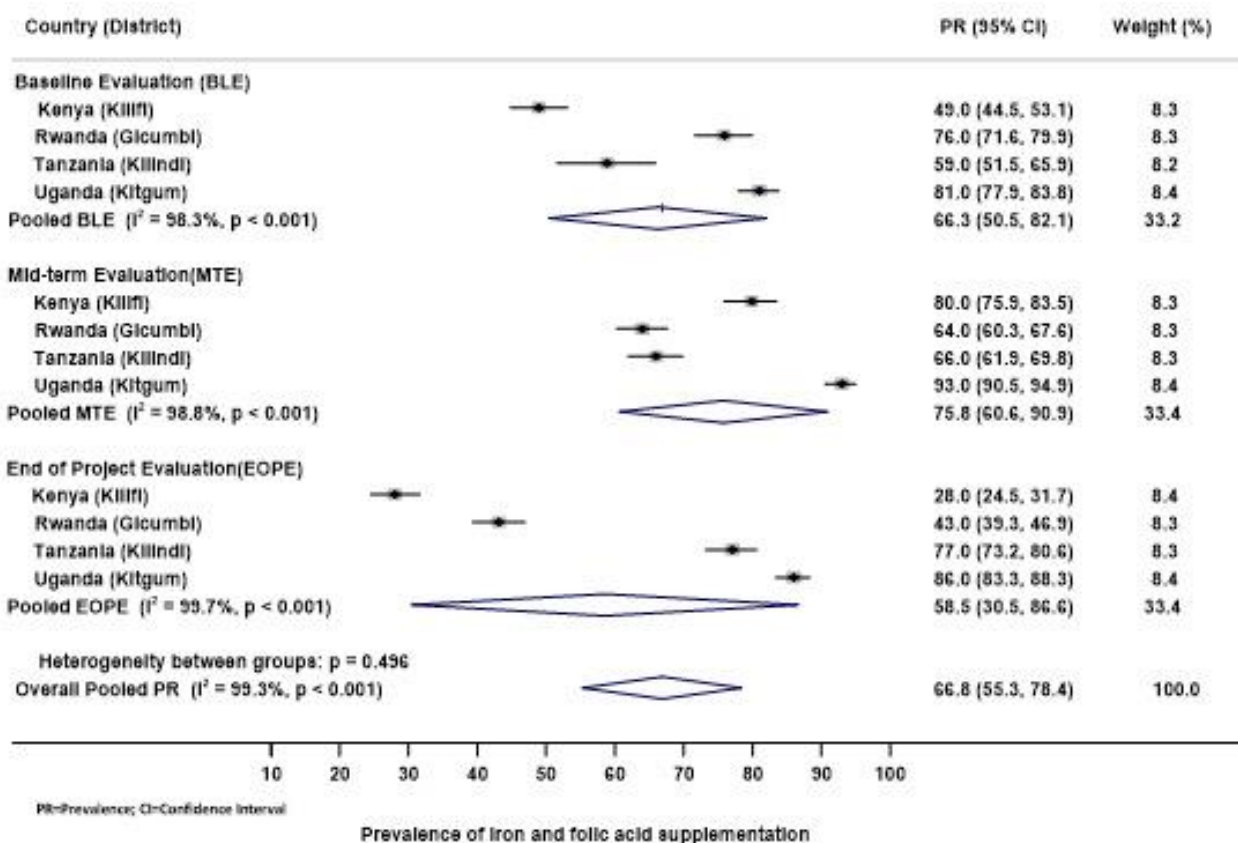
Impact and implications

Iron/folic acid supplement is a nutrition intervention for pregnant mothers which reduces anaemia, preterm birth and birth asphyxia. Ensuring universal (90% coverage) of IFA is considered crucial to the achievement of MDG5^x. Policies are in place for IFA at national level in all four EAMNeCH countries but uptake remains low. Collecting the data in isolation of specific enquiry on this does not tell us why this indicator delivered a negative result for the project. As IFA uptake is one of World Vision's '7-11' actions and was included in the training and materials provided to CHWs by projects, the decrease in usage (pooled, -7.9%) requires further inspection. Interventions in the four countries to reduce infant and child mortality need to install IFA use during pregnancy as a consistent element of neonatal care packages.

Comparing with national rates

At EOPE, the prevalence of mothers who received IFA supplementation was lower in Kilindi (43%) and Kilifi (28%) compared to 2010 TDHS (64%) and 2014 KDHS (67%). The EOPE prevalence of mothers who received IFA supplement was higher in Gicumbi (77%) and Kitgum (86%) compared with 2010 RDHS (73%) and 2011 UDHS (77%). The lower prevalence of IFA supplementation in Kilindi and Kilifi could be attributed to existing disadvantages such as poverty, poor services and low take-up of ANC compared to national average.

Figure 7: Prevalence of IFA usage, by baseline, mid-term and end of project evaluation



Diphtheria, pertussis, tetanus (DPT) immunisation

Figure 8 shows that the pooled prevalence of DPT at the EOPE increased to 90.2% (95% CI: 83.5-96.9), compared with that at BLE of 86.4% (95% CI: 77.6-95.2), and at MTE of 92.7% (95% CI: 88.8-96.6).

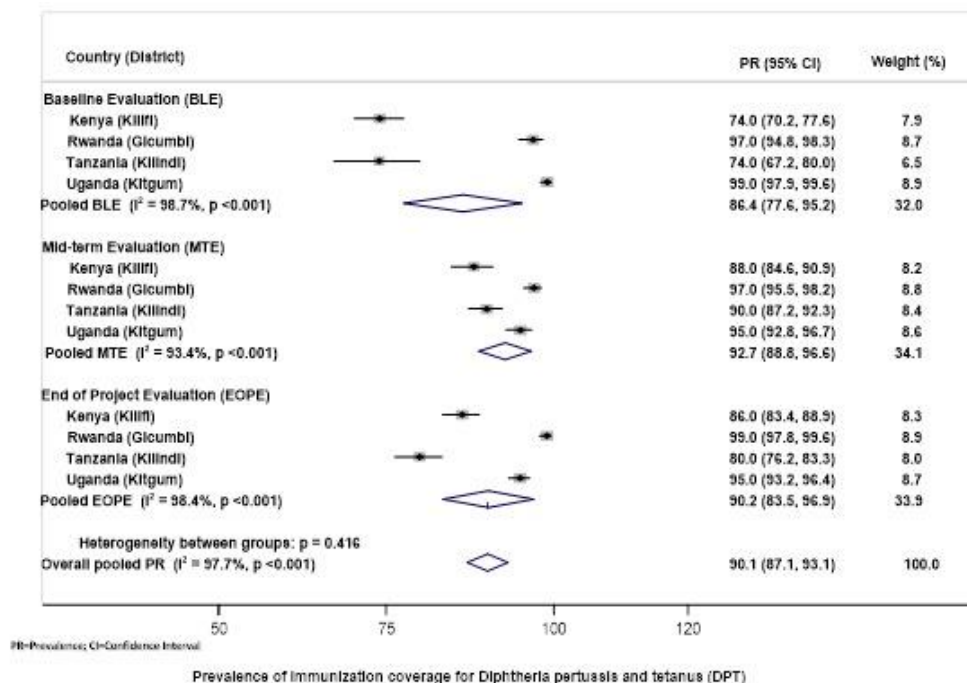
Impact and implications

Immunisation coverage for DPT is often used as an indicator for immunisation in general, as the most common and globally available immunisation. It is also delivered as a course, indicating that children have contact with health workers and monitors more generally. Immunisation rates in project areas were already high, though in some cases not yet universal (defined as 90% or more). Compared with the BLE, there was an increase of about 4% in the prevalence of DPT coverage in the four countries, bringing the pooled rate to universal standard and with all rates now above 80%. Immunisation was part of the '7-11' strategy and encouraged by CHWs and government public health campaigns in all contexts, and qualitative data indicates that access to immunisation services improved in some contexts. Though it can be concluded that child survival is greatly enhanced due to the high rate of immunisation against DPT, it is important to note that other vaccinations, such as whooping cough, measles or rotavirus, are also vital in saving lives.

Comparing with national rates

At EOPE, DPT prevalence was lower in Kilindi (80%) and Kilifi (86%) compared to 2010 TDHS (85%) and 2014 KDHS (88%), but higher in Gicumbi (99%) and Kitgum (95%) compared to 2010 RDHS (96%); and 2011 UDHS (66%). In Tanzania and Kenya, DPT is now combined with antigens for hepatitis B and haemophilus influenza (DPT-HB-Hib). The prevalence reported in 2010 TDHS and 2014 KDHS reports are for DPT-HB-Hib, making it difficult to compare the prevalence in a meaningful way.

Figure 8: Rates (%) of DPT immunisation, by baseline, mid-term and end of project evaluation



Current use of any family planning method

Figure 9 shows that the pooled prevalence of current use of any family planning method at the EOPE increased to 57.0% (95% CI: 20.5-93.5), compared with that at BLE of 47.2% (95% CI: 23.5-70.8), and at MTE of 49.5% (95% CI: 29.5-69.4).

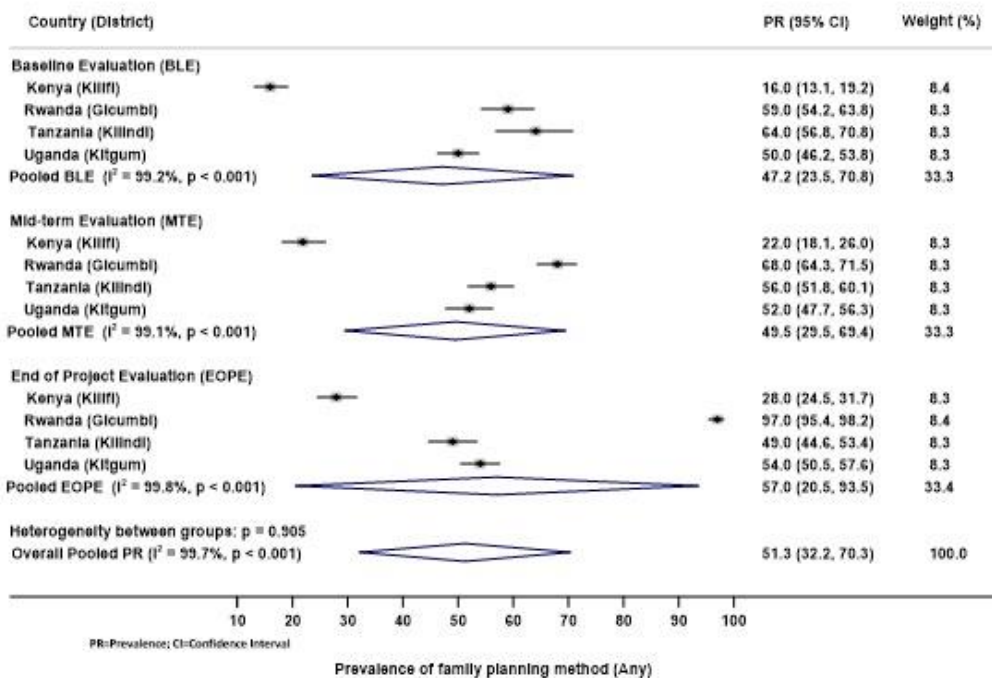
Impact and implications

Intention to use a method of contraception is an important indicator of the potential demand for family planning services. There was about a 10% increase in the prevalence of family planning methods when the EOPE is compared with the BLE in pooled analysis. This increase is made more significant by low starting rates in most contexts; for instance, Kilifi's measure increased from 16% to 28%. Rwanda's statistics are remarkable with 97% of women now reporting they use some form of contraception. The implication of this for each woman or couple is healthier timing and spacing of pregnancy as well as increased protection from HIV. As family planning is also an empowering concept for women, an increase in usage can also be interpreted as an increase in women's status and decision making within the home. All projects delivered activities to enhance the interest and responsibility of men in MNCH, with this result in mind.

Comparing with national rates

At EOPE, prevalence of current use of any family planning method is above national average in all contexts except for Kilifi in Kenya: Kilifi (28%); Gicumbi (97%), Kilindi (49%) and Kitgum (54%) compared with 2014 KDHS (65%), 2010 RDHS (52%); 2010 TDHS (34%) and 2011 UDHS (30%).

Figure 9: Prevalence (%) use of any family planning, by baseline, mid-term and end of project evaluation



Exclusive breastfeeding (EBF)

Figure 10 indicates that the evaluation observed pooled prevalence increase of EBF of 66.0% (95% CI: 47.1-86.1) at EOPE compared with mid-term 64.3% (95% CI: 32.0 –96.9) and baseline 44.9% (95% CI: 12.8 – 76.9).

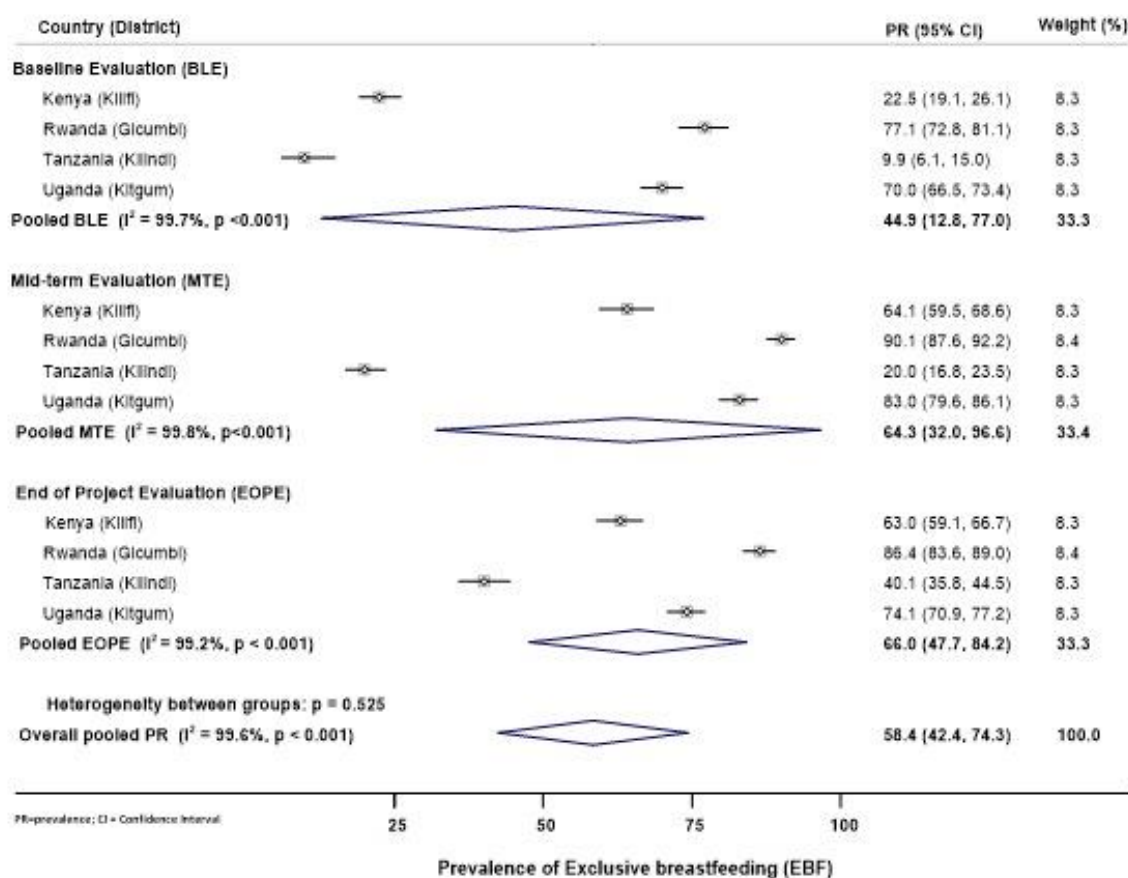
Impact and implications

Rates of exclusive breastfeeding have increased in all contexts. Compared to baseline, the prevalence of EBF has increased by around 21% at the EOPE. It is estimated that non-EBF in the first 6 months of life is contributing to 1.4 million deaths each year and represents 10% of the disease burden in children younger than 5 years in low-income and middle-income countries including these four East Africa countries^{xi}. Therefore the conclusion is that the increased rates will result in the desired final outcome of reduced child mortality. However, rates of EBF in Tanzania, particularly in Kilindi but also nationally, are among the lowest in the world, and the limited results of the project in that context indicate an urgent need for public health campaigns and incentives for EBF.

Comparing with national rates

At EOPE, EBF rates has increased in Kilifi (63%), Gicumbi (86%) and Kitgum(74%) compared with 2014 KDHS (61%), 2010 RDHS (85%), and 2011 UDHS (63%). However, a shortfall of about 10 percentage points was evident in Kilindi compared with 2010 TDHS (40% vs. 50%).

Figure 10. Prevalence (%) of exclusive breastfeeding (EBF). by baseline, mid-term and end of project evaluation.



Early initiation of breastfeeding (EIBF)

Figure 11 shows pooled prevalence of EIBF at the EOPE increased to 72.2% (95% CI: 59.2-85.3), compared with that at baseline of 46.1% (95% CI: 24.7-67.4), and at mid-term of 72.6% (95% CI: 59.6-85.6).

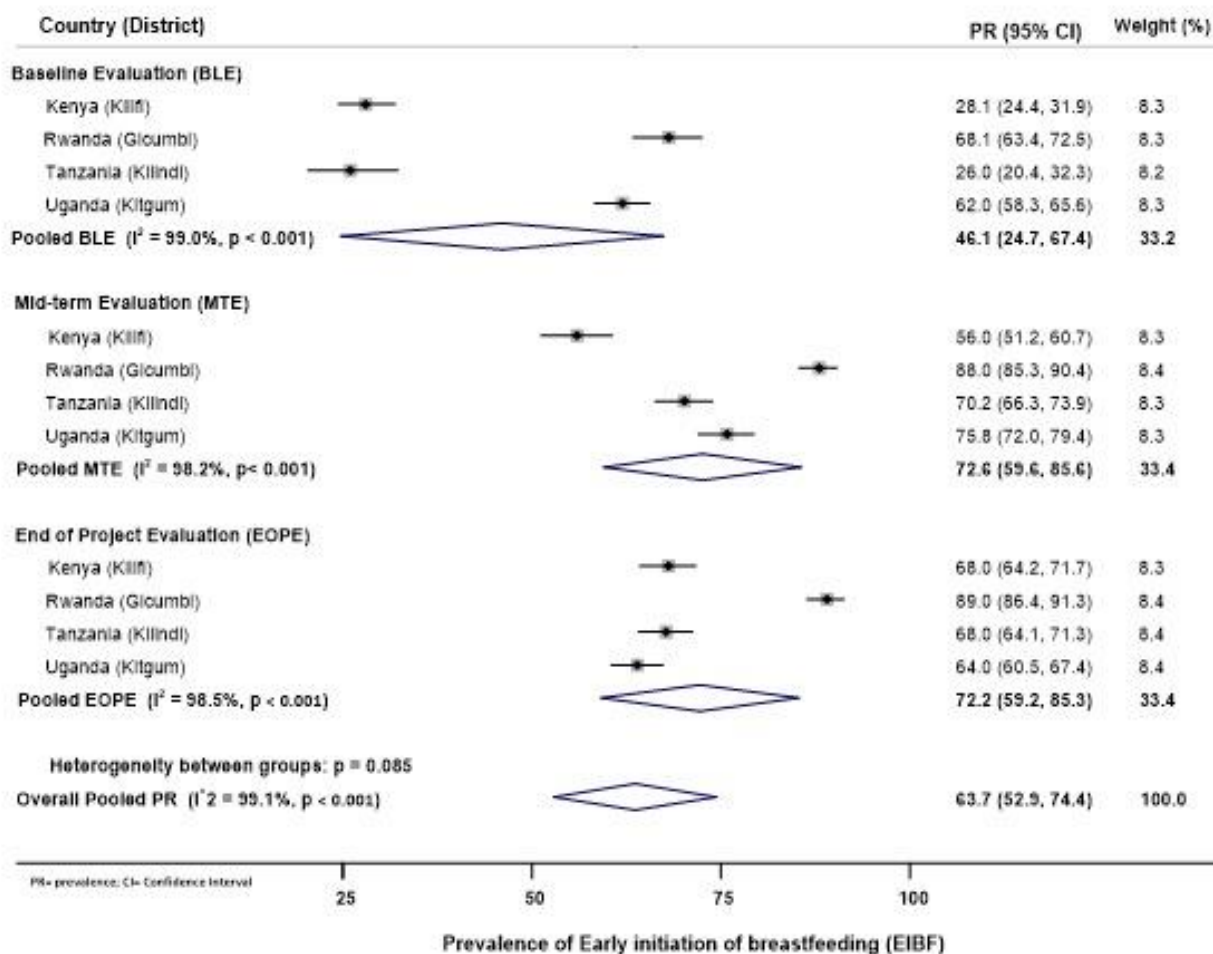
Impact and implications

As an indicator of good birthing practice and of nutritional advantage for newborns, EIBF has increased in all contexts, ranging from slight to significant. Compared with the baseline, there was a 26% rise in the prevalence of EIBF at the EOPE. A study undertaken in rural Ghana concluded that 22% of neonatal deaths could be prevented if all infants were put to breast within the first hour of birth^{xii}. Thus, though more can be achieved in this regard, the increase is likely to have saved lives since the projects began. The results also demonstrate the positive impact of improved knowledge in health workers and midwives and the uptake of skilled birth attendance as outcomes of the program.

Comparing with national rates

At EOPE, EIBF rates are above national average in all contexts: Kilifi (68%); Gicumbi (89%), Kilindi (68%) and Kitgum (64%) compared with 2014 KDHS (62%), 2010 RDHS (85%); 2010 TDHS (49%) and 2011 UDHS (53%).

Figure 11: Early initiation of breastfeeding (EIBF) prevalence (%) by baseline, mid-term and end of project evaluation.



Complementary feeding (CF)

Figure 12 indicates a pooled prevalence of complementary feeding of 77.6% (95% CI: 69.5-85.6) at EOPE compared with BLE 70.0% (95% CI: 55.2 – 84.9), an increase of 7.6 percentage points.

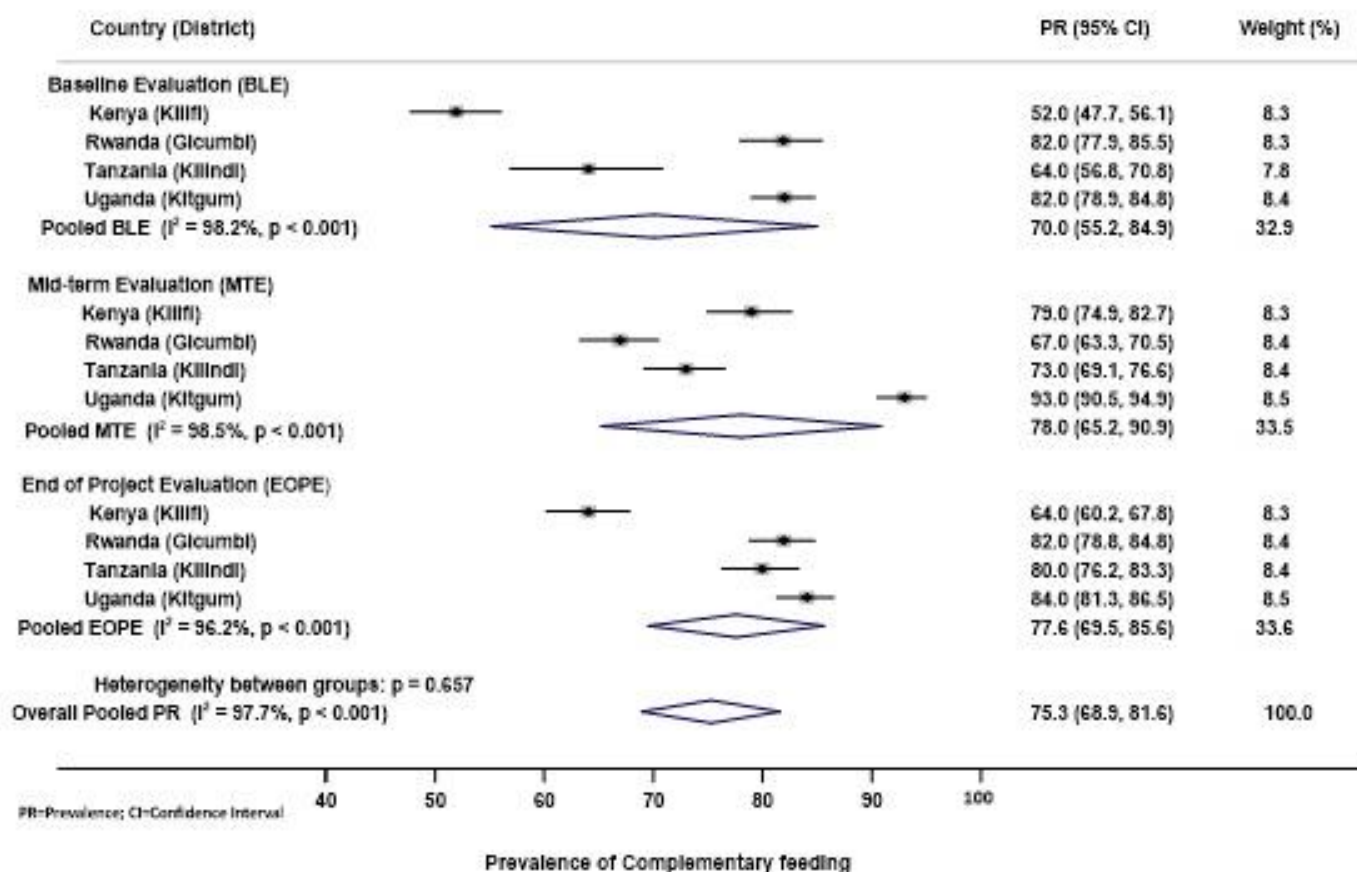
Impact and implications

Unlike breastfeeding, complementary feeding has not received the attention it requires, especially in low-income and middle-income countries. Rates of timely introduction of complementary feeding among children aged 6-23 months of age have increased in the EOPE compared with BLE, but apart from Kenya, the rate of increase is slight: 7.6 percentage points, or a proportional increase of less than 5%. The levels of CF have some correlation with EBF, as the implication when CF has not commenced by six months is that EBF has been taking place. However, there is evidence to the effect that breast milk alone is nutritionally insufficient for children aged six months and over. Children can face heightened risks of stunting and wasting if the balance is not achieved.

Comparing with national rates

At EOPE, prevalence complementary feeding among children aged 6-23 months, are above national average in all contexts except for Kilifi in Kenya: Kilifi (64%); Gicumbi (82%), Kilindi (80%) and Kitgum (84%) compared with 2014 KDHS (79%), 2010 RDHS (75%); 2010 TDHS (78%) and 2011 UDHS (69%).

Figure 12: Prevalence (%) of complementary feeding from six months, by baseline, mid-term and end of project evaluation



Prevalence of stunting

Figure 13 shows that the pooled prevalence of stunting among children aged 6-59 months at the EOPE decreased to 38.8% (95% CI: 26.5-51.0), compared with that at baseline of 40.5% (95% CI: 31.4-49.7), and at mid-term of 39.1% (95% CI: 27.6-50.5). Note that the nutrition charts should be read in reverse; above the benchmark for historical median denotes insufficient progress.

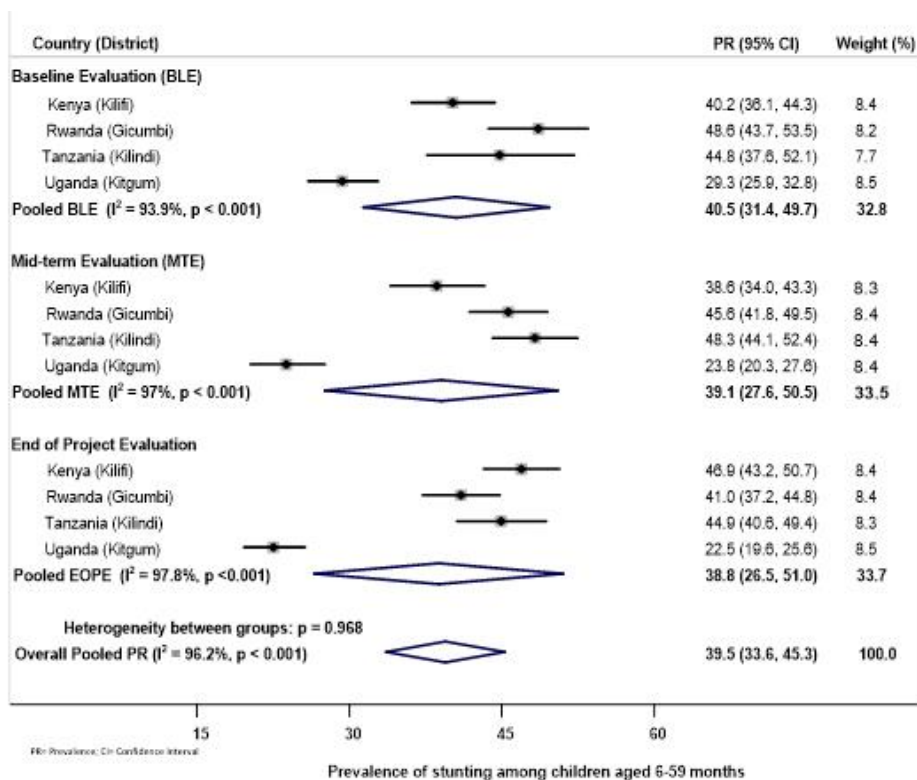
Impact and implications

The four locations for EAMNeCH faced grave challenges of child nutrition manifesting in high rates of stunting. With effects of stunting largely irreversible, it takes time for stunting reduction, as it must wait for a new and better nourished generation to be born. The reduction in this indicator, though visible, is at a smaller scale than other changes sought. Compared to BLE, the prevalence of stunting had declined at the EOPE by only 1.7 percentage points in the four countries. Noting the crisis levels at baseline, reductions in stunting of around 6 percentage points in Gicumbi and Kitgum indicate a downward momentum reflecting longer term change; however, the stagnation of results in Tanzania and increase in Kilifi require closer examination to understand the food security, diet diversity and child care causal factors that continue to stunt children's healthy development. Stunting has been known to be one of the leading causes of the global burden of disease in childhood, and 80% of this burden is in developing countries^{xiii}. Interventions need to continue targeting factors known to be associated with stunting in children, such as household assets, parental education, sanitation coverage, demographic outcomes and health utilisation, which all make important contributions to improvements in child height-for-age scores^{xiv}.

Comparing with national rates

At EOPE, prevalence of stunting among children aged 6-59 months, are below national average in Gicumbi (41%) and Kitgum (23%), but above in Kilifi (47%) and Kilindi (45%) compared with 2014 KDHS (25%), 2010 RDHS (42%); 2010 TDHS (41%) and 2011 UDHS (32%).

Figure 13: Prevalence (%) of stunting in children 6-59 months, by baseline, mid-term and EOPE evaluation



Prevalence of underweight

Figure 14 indicates that the evaluation observed pooled prevalence of underweight of 14.7% (95% CI: 6.2-23.1) at EOPE compared with BLE 18.4% (95% CI: 10.5 – 26, a 20% reduction in proportional terms. Note that the nutrition charts should be read in reverse; below the benchmark for historical median denotes good progress.

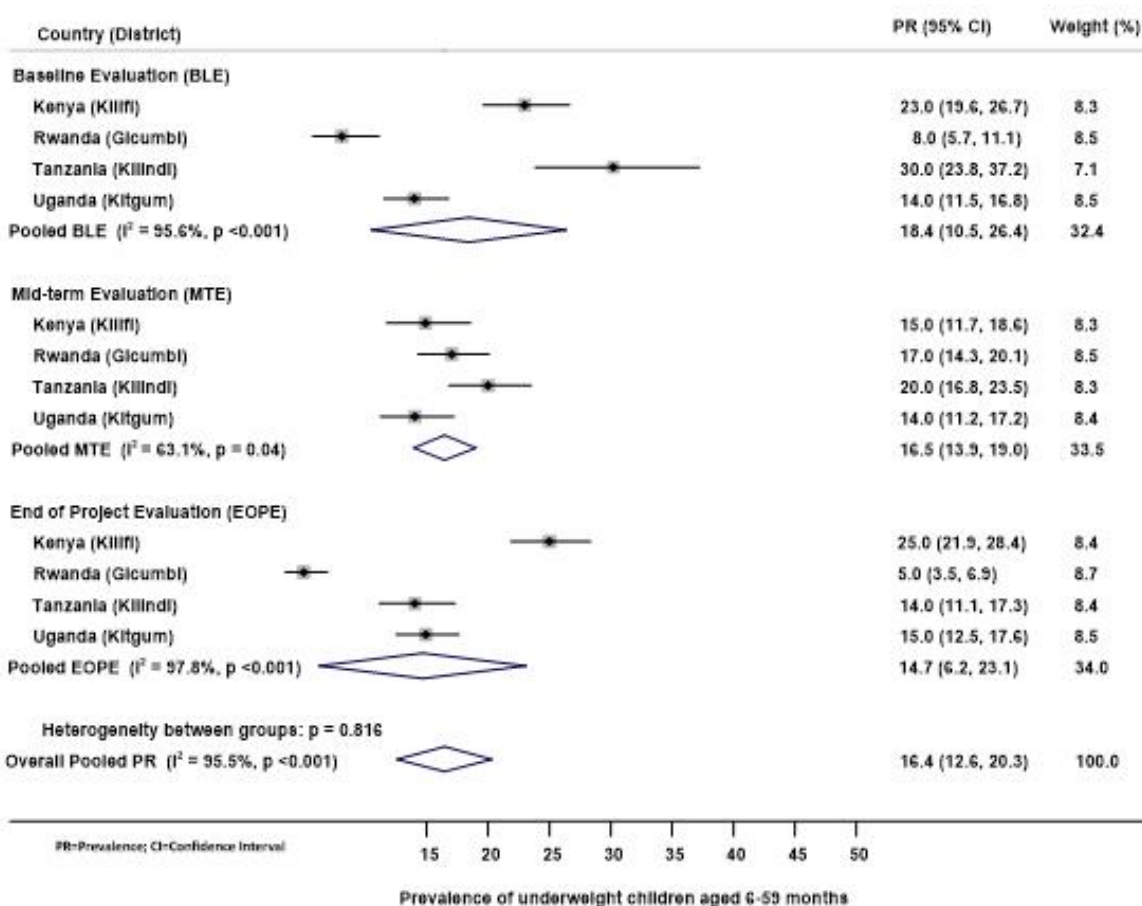
Impact and implications

Underweight is an important indicator for monitoring population nutritional status and health. The prevalence of underweight among children aged 6-59 months of age has decreased in the EOPE compared with BLE, by 3.7 percentage points. As the pooled baseline for underweight was measured at 18.4%, this actually shows a solid improvement, with nearly one in four fewer children presenting underweight. However, these results are driven mainly by a significant reduction (from 30% to 14%) in Kilindi. In two out of four contexts the rate increased slightly, and in all, underweight remains far above acceptable rates. A link between underweight, diet diversity and illness in children, as well as some gaps in complementary feeding practices, may be leading to growth faltering and underweight in children over the age of six months^{xv}.

Comparing with national rates

At EOPE, prevalence of underweight among children aged 6-59 months are either fairly constant or below national average in all contexts except for Kilifi in Kenya: Kilifi (25%); Gicumbi (5%), Kilindi (14%) and Kitgum (15%) compared with 2014 KDHS (11%), 2010 RDHS (12%); 2010 TDHS (16%) and 2011 UDHS (15%).

Figure 14: Prevalence (%) of underweight in children 6-59 months, by baseline, mid-term and EOPE evaluation



Prevalence of wasting **Impact and implications**

Figure 15 shows that the pooled prevalence of wasting decreased between BLE and EOPE (6.0% for EOPE Vs 7.1% for BLE).

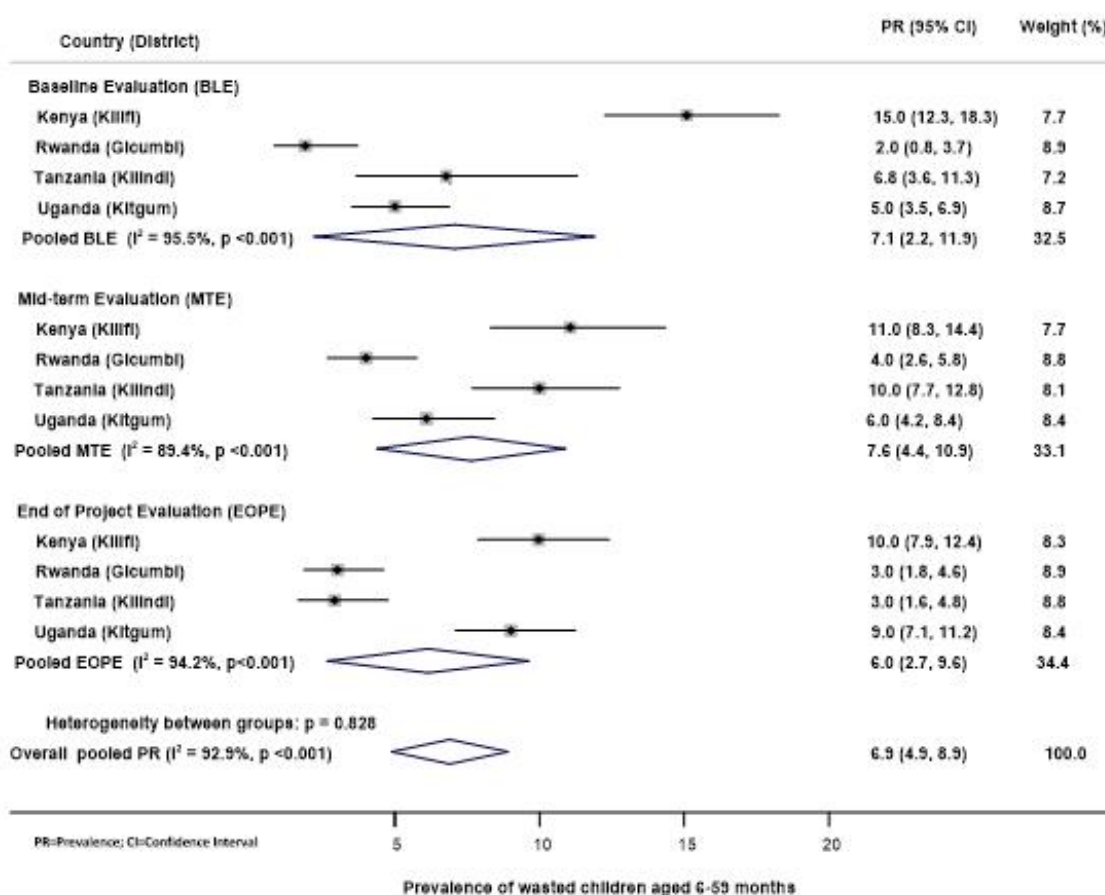
Note that the nutrition charts should be read in reverse; above the benchmark for historical median denotes insufficient progress.

Wasting reflects a deficit in body weight relative to height (or lengths) due to a deficit in tissues and fat mass. Caused by malnutrition, wasting in young children renders them extremely vulnerable to illness, and can also lead to stunted development and longterm for women, increased obstetric risk. The prevalence of wasting among children aged 6-59 months of age has decreased by 1.1% in project areas but, as with underweight, not as much as is needed, and inconsistently across contexts. Marked reductions were noted against baselines in Kenya and Tanzania, but Uganda and Rwanda's wasting rates increased both at mid-term and at EOPE. Because wasting can happen rapidly, this could be due to food insecurity at time of measurement, outbreaks of illness in communities, or inadequate diet diversity due to misunderstanding on complementary feeding. Understanding the trends here will be important for future interventions in these areas.

Comparing with national rates

At EOPE, prevalence of wasting among children aged 6-59 months is below national average in all contexts except for Kilifi in Kenya and Kitgum in Uganda: Kilifi (10%); Gicumbi (3%), Kilindi (3%) and Kitgum (9%) compared with 2014 KDHS (5%), 2010 RDHS (4%); 2010 TDHS (6%) and 2011 UDHS (5%).

Figure 15: Prevalence (%) of wasting in children 6-59 months, by baseline, mid-term and EOPE evaluation



Prevalence of handwashing with soap

Figure 16 shows pooled prevalence of hand washing at 79.3% (95% CI: 71.2-87.5) at EOPE compared with BLE 73.6% (95% CI: 65.5 – 81.7).

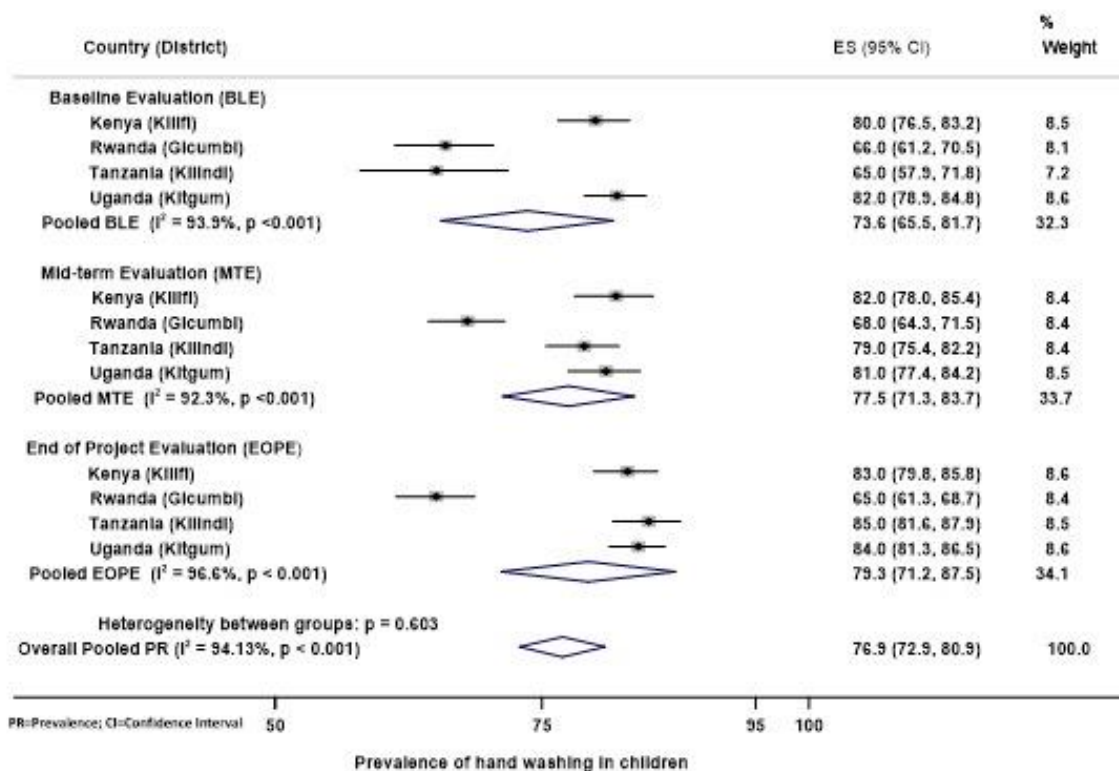
Impact and implications

Because the program did not aim to work within WASH infrastructure, its key contribution to the sector was in improving household hygiene practices, using among other indicators the rate of handwashing with soap. Diarrhoea and respiratory infections remain leading killers of young children in the developing world, and claim approximately 3.5 million young lives each year. Handwashing plays a major role in preventing the spread of these two leading killers of young children, as well as others ranging from the common cold to meningitis and hepatitis A. Handwashing had increased slightly from a BLE value of 73.6% to an EOPE value of 79.3% across the four countries; however, Kilindi project delivered significant change of 20 percentage points.

Comparing with national rates

At EOPE, the prevalence of hand washing is above national average in all contexts: Kilifi (83%); Gicumbi (65%), Kilindi (85%) and Kitgum (84%) compared with household prevalence reported in 2014 KDHS (52%), 2010 RDHS (25%) and 2011 UDHS (30%). However, it is worth noting that baseline rates were also above average. This could be attributed in part to ongoing WASH and hygiene promotion in the areas, including from WorldVision who was already present and working with children in each project location.

Figure 16: Prevalence (%) of handwashing with soap in households, by baseline, mid-term and EOPE evaluation



Section 4: Country contexts and key achievements

Projects monitored and shared their results regularly, including meeting with district and national government representatives to discuss sustainability and scale up of promising practices. The photo below was taken on White Ribbon Day 2015. It shows World Vision presenting publicly to the Tanzanian Vice President, the Hon. Samia Suhulu (back to camera), on experiences from Kilindi. Both district and national governments now have plans in place to continue training and equipping CHWs based on the Kilindi model.



Kenya

Outcome indicator highlights:

- ANC visits rose twofold (34% to 69%)
- EBF rates tripled (22% – 63%) and EIBF increased by 2.5 (28% to 68%)
- Family planning nearly doubled (from 16% to 28%, though still lower than any other context)
- Wasting reduced by one third (15% to 10%)
- Birth attendance rose by 50% (44% to 68%)

Kenya's governance system has been decentralising at a rapid rate since the beginning of the decade, creating an urgent need for capacity support to local and district governments, particularly in remote areas of the country. Kilifi County where the project took place has listed health as one of its development priorities. Services were sparsely located meaning that a significant number of county residents were travelling more than 10km to attend a clinic. Rates of attendance at medical centres were therefore low, including for pregnant mothers. Enhancing CHW numbers and the range of services they can offer has been a cost-effective and popular approach which can now be handed to the government to continue. The project also supported monthly integrated outreaches for basic services such as antenatal care, vaccinations and growth monitoring for children under five. Kenya EAMNeCH's focus on inclusion has built participation and leadership skills for women and people with disabilities, as they work together on income generation and social accountability initiatives.

Key achievements, Kenya

- EAMNeCH partnered with government to support CHWs in a variety of ways including recruitment, CHW kits, knowledge and training and performance-based incentives (see case study following). CHWs are now providing ttC including family planning and in some cases also providing WASH analysis and advice.
- A value chain addition agreement with Equator Kenya, a food processing business marketing the African birds' eye chili internationally, demonstrated the project's ability to work with the private sector. Equator Kenya is now sourcing and supporting produce from Kilifi community cooperatives. **This is the first cash crop from the area in two decades.** The project's support to the drought tolerant crop included micro-irrigation, capacity building, land selection and agronomic practices including selection of appropriately located land, while Equator Kenya has assured farmers directly of their commitment to the market.
- Over 90% of women who took part in the farming project now operate kitchen gardens. As most of them also care for children, women report that the ability to work from home, diversify household diet, and sell the surplus for income, is a significant change. With all farming cooperative committees now including women, and several led by women, these groups are generating small loans and other support directly from government budgets. Project monitoring shows that household income for members of farming cooperatives has increased and that children from these households are staying at school longer than before.
- CVA groups have worked through several cycles of accountability improvements based on their observations of shortfalls to health centres and services. This includes the release of government funds to improve infrastructure at health facilities, as well as the connection of revenue from the government health voucher scheme to the completion of a new

“These CHWs have been very useful to us. When we are pregnant, they advise you start ANC clinics earlier. There you are given IFAs, tested for HIV/AIDSThey also advise us to dig latrines to prevent diarrhoea ... to dry our utensils after are washed....they tell us to maintain environmental hygiene to prevent disease and they advise us to hand wash after using latrine.”

*Comments from mothers’ FGD,
Kilifi*

“We have (personally) seen benefits of taking children to hospitals. Earlier children were being taken to witchdoctors and they used to die. When we educated them they stopped traditional treatments for children, hence no child deaths.”

*Comment from CHW FGD,
Bamba*

maternity unit. After discussions with and evidence from Kilifi community representatives, the county has redistributed a portion of the county health budget to support sustainability of CHW functions, and changed its systems for monitoring and reporting causes of newborn deaths.

- After advocacy at national level, the Community Health Worker Assessment Improvement Matrix (CHW-AIM) tool has been adopted and contextualised by the Kenyan Ministry of Health as part of policy. This tool is now fully incorporated in the current Government of Kenya Community Health Strategy document which has been drafted and undergone pilot testing in some regions of the country.
- Healthcare access for people with disabilities faced challenges not only of transport but also of poor treatment and discrimination from health officers. After sensitisation sessions with nurses and other primary healthcare workers, data from Year 4 monitoring found that people with disability reported a significantly higher degree of satisfaction with services offered, including a more welcoming attitude from nurses. World Vision in partnership with Plan International will continue to coordinate the Kilifi County Disability Network whose objective is to enhance access to services and resources to PWDs in the County. In the network, a policy proposal on the implementation of the national disability policy for Kilifi County is in development.
- mHealth systems for CHW and clinic workers are well established, allowing mothers to consult and home-based carers to monitor and refer using their smartphones. Health facilities also use mass SMS to send bulk messages to registered mothers on scheduled ANC visits and outreach services.
- Support for farmers in Bamba saw the first successful harvest for over 2800 farmers in Year 3, using drought tolerant seeds or fruit seedlings. Farmers have honoured their agreement to harvest and share seeds with at least two other neighbours each year. The farmers reported increased yield, in some cases up to fourfold, as well as prolonged storage due to better preservation methods and equipment and preservation of vegetables.
- The project connected with local youth groups to enhance their participation in health awareness activities and CVA. As a result of public pressure from youth, one local hospital sourced a new ambulance for transport of patients from remote areas. While no data has been sampled to identify increased uptake of reproductive health services in this age group, peer-to-peer communication through the youth groups on reproductive health and healthy choices has been widespread.

Social value case study:

Motivating CHWs for quality and retention of services

Table 3: Statistical comparison, BLE/EOPE

	2011	2016
Women delivering in health facilities	21%	69%
Women receiving 4 ANC visits	34%	68.8%
Children up to one year fully immunised	65%	89%
Children exclusively breastfed	22%	63%
Number of Community Units	1	7
Number of CHWs in Bamba	30	210

The Kilifi MNCH Project sought a sustainable motivation model for Community Health Volunteers (CHWs) engaged in promotion of MNCH services to women and children in the remote location of Bamba, northern Uganda. When the project began in 2010, MNCH indicators for Bamba were consistently the worst in the county of Kilifi^{xvi}. Now, indicators of service utilisation and behaviour show significant improvements. Table 3, left, lists statistical comparisons that show three times as many women are delivering in health facilities, the number of women attending the recommended four ANC visits has nearly doubled and exclusive breastfeeding has jumped from less than one-quarter to nearly two-thirds.

These results indicate that the role of CHWs is working in Bamba. In terms of sustainability, there are seven times more CHWs in the area than before the project began, incentivised by opportunities for improved livelihoods and closer links with the Ministry of Health.

How did it happen?

Kenya's rural health system revolves around community units (CU) and CHWs under the national community health strategy (CHS) initiative. In this area there was just one CU. Recognising that CHWs play a key role in encouraging women to change practices around pregnancy and birth, newborn and child care, the project began to work on three interconnected goals that would strengthen community health systems sustainably: more CUs, more and better-skilled CHWs to staff them, and improved conditions and motivation to keep these CHWs long-term.

Working in close collaboration with the Ministry of Health, World Vision helped to establish seven additional community units and developed a strategy for training and equipping CHWs from the local area. To be fully operational and sustainable, each community unit required around 30 CHWs, around 10 community health committee (CHC) members, also known as the governance group, and two community health extension workers (CHEWs), to supervise and provide technical support to the CU. This meant that over 300 CHWs were needed. Finding and training so many volunteers was an intensive process. The project recognised early the importance of keeping trained CHWs motivated and keen to continue.

World Vision developed an innovative livelihoods empowerment strategy to sit alongside health service improvements. Women working as CHWs also gained access to exclusive income generation clubs. World Vision's initial model involved goat rearing in groups but the women have since branched

“...WV has supported us in capacity building of CHWs where they can manage minor ailments like diarrhoea, malaria and refer those severe diseases. They (CHWs) also do growth monitoring at the village where they do growth monitoring with weighing scales and MUAC tapes. They do the health education at the village they are sensitised that they take care of their health... They have also been trained on timed and targeted counselling (TTC) for pregnancy women with support from WV”.

In-charge at health facility, Bamba,

CHWs walk to visit a client at her home, Kilifi, Kenya

out to encompass a number of entrepreneurial investments. Since then, no CHW has dropped out of any CU in Bamba, including the one already in existence and the six established by the project. The statistical increases in health seeking and healthy breastfeeding by mothers are significant. Focus groups with mothers consistently show that the role of the CHW has been key to bringing about this change.

Social value conclusions

The project estimates that each CU required around US\$29,000 for setup and stabilisation of services. This represents a substantial and accountable cost per community unit, highlighting once more the importance of incentives for keeping CHWs motivated and interested in their vital roles. Almost all costs were standard for a project of this nature, such as materials, training and kits for CHWs to carry with them. Because of its exponential nature, the income generation scheme has paid for itself. Its effectiveness in maintaining high levels and standards of human resource in this remote setting also brings great value to the CUs longterm.

Beyond financial implications, the model has:

- Strengthened the Ministry of Health to manage additional CUs in the area.
- Awarded status and empowerment to women who take up volunteer roles for health in their communities.
- Increased economic and food security for around 350 households due to the involvement of CHWs in income generation.
- Given the government a ‘learning model’ with interest in replicating in other health-vulnerable areas.



Rwanda

Outcome indicator highlights:

- *Post-natal care more than quadrupled to reach near-universal rates (20% to 90%)*
- *Family planning strategies rose around four-fifths (59% to 97%)*
- *Stunting reduced by around one fifth (49% to 41%) and underweight by more than one third (8% to 5%)*

“There is no longer violence against children. There is increase in childcare and sanitation, improved nutrition. Parents were taught how to raise their children, keep clean in what they do and prepare a balanced diet using available food. All of this was as a result of establishing the VCNCs.”

*Government representative,
Rutare*

The policy context for improved MNCH was favourable in the areas where the EAMNeCH operated, but not always operating smoothly due to low awareness and priority of the health requirements of mothers. Local governments, who are subject to upward accountability through performance contracts with national government, showed themselves open and willing to improvements in health services and functional health posts as needs were identified through CVA. The project also contributed directly to capacity building for nurses and CHWs, who now provide family planning services as part of their role. After introducing community dialogue, forums and ongoing groups on maternal and child health, the project has seen rapid improvement in household level interest and accountability for ante-natal, obstetric and post-natal care, and husbands/male partners are observed to be participating more visibly over this time. Connecting the different community-led activities around children’s health and protection, nutrition, sanitation, inclusion and community cohesion, the Village Child Nutrition Centres have proven to be a highly effective community resource in the Rwandan context.

Key achievements:

- Local governments partnered with WV on intensive birth registration campaigns using promotional materials and events to demonstrate the value of registration as well as providing easier access to the registration process than previously. At one event, over 100 parents registered their children for on-the-spot birth certificates.
- EAMNeCH connected with the government’s Parents’ Evening initiative to provide information to mothers and fathers on maternal and child health systems and ways to maximise their benefits. Information was two-way, with Parents’ Evenings also used to discuss ways that local MNCH services could improve. Due to its popularity and effectiveness as a community-government forum, the Government of Rwanda will introduce discussions on health system strengthening and access as part of the Parents’ Evening outreach in other areas.
- The CVA model has improved dialogue and joint planning between community and government beyond the realm of policy implementation. CVA negotiation resulted in a new health post being built to service women and children in a remote and hilly area with no previous facilities. As well, CVA facilitators took up disability inclusion as a community campaign, leading to the creation of local PWD associations and increased employment and self esteem among this vulnerable group.

“EAMNeCH taught us people’s advocacy and talking to the leaders. Now PWDs present their problems boldly. They are informed about workers’ programs. World Vision taught CHWs to take better care of people with disabilities so they can access health care and also now birth control. People with disabilities are now financially independent and are a good example to others.”

Representative of PWD Association, Nyankenke

- With over 300 CHWs trained on accommodating the special needs of people with disabilities, problems with both access and uptake have been resolved. Monitoring of results among the disability community indicates they are now receiving family health services on a par with the rest of the community.
- Village Child Nutrition Centres (VCNCs) are another flagship approach for the project in Rwanda, a community-based participation and education model focusing on nutrition and childcare from conception onwards, as well as involving men in village kitchen sessions and diet diversity training.
- A strategy to bring husbands and partners closer to the cycles and practices of pregnancy, birth and early child care included partnership with health centre staff to orient men in particular on reproductive health messages. A number of trainings and community awareness events reached an increasingly supportive male audience. As a result, both men and women report increased sharing of responsibility for family planning and ANC/PNC services, while women also report more harmonious relationships and fewer family conflicts.
- EAMNeCH successfully applied to the government to include provision of contraceptives, including injections, as part of CHW role, then provided them with training and other facilities to provide quality service in this regard. Project monitoring noted a significant increase of new family planning users each year, and women expressed appreciation and trust of CHWs and the improved access they provided.
- The project also worked with nurses based in health posts to expand their own understanding and at times remove prejudices around different options for family planning and contraception. Monitoring shows that since this took place, community satisfaction with the service has increased.

Social value case study:

Village Child Nutrition Centres as a community-owned resource

Table 4:

Statistical comparison, BLE/EOPE

Indicator	2011	2016
Diarrhoea rates	25%	16%
Stunting	48%	46%
Child birth registration	24.7%	86%

“Before the VCNC, we had what we called Agakono k’ Umwana mean “pot of the child”, which is food prepared according the child’s age and put a side for him], but still we had malnourished children in our area. But today, malnutrition has reduced.”

Ms. Muhayiteto Christine, CHW, Nyirantarengwa Village.

World Vision’s Village Child Nutrition Centres are a cross between a community kitchen and a day care center for children under five. The centre runs every day with children looked after by volunteer mothers or caregivers from within the community. Children receive childcare and nutritious meals for free, allowing parents or other caregivers to work without worrying about their young children. This innovative approach began in 2012 to address the high rates of child malnutrition and promote child protection in the sectors of Nyankenke and Rutare in Gicumbi District of Rwanda. Table 4, left, shows that stunting rates have reduced overall, and in the village of Munini, a pilot location in 2012 for the VCNC model, chronic malnutrition was recently confirmed at 0%. Partly due to parents’ involvement in the VCNC and its consistent messaging, birth registration has more than tripled.

How did it happen?

VCNCs were created to address the factors that caused malnutrition and child neglect. Such factors include: delays in feeding of children, lack of enough food items within individual homes to feed children, and mothers’ lack of knowledge on preparing good, nutritious meals. The most vulnerable children in the community, including those from single-parent or child-headed households, benefit from sharing a meal provided by the community.

The communities where VCNC implemented saw the relevance of the model quickly, including through local leadership structures who were keen to endorse VCNC. This has been important to its success because men in the community, who wield much of the power and economic influence, have taken an interest in the VCNC and its goals. In most of the communities, VCNC management has been taken up by self-nominated and appropriate community figures including the village leader, women’s group representatives, CHWs and church leaders. World Vision provided basic equipment such as sleeping materials, pots, pans, plates and other utensils, toys and books, handwashing and hygiene facilities, as well as livestock and seeds to establish a small kitchen garden to support food needs.

VCNC has proven to be a valuable and stable addition to village community life. It has brought additional value through its engagement of community figures who might not otherwise have taken an interest in the topic of malnutrition: husbands, male leaders and the church. Though its foundations lie in better nutrition, it addresses a far greater spectrum of needs for children: education, socialisation, protection, monitoring and inclusion of the poorest and most vulnerable. Volunteers at the centre play, sing and read with the children and teach them basic hygiene, all of which helps to prepare them for primary school enrolment.

“Now the VCNC is different because all parents work together to give children what they need to eat. All children are brought to eat together (not only malnourished), plus their mothers are trained on how to prepare good food. Children in the VCNC gather together and get to know each other.”

*Ms. Nyiramajyambere
Veneranda , CHW, Rwirute*

Bringing mothers and caregivers together also provides a natural opportunity for joint income generation, partly to support the centre but also to create joint savings accounts for emergencies. They choose their own activity; one centre grew mushrooms for profit while another created a knitting club.

Social value conclusions

The cost to the project of implementing VCNC is estimated at around US\$65,000. This helped to establish 9 VCNCs which already appear to be part of community structure and which are delivering significant nutritional advantages to children under five. The government is integrating the model into its own structures with intention to roll out more broadly.

A point of difference between this and previous nutrition models has been that WV has stayed away from direct food provision. The centres have needed to devise their own structures for sharing food available in the community, including provisions for those who have very little of their own. People associated with VCNC including mothers, fathers and government comment on the planning and innovation processes as a contributor to social cohesion and community development in general, because they bring people together and remind them of their responsibilities to others, in particular children. The model has quickly become a sustainable community-owned resource with the potential to reduce undernutrition in children long-term.

A volunteer carer at the VCNC administers deworming medicine to children.



Tanzania

Outcome indicator highlights:

- Exclusive breastfeeding, though still too low, quadrupled (10% – 40%)
- Early initiation of breastfeeding more than doubled (26% - 68%)
- Rates of handwashing rose nearly one quarter (65% to 85%)
- The project halved rates of underweight (30% to 14%) and wasting (6.8% to 3%)

“In a village where the CHWs are found, child vaccinations and facility deliveries are higher. when we conduct outreach activities, we work with CHWs as a team: they give health education and weigh the children while we give vaccinations...CHWs have been trained to fill the required MNCH report monthly using their mobile phones. This has helped us to prepare our report on time.”
District Council representative, Kilindi

The policy landscape for improving MNCH in Kilindi was neutral at the start of the project, but has shifted quickly into positive momentum as a result of close liaison with Ministry staff. Health workers, local leaders and the community all report an increased uptake of maternal newborn and child health services, linked to better affordability, quality and satisfaction. The project took a particular focus on health systems strengthening in community facilities, using several expanding cycles of local level, community-led advocacy to identify gaps and solutions. The project with its partners also offered Ministry of Health staff several modules of training in family planning, immunisation and Basic Emergency Maternal Obstetric New Born and Child Care (BEmONC). Further, the project supported the Ministry of Health to deliver integrated outreaches to marginalised people. Community health workers were trained on the integrated MNCH module (ttC) to help them effectively reach pregnant and lactating women and their households, especially those who did not currently have easy geographical access to facilities.

Key achievements:

- Building the capacity of CHWs, hired locally and supported by the District Council Health Management team, has been at the heart of the Tanzania project. By the end of Year 4, World Vision had trained and equipped 92 CHWs to conduct home visits, collect and collate health management data (using mHealth/smartphones), and to expand their numbers further through regular Training of Trainers.
- CHW advice to pregnant women includes HIV awareness and access to testing facilities. The proportion of women testing for HIV in the area has increased by nearly one half since baseline measures (63% to 94%) and the proportion of women returning to receive their test results is 99.3% - both statistics well above the national average.
- Village banks, with twice as many female members as male, have received district council loans for livelihoods worth USD 13,600.
- The project has contributed in the review of health indicators and data collection tools in partnership with the Ministry of Health and Social Welfare (MoH&SW) and other NGOs (AMREF, Africare, Wateraid). The review found a distinct positive difference in the health seeking behaviour of people in the two divisions where WV's CHW home visit model (ttC) been implementing. As a result, the district has committed to expand the model.

“Community Voice and Action in Gombero village has been educating the community about their responsibility and accountability to the village development that development cannot be brought by the government itself, it must be shared by community...this resulted in the construction of a dispensary in Gombero village by community members in collaboration with the government.”
CVA committee member,
Kilindi

- After presenting the results of CHW role enhancement and training to the national MoH, the government has introduced a one year certificate course for CHWs and commenced discussions on integrating the role into formal government employee structures.
- Support to disability organisations and to quarterly government disability planning meetings has led to examples of better inclusion, among them inclusion in livelihoods groups and community efforts to design disability friendly public buildings. One health service reported in 2015 that 35 people with a disability were now seeking healthcare at their clinic, up from just 3 in 2010.
- A local health accountability forum, the Citizens' Hearing in Tanga, connected to the global process for health decision making at the World Health Assembly in May when a delegate councillor from the Citizen Voice and Action group travelled to Geneva to present results. She has since been elected to co-chair district council meetings due to her unique leadership skills.
- CVA sensitisation and community mobilisation on health service facilities have led to construction of five additional dispensaries (two complete, three under construction), a staff building and three classrooms. CVA mobilisers have also driven campaigns for equity of access including for people with disabilities.

Social value case study:

Nutrition Groups as a livelihoods venture

In Mgera, Tanzania, the project introduced the Nutrition Group as a hybrid model combining nutrition intervention and training with food security and economic livelihood. After a setup phase to find and equip group leaders and to allow opt-in participation to begin, the project's role was mainly that of trainer. Three types of food-based knowledge were shared within the Nutrition Groups: firstly, nutrient dense cooking for different age groups and dietary needs; secondly, kitchen garden farming for food diversification; thirdly, entrepreneurial skills to pursue and fund other business ideas including partnership with private sector.

The project invested around USD5000 in the Mgera Nutrition Group. As a result, it has developed into a strong and well-governed savings group with the ability to source loans directly from local banks, as well as from government and other sources. Working together in a farming cooperative has been particularly successful, with first year maize harvest worth around USD2500 and more than USD5000 in loans from district council to expand and modernise community farming facilities.

How did it happen?

The process and results of the Nutrition Group in Mgera are described below by Muya Atanasio, the group's chairperson.

"Our group started in September 2012 aiming at reducing malnutrition in our community. This group was formed after the World Vision Maternal, Neonatal and Child Health (MNCH) project sent an invitation to all wards in Mgera division to select a few members to be trained. From our ward 20 members were selected, both male and female.

Before the MNCH project, things were different. We didn't know that malnutrition was a problem in our community. Children with malnutrition were taken for alternative medicine treatment (traditional healers/witch doctors) and most of them died. Women were not using family planning and therefore were giving birth each year and this weakened the economic status of the community as they had no time for anything else. During pregnancy, mothers were not attending antenatal clinic and were giving birth at home assisted by traditional birth attendants (TBAs). Women were not empowered and all decisions including those related to their wellbeing were vested to their husbands.

The project trained our group on nutrition, especially on how to curb malnutrition. This knowledge made us aware of the problem in our community. We were also taught about the importance of a pregnant mother to attend antenatal clinic and deliver at the clinic, and of male involvement in reproductive and child health. After training we started visiting households and teaching them the importance of preparing nutritious foods for children and pregnant mothers so that they can deliver a healthy baby. We were doing this on our own without any financial support from anybody. After seeing what we were doing, World Vision advised us to officially register our group and acquire a bank account, which we did. They also linked us with horticulture extension officers in the district who taught us about vegetable gardens. We managed to get several acres and now, as a group, we are farming different types of vegetables and sell surplus vegetables for income. The money we get helps the group to continue with our health education activities.

When we started, it was not easy for us as we were not accepted by the community because they didn't know anything about nutritious balanced diet. One day we visited a house and we found two children who were severely malnourished. The group took them to them to the health facility and we kept them under our care for two months. Their condition improved tremendously and that was the beginning of us being appreciated by the community.

Muta Atanasio hosts a cooking demonstration with the Mgera Nutrition Group



The MNCH project connected us with the district council administration under the Community Development Officer. After seeing the gardens, they gave us a loan of 3 million Tanzanian Shillings (TZS) which is equal to USD1500. Later, we were invited to present to the Regional Commissioner who was visiting the district, and he directed to us a loan of 10 million (USD5000) to acquire a greenhouse.

The community is now aware of the different methods of family planning available and both men and women are supporting its use. We see both husband and wife attending antenatal clinic together for services. The project has created greater harmony in families because husbands are involved in reproductive and child health. The project has also united us as we are now working together as a group and we can see our voice reaching far. This year we have cultivated 5 hectares: 2 hectares of simsim, 2 hectares sunflower and 1 hectare of cassava. We have recently harvested USD2500 worth of maize and we will grow 3 hectares more in the coming rain season. This was on request from the district council who are interested in the production of seeds for the region.

The project has empowered us. We now know what to do and we are working very closely with the District Council under the Department of Community Development. We are the bridge between the district council and the community as far as nutrition is concerned.”

Uganda

Outcome indicator

highlights:

- ANC visits have increased by nearly one third (60% to 84%), and PNC by over a half (58% to 88%)
- Though current indicators of wasting and underweight remain relatively unchanged, the longer term indicator of stunting has reduced by around one fifth (29% to 23%)

“The VHT training approach on appropriate IYCF has helped to ease our work. They have the appropriate knowledge of breast feeding practices required for proper child growth. This is very important because the mother stay in the communities not at the health facility.”

*Health facility worker,
Loborom*

Of the four contexts, this has been the most challenging in terms of sustainable and accountable improvements to health systems; however, good results and valuable lessons are still evident. The Ugandan national government increased human resourcing commitments in 2013 as a result of NGO advocacy, but the policy in decentralised district systems will take some time to implement in full. In this environment, CVA has proven to be very effective, and the context largely supportive of EAMNeCH efforts, but a high rate of government staff turnover including midwives has slowed progress in some areas. Community conflict in Mucwini area in 2014 also affected operations briefly. The remoteness and relative instability of this area affects its ability for resilience under sudden change; for instance, planned integrated outreaches in Year 4 did not have sufficient supplies and resources to combat a particularly bad malaria season. Responding to this, World Vision worked with the Ministry of Health to identify alternatives to ensure outreaches could continue. Since, it has focused on skilling up Village Health Teams (VHTs), the Ugandan equivalent of CHWs, to act as health providers where necessary. Though VHTs can only provide vaccination and general medical services to children, leaving an unmet gap for ANC and PNC for mothers, VHTs have also taken on ttC as a proactive methodology for reducing occurrences of illness in mothers and their children. The more recent entry of a number of humanitarian NGOs has opened new opportunities for partnership in health and WASH.

Key achievements:

- Parent Support Groups (PSGs) have been used throughout the project to bring both women and men on board. This has increased women’s awareness of their leadership skills as some groups are headed by women. Through PSGs both men and women have started to handle and control income at household level with relative equality. This is as a result of business enterprises managed by the PSG members equally whether they are women or men.
- The Parish development committees were non-functional. Their reinstatement required working with sub county authorities. As part of this, the project lobbied for inclusion of female representatives in line with implementation guidelines for the policy. The standard is 4 out of 9 members; most committees are now close to that and several are led by women. Sub-country government is showing responsiveness to these committees, for instance agreeing to the repairing of a borehole at the request of the female chair.

“The health workers are now much more aware of the immunisations to be given to the child at birth and the breastfeeding practices they should make the mothers aware of before they leave the health facility. This has been of great importance to our communities too because mothers are more enlightened on how to feed their children.”

*Midwife,
Kitgum General Hospital*

- CVA empowerment led to several decisions on resourcing of health posts with staff and drugs after community monitoring showed gaps. As a result, district authorities recruited six midwives and filled an additional four nursing positions for health centres that did not have this previously. The health facilities are well stocked and the Health Unit management committees for these health centres are operational and influence the day to day running of the health posts.
- The project supported improvement of delivery and post-natal services by applying the criteria of the Baby-Friendly Health facility Initiative to 21 facilities. Five are now fully certified, while four are partially certified and 12 are committed. Health Unit Management Committees and leadership have committed to aim for certification in all facilities through bridging the gaps identified (including resuscitation corners) and making sure that the staff practice the required steps for certification.
- Village health teams have been monitored for performance, with the committees taking action on team members who were not meeting expectations. Through mentoring and coaching, the VHTs have increased their understanding of ttC implementation which has improved ttC results. This led to the remapping of all households for children and pregnant mothers in the two sub counties. The number of children under 2 being monitored has increased from 392 to 682, while the number of pregnant mothers receiving visits is at 428.

Social value case study:

Baby Friendly Health-Facility Initiative (BFHI) in Kitgum

Table 6: Statistical change, BLE/EOPE

Indicator	BLE	EOPE
Health sector performance ranking (govt.)	62	28
Mothers receiving 4 or more ante-natal consultations	60%	84%
Mothers receiving post-natal health checks	58%	88%
Health workers with BFHI knowledge	2.3%	75%

One of the project strategies for improving maternal and child health services in Kitgum district was to promote the WHO/UNICEF Baby Friendly Health-facility Initiative (BFHI)^{xvii}. BFHI is an evidence-based global model aiming to create healthcare environments where breastfeeding is the norm and IYCF is promoted alongside medical health. Around 1.4 million preventable deaths a year are connected to neo-natal and post-natal infant feeding. A baby-friendly health facility has the potential to save lives directly, through better knowledge in its staff of common neonatal and early childhood conditions, and also indirectly by reducing the prevalence of undernutrition, diarrhoea and stunting through better IYCF practices. The BFHI in Kitgum has contributed to strong improvements in health sector performance. In 2011 the district was ranked 62 out of 112 districts in Uganda; now it is ranked 28. HMIS data indicates an increase of 20 percentage points in women giving birth at health facilities. Table 6, left, illustrates levels of change that can be connected to health system strengthening including the BFHI. Clinic staff also report reduced cases of diarrhoea and increased uptake of vaccinations, while improvements to mothers' ante-natal and post-natal consultation rates is a key outcome for the Uganda project.

How did it happen?

Partnership and collaboration with the district health team was essential for implementing the BFHI. The project researched current practices of health workers in 21 health facilities to identify what gaps needed to be filled in order to achieve 'baby-friendly' certification. They found that only 2.3% of health workers in Kitgum health facilities knew about BFHI and 54% of them did not know how to support mothers to initiate breastfeeding. The project set up networks for mentoring and coaching health workers to increase their knowledge and interest in age-appropriate nutrition for mothers and children. They also supported the health facilities to set up mothers' groups for uptake of post-natal care and ongoing nutrition advice and action. IEC materials were available to staff and patients on different maternal and child care topics, including the 16 indicators of a baby-friendly health facility.

A total of 75 health workers received mentoring through the EAMNeCH networks. This was also an opportunity to strengthen the skills of health workers in applying national health policies, for instance filling child health cards. By the end of the project, five facilities had achieved full baby-friendly certification, with four more partially certified and working towards the remaining indicators. The remaining 12 are committed to implement BFHI in the near future, as demonstrated in committee planning records. All have set up breastfeeding corners, separate from the wards and other patients, utilised by mothers living close to the facility as a safe, sterile and social place for breastfeeding.

According to a nursing officer at Oryang Kul Kwach health centre II, most of the mothers understand the right time when they should introduce other feeds to their children.

“We no longer receive many mothers at the health facility who are giving glucose and feeding bottles to children below the age of 6 months. The number of cases of diarrhoea among children below 2 years has also tremendously reduced at our health facility.”

BFHI also increases the focus for each health facility on safe delivery and newborn clinical care. As part of the EAMNeCH strategy for Helping Babies Breathe (HBB)^{xviii}, four of the facilities in Kitgum have installed a resuscitation corner with appropriate equipment and training. Health workers express appreciation for the empowering new knowledge that gives them a stakehold in results in breastfeeding and associated indicators such as nutrition and reduced childhood illness. Staff turnover remains a challenge due to the remoteness of this area, but (as yet unmeasured) BFHI status could be a motivating factor for staff retention in the future.

The dedication of district authorities to achieve certification in all facilities has been crucial. This has helped health workers to see baby-friendly services as necessary to their role, promoting sustainability and innovation. It also ensures the primary partnership ongoing for these facilities is between health staff and district MoH.

Social value conclusions:

The project team estimates around US \$45,000 was invested into BFHI, with the majority of funds channeled to facility and staff assessment, community needs research, mentoring and training. In Uganda, Health Centres II, III and IV are of different sizes and serve different purposes, from local outreach through to hospital. Staff at all health centre levels report improvements to working conditions including their own breastfeeding facilities and support, better knowledge among their team, and cleaner, better equipped wards and labour suites. The project found that due to their size, support to Health Centre IVs was the most costly at just over US\$7,000, while Health Centre IIIs cost on average \$1642 and Health Centre IIs just \$569. Reaching Health Centre IIs was an important part of the strategy for BFHI, and required adaptation of self-assessment tools to acknowledge the function of these small, community-based centres. By including them, the project has seen community referral process strengthen and a greater synergy between the centres, VHTs and community campaigns for IYCF.

The low cost of mentorship and materials, especially to the smaller health centres, indicates an affordable and replicable model. However, experience from implementation recognises the need for continued external support from partners, preferably government, to conduct refresher training, mentorship and monitoring.

Section 5: Discussion and analysis of results

Based on quantitative and qualitative feedback presented in the previous sections, this section considers the overall contribution of the program in terms of its quality and value for those who were intended to benefit. The discussion uses as its lens the basic structure suggested by the OECD-DAC: effectiveness, efficiency, impact, sustainability and relevance.



EAMNeCH in Rwanda has integrated a variety of health services for children, including growth monitoring, nutrition and deworming, into its VCNC model.

Impact

Levels of change to quantitative health performance indicators in project areas have been covered in Section 2. It is clear that positive change for mothers and children has resulted from project activities in all cases, though with differing degrees and emphasis. The core strategy, around which contextual approaches and structures were built, was to strengthen the role and capacity of the CHWs so that they could lead the way for mothers to reach, and for all of society to demand, quality maternal, newborn and child services. By the end of the project, CHWs had contributed greatly to improvements in ANC/PNC, breastfeeding and family nutrition and in several contexts, the uptake of family planning.

One of World Vision's hopes for this program was to learn more about '7-11' in action through ttC. Results have underpinned theory in this regard; behaviour change has come rapidly and with measurable results in children's nutrition. Impact in health system strengthening is also evident through improvements to health facilities and an increased number of CHWs in every context. In 2015, a case study from EAMNeCH estimated that 897 new CHWs were now active in communities across the four locations as a result of the program.

Influence on policy and strengthened government implementation is also evident. CVA and other models of community mobilisation has been important to improving standards at health facilities including better transportation, more appropriate opening hours and quality outreach. The collaborative nature of action plans through CVA has seen this happen with minimal friction. It can even be seen as a peacebuilding tool in bringing communities together to work on common goals. World Vision has also influenced policy directly, particularly in improving curriculum (Tanzania) and monitoring quality of CHWs (CHW-AIM in all contexts).

Gender impact

Stakeholder feedback highlights impact for women, not only mothers but also women in leadership, with a greater representation on committees, more involvement in economic activities and decisions, and more regular consultation on community and government programs for MNCH. This success has come about because of the hard work and courage of women involved in the projects, no doubt; but attention should also be drawn to EAMNeCH's strategies for increasing role and participation of men in what has traditionally been a world closed to them: reproductive and child health. Particularly in Rwanda, but also in other contexts, stakeholders attributed social cohesion, reduction of homebased violence and increases in uptake of ANC/PNC to a more equal dialogue between women and men on pregnancy and early childhood.

All projects successfully pursued strategies for engaging men – husbands, village leaders and faith leaders – as advocates for women's inclusion in livelihoods, decisions and community governance, and as partners in pregnancy, delivery and childcare. According to EAMNeCH 2015 end-year program report, 1,847 couples have recently started using family planning in Gicumbi, Rwanda, while in Kilifi, 3,465 men accompanied their pregnant partners to ANC visits in 2015, up from 46 in 2013. As stated previously, this can be considered an indicator of empowerment for women.

Effectiveness

Models and approaches particularly important to program effectiveness::

- *CVA, in mobilising community interest for long-term action and planning*
- *CHW-AIM, in setting and monitoring standards for greater consistency of services to mothers and children*
- *mHealth, in providing technology solutions to make health services easier and more accessible*

EAMNeCH utilised a number of ‘tried and true’ models from the increasing evidence base of ‘7-11’ programming and its implementation strategy of ttC. This gave the program an immediate starting point in working with CHWs even while other elements of design were in discussion. Achieving early could be attributed to quick wins in some cases, but mostly it came about as a result of scale and efficiency: for instance, of training nearly 300 CHWs in Kenya within 2 years, or taking BFHI strategies to 21 facilities at the same time. These coordinated pushes have been reliant on effective partnerships with government and other agencies, who need to agree and work to the same timelines as the projects despite competing priorities (also see Efficiency section). The confident start to the project can be seen in the mid-term evaluation results, with many indicators slowing from that point as the emphasis shifted to partnership and sustainability, rather than increase, of services and human resource.

PD Hearth was a model identified in program design as suited to these contexts and their goals. Interestingly, none of the projects under EAMNeCH implemented PD Hearth in its ‘traditional’ form. Innovation on the model, often led by community ideas and cross-cutting strategies for livelihoods and child protection, has provided some of the program’s best practices, still based on maternal knowledge and locally available ingredients, but expanding so that the whole community can take an interest in the improved nutritional status and wellbeing of children in its care.

The program aimed to work in a number of sectors beyond health in order to bring health outcomes. Some were more effective than others. The Theory of Change for WASH suggested that CVA demand could achieve improvements to problems of water supply, drainage/sewage, latrines and hospital infrastructure. There is no problem with this – stakeholder feedback shows that people have, appropriately, been approaching government to lobby for this type of development – but it is worth noting that achievements in this sector have come more slowly than expected.

Great advances were made in livelihoods including village banks and farming cooperatives (see Tanzania Nutrition Group case study), and in bringing women including mothers into the groups for economic empowerment. Food security resulting from this was more evident in some contexts than others. Uganda and Tanzania in particular appeared to suffer from seasonal food insecurity which could have been met better from design onwards. While these projects demonstrated substantially improved behaviour change indicators (breastfeeding, ANC/PNC), they face challenges of food availability and affordability that still need to be addressed.

EAMNeCH piloted strategies for private sector engagement in agriculture and food security, in Tanzania and Kenya. Though there has been progress and achievements in this regard in both settings, it has not emerged as a key theme compared to achievements in other approaches. It is worth considering this in greater detail in a separate report. There is great potential for campaigning and acting on nutrition, including nutrition-sensitive agriculture,

through corporate partnership in each country. It may be that these partnerships are often forged at national level while the projects implemented quite locally, requiring collaboration within World Vision to pitch for effective and targeted portfolio partnerships.

Effectiveness of the program in the East Africa context was both tested and advanced by the AACES framework, and the value of Objective 2 as a learning and partnership objective for participating agencies. Scrutiny and dialogue on the thematic priorities of the AACES program - gender, disability inclusion, marginal voice, livelihoods and economic security, supporting public and private service providers to be more effective – kept project teams motivated and challenged to come up with new ways of working within civil society networks. Not everything worked according to theory – and it should also be noted that the theory including objectives and desired outcomes changed after the mid-term review - but results in women’s empowerment, innovative livelihoods integration and local system strengthening are highlights of the program.

Efficiency

The projects have managed budgets in a way that has allowed them to achieve against all output indicators in some way by the end of the program. World Vision is able to maintain efficient processes due to internal and external networks of expertise, which minimises the need to hire outsiders for short term advisory roles. The presence of World Vision projects in all target areas also supported strong initial implementation aligned with community expectation of the organisation's priorities.

In financial terms, it is fair to rate the program as a low-cost approach. Advocacy and governance programs tend to have a significant cost benefit over traditional service delivery models because of their reach into systems, structures and political influence beyond target geographical catchments. Activities were not high-cost because infrastructure needs were low. At times support has been extended to equipping health facilities or mobile outreach, which fits within service delivery; however, by far the majority of activities have been socially based: training and sensitisation of duty bearers and community, mentoring and monitoring health workers, partnering with and mobilising community groups, and connecting new ideas with government or other local resources.

However, in terms of value for money, the program never aimed to calculate a straight 'cost vs. beneficiary' figure for its work; rather, it considers social worth and compound outcomes such as exponential reach, increased capabilities and self-worth, empowerment and participation of vulnerable or marginalised people, social cohesion and collaboration, and the quality of mutual responsibility between community and government. We see a great deal of this in EAMNeCH project outcomes, reflected in high levels of satisfaction with, and very limited criticism of, the project by community stakeholders.

The case studies in Section 4 each contain a short social value analysis, showing that costs appear relatively low when measured against health and nutrition results, women's empowerment, stability of livelihoods and food crops, or the increased capacity of government to continue with the work started by EAMNeCH.

The program's emphasis on partnerships to bring about change has created efficient and mutually accountable social initiatives. While World Vision's primary partner in programs was the Ministry of Health, other NGOs such as CARE International, ActionAid, Marie Stopes and Plan International have also coordinated well with EAMNeCH. In Tanzania, involvement with the White Ribbon Alliance has been vital for connecting different layers of influence, raising the profile of women's and children's health in Kilindi. Partnerships have led to shared and heightened results, but there have also been lessons for World Vision around planning and alignment. Stakeholder feedback indicated that demands were too ad hoc, or that it was difficult to set longterm goals with NGOs due to the project's complexity. The Kenyan project sought partners for particular phases where collaboration could work well: for instance ActionAID in supporting youth: the Channel and Agents of Change project under

the Innovation Fund, and with Marie Stopes and Plan International Kenya during health action days. Overall, these partnerships have been positive; however, stakeholders including staff acknowledge that the process involves costs and that networking and liaison is time-consuming. At times working in partnerships led to greater efficiencies and adherence to deadlines. In some other cases, including Uganda's early to mid-term work with the Ministry of Health, it slowed progress and more time needed to be allocated than planned.

Relevance

The output goals of the program (see Annex 1) remain relevant and have not yet been met in full, though the project results show progress towards them. Under Outcome 1, many examples exist of improved capacity in government and in health structures, which can be linked to improved nutrition and ANC/PNC care. Increased community demand has also been a relevant need, with the early and ongoing successes of CVA demonstrating that health systems will respond democratically to community requirements. Under Outcome 2, there is already empirical evidence of the relevance of knowledge, diet diversity, access to markets and hygiene promotion to better nutrition and survival in children.

A jarring note in results is the lessened, rather than greater, usage of IFA supplements. The consultants do not have sufficient insight to understand why, in all four contexts, messages on dietary supplements for pregnant and lactating mothers did not resonate. Global and national policy recognises that this affordable supplement saves lives and in theory it should be available to all mothers seeking ANC/PNC. World Vision is urged to return to this theme and understand whether the challenge to this is knowledge, supply chain, affordability or culture.

To reflect on relevance, we also looked at whether stakeholders, particularly community stakeholders, understood and were satisfied with the project's approach and processes. In feedback there is a sense of pride and achievement in the journey already travelled, particularly in the enhanced capacities of health workers and health facilities, which makes the services more attractive and relevant to mothers. There are also many gaps, particularly in water supply, which health workers and committee members wish to see filled. However, they are not turning to WV for this; another positive aspect of CVA is the improved dialogue between government and civil society which is being used to lobby for further investments in services.

The relevance of livelihoods initiatives has been dictated mostly by the community, as groups form and decide what they might like to try in terms of income generation. The case studies for Kenya and Tanzania reflect this element well. CHWs in Kenya received goats as a motivator for retention but redirected profits to a broader range of homebased income generation; the Mgera Nutrition Group has moved beyond food cropping with a grant from local government to provide seed stock. These self-generated ideas are showing success and bringing resources back to the community for further investment; they also indicate increased confidence and coordination among cooperative members.

Of note, the program seems to have made topics of maternal and child health and nutrition more relevant to village communities than at its commencement. Specific strategies to include men (including but not solely husbands), the church and ministries beyond the MoH have been successful. This supports more naturalised demand, monitoring and take-up at village level longterm.

Sustainability

Design and monitoring records show plans for sustainability of efforts from an early stage, brought to life through the mobilisation of local groups and government to work together with minimal World Vision involvement. Many of the models used – CVA, ttC and the Nutrition Clubs or livelihoods groups – are designed to become institutional community resources. There is evidence that this is taking place in all settings. Thus, the sustainability not only of current change (behaviour and services) but of demand for future change is likely.

Improvements to interim indicators, particularly around breastfeeding and early initiation of breastfeeding, are likely to continue to grow so long as ttC through CHW continues. The outlook for this in Tanzania and Kenya, where the Ministry of Health has taken up increased support to CHWs, is favourable. In Uganda, the BFHI achievements add another layer to perpetuating knowledge of mothers before and after delivery in age-appropriate nutrition for their children. Again, this will be dependent on the continuation of training and quality staff, which has already faced challenges of turnover. The incentive schemes for retaining CHWs in Kenya could be used to good effect elsewhere to reduce knowledge loss and maintain motivation and ownership in reducing preventable maternal and child deaths.

As discussed in the impact and effectiveness sections, the program has contributed to strengthened institutions and systems. However, as with any program delivered in partnership with government, sustainability is not guaranteed in the face of changes to policy, political will or the external landscape. Uganda's project seems particularly susceptible to this as seasonal food insecurity and localised instability have already affected outcomes. All project locations were chosen because of their vulnerability compared to national level statistics and the need to transform opportunities beyond MNCH to combat high rates of mortality and morbidity. Efforts are required to maintain visibility to national government and other partners on poor standards of service and accountability in these remote locations. Because World Vision has other programming commitments in these areas, the role of monitor can transfer to other World Vision projects and programs for now, but this will need to be clearly articulated within the organisation and possibly added to parallel World Vision logical frameworks to ensure resources for this function.

Section 6: Conclusions and recommendations

A mentorship approach to skills upgrade for health workers in Kitgum, Uganda, included newborn resuscitation training. Four facilities now have fully equipped resuscitation corners.



Conclusions

EAMNeCH has contributed in a strategic, holistic and consultative way to improving health systems that support and promote maternal and child survival. Qualitative data and feedback tells us that nearly 900 additional CHWs are introducing empowering knowledge to women and their families, including their husbands or partners, in areas with previously low consultation of health professionals. Working conditions and standards in public facilities have improved. Health staff have stronger and more accountable links with community and public health, and are better at their jobs due to training and expansion of roles.

Demographic health data collected quantitatively demonstrates not only outcome-level impact, but also priorities for building on progress made in the five years of EAMNeCH. Of the 13 indicators chosen to reflect improved opportunities for health and nutrition, now and in the future, just one showed a negative pooled result. At the other end of the scale, consistent and marked improvements to IYCF and ANC/PNC link closely with the value of support and information from CHWs to new mothers.

In all the four countries, there were improvements in the recommended numbers of ANC visits (four times or more) and post-natal health check visits by women. This highlights positive impact in two closely linked areas: 1) the patronage of existing services by expectant mothers, and 2) improvements in services to reach more expectant mothers. Mothers are more aware of the importance of establishing contacts with health professionals to guide them through pregnancy, birth and early motherhood in the four locations. There is good reason to link this change to the core activity of the program, strengthening numbers and quality of CHWs. Mothers' focus groups (for instance, in Kenya) report that CHWs have encouraged them to utilise available health services, not only during pregnancy and childbirth but also when infants or children fall sick. According to a District Council representative in Rwanda, in a village where the CHWs were found, child vaccinations and facility deliveries were found to be higher. Anecdotally mothers, health workers and CHWs all report that child mortality has reduced in their village.

While there was an improvement in DPT immunisations, there was a drop in the prevalence of using IFA supplements in the four countries. As hospitals are by policy expected to distribute IFA supplements as part of ANC/PNC, the drop indicates a gap either in hospital visits or in policy implementation. In more than one context, mothers confirm that they have been given IFA when they go for checkups. This gap is perplexing and requires further analysis.

In all four countries, there was a rise in the use of family planning methods, an indicator not only of better maternal health but also increased status and empowerment of women. The change has been disability-inclusive; for instance, a representative of PWD Association in Rwanda observed that World Vision taught

CHWs to take better care of people with disabilities so they can access health care and also practice birth control.

It is evident from all four countries that there were improvements in the prevalence of early initiation of breastfeeding, exclusive breastfeeding and timely introduction of complementary feeding practices, indicating an improvement in infant and young child feeding (IYCF) practices. The projected result of this is prevention of growth faltering and childhood illnesses such as diarrhoea. A Rwandan government representative noted also the increase in children's hygiene and sanitation, while a Kenyan mother reported the project connecting children's healthy development to WASH behaviour: latrine usage, cleaning utensils and handwashing with soap.

In all countries, there were slight declines in the prevalence of stunting, wasting and underweight among children. There was also an increase in the prevalence of hand washing in these countries. The decline in the prevalence of stunting, wasting and underweight reflects the improvement in IYCF practices, while improvement in hand washing will help in reducing child illnesses.

One of the major highlights of the project in all four countries was the increased participation and empowerment of women. This has been duly acknowledged by women respondents in these countries, and can also be evidenced quantitatively by the increased number of women taking part in health committees, CVA groups, mothers' groups, livelihoods initiatives and district consultations. It is unfortunate that the data from the questionnaires was not able to disaggregate in a way that drew a picture of improvements for people with disabilities. However, there have been activities designed to reach this vulnerable demographic in all four settings, and interviews with PWD groups in Rwanda showed that they were taking part in advocacy, community-government dialogue and health services including family planning.

Overall, the evaluation team finds that the project has delivered positive impact in the lives of women and their young children in the four countries. The approaches have been inclusive and appropriate to culture, and there is general satisfaction with the projects and with World Vision as a partner in health strengthening. However, the nature and volume of change varies from context to context. Some shifts are only slight, and in some cases certain indicators have slipped backward. Ways must now be found to continue the momentum and demand for change, involving both women and men in localised decisions around health facilities and behaviours. The role of district and national governments is also key, as recognised from the outset in the design of the program, and strategies need to remain for effective community engagement and influence with government longterm.

Recommendations

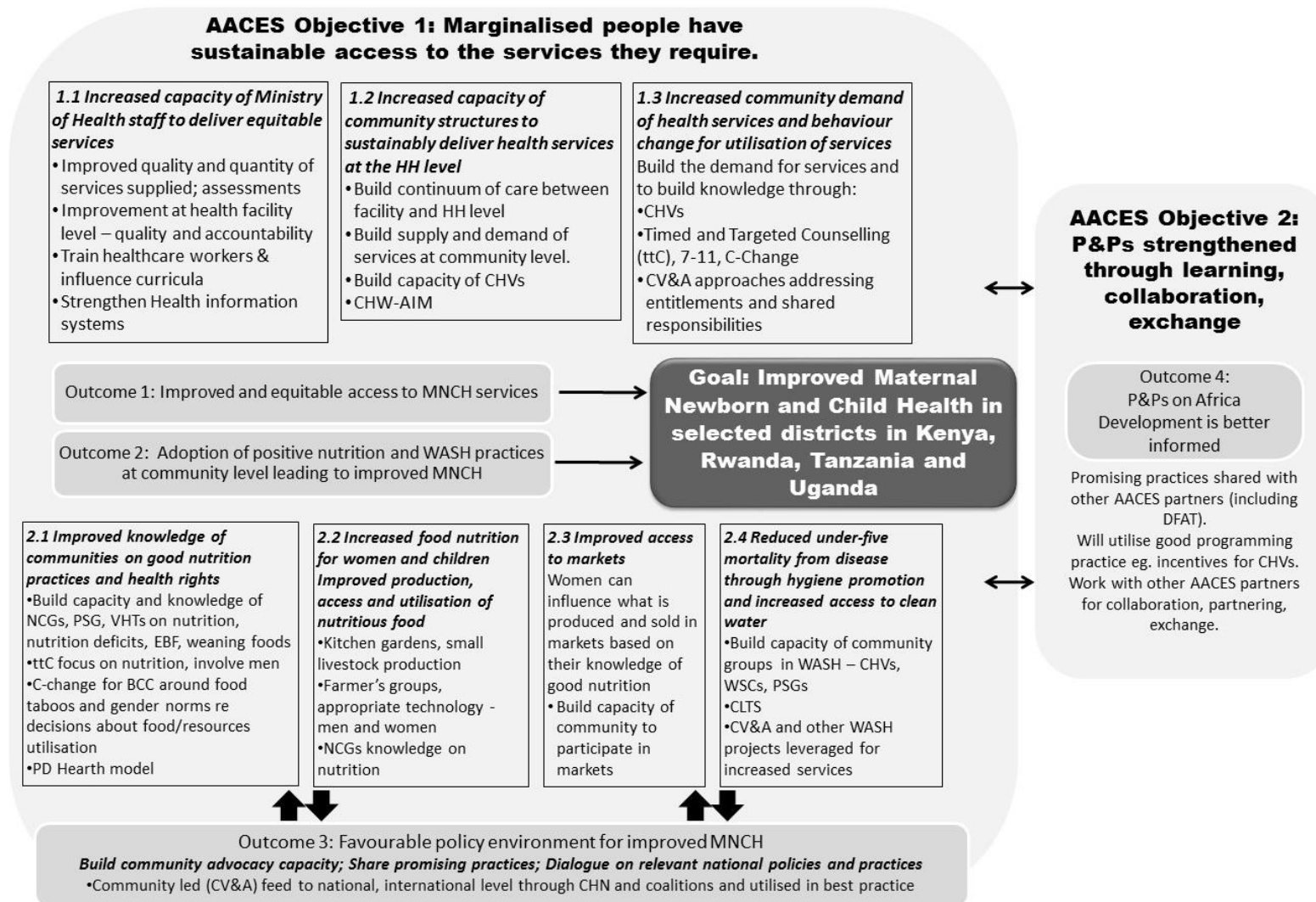
The following recommendations are made based on the outcomes of this evaluation, with an emphasis on sustaining and further building improvements in maternal, newborn and child health in East Africa.

- CHWs have been found to be vital and valued community health advocates. Ways must be found to continue increasing their numbers and skills for higher quality community-based services, with greater reach and impact.
- Numbers of locally based health facilities need to increase further. These facilities should focus on training, networking, mentoring and motivating staff and CHWs, for lower-cost, higher quality services including staff retention.
- Poor transport remains a barrier to accessing services, including ambulances but also more basic services (buses, local affordable taxis or carpool) that make it possible for mothers and children to attend health professionals. This is a policy and planning issue which could be integrated into CVA orientation.
- Projects and governments should continue to explore integrated health and nutrition models like the Nutrition Groups (Tanzania) and VCNC (Rwanda) so that responsibility for community health is adopted throughout the village.
- In all contexts, continuation of CVA and ttC is vital; sustainability strategies for both are in place but need a monitor. World Vision programs in the area should prepare to take this role, including watchfulness over government progress on CHW and ttC and the continuation of policy advice and relationship brokering to local CVA groups.
- Enquiry and solutions are required for the poor results in IFA supplements among pregnant and lactating mothers.
- Given the experiences of the private sector pilots, future projects are encouraged to prepare for greater emphasis on collaboration with the sector, which has the potential to reach many more communities nationwide.
- Future projects should take a greater design and reporting focus on the disability sector; though it is known qualitatively that people with disabilities were more likely to access health services including family planning as a result of the project, not enough data and documentation is available to promote or institutionalise effective practices in this regard.
- Given the unmet demand by communities for better WASH infrastructure, future projects should consider closer integration with major WASH projects; however, this should be done in a way that does not undermine community voice and government accountability on services.
- Though positive livelihoods results were evident, the links between poor nutrition and agricultural food security have not been adequately addressed in this program. Further needs assessment and a strategy targeting availability and affordability of nutritious food are now required.
- Considering the progress measured in ANC/PNC, exclusive breastfeeding and early initiation of breastfeeding, return to measure levels of stunting and maternal/child mortality in years to come. This will help to understand the longterm impact of what can look like a small shift presently.

Contextual recommendations to the four countries have been made separately as part of national evaluation conclusions. The meta evaluation process also helps to highlight key priorities for future programming at country level, as follows:

- **Kenya's** low uptake of family planning implies challenges with both supply and demand; there may be a cultural element to this result, or it may be the case that CHWs need more time and encouragement to share the advantages of HTSP in their household visits. CHWs also may not be talking to first time pregnant mothers, especially those who are unmarried. Future programs in the area should consider more participatory planning in sexual and reproductive health elements of MNCH, where possible also including faith leaders or other relevant role models.
- **Rwanda's** survey results show a strong increase in post-natal care, but less so in ante-natal – in fact, it has the lowest rate of all contexts – and also a massive drop in IFA supplements. This is in stark contrast to the positive rates of indicators from birth onwards, and suggests that pregnancy is a risk phase for MNCH. Expectant mothers need greater support, services and advice to take up national policies for ANC and maternal nutrition.
- **Tanzania's** low rates of breastfeeding nationwide are hampering the country's progress in maternal, newborn and child survival. More focused policy and behaviour change programming is urgently required to increase mothers' ability, knowledge and interest in early initiation and exclusive breastfeeding. Clearly this is not straightforward. However, the BFHI model (see Uganda case study) provides a low cost model, template and standards for working with government to institutionalise appropriate feeding within MNCH services.
- **Uganda's** food insecurity in Kitgum remains a challenge in terms of nutrition for mothers and children. It was never likely that seasonal food insecurity could be eradicated among the vulnerable families of this area in five years. A greater and more coordinated effort by government, private sector and relief agencies will create a better environment for agriculture and other livelihoods. Noting that Kitgum's health ranking has increased significantly during the project, this recommendation will apply equally or to a greater extent in other disadvantaged rural districts of Uganda.

Annex I: EAMNeCH Theory of Change



Annex 2: Description of common models

To keep descriptions of country-level strategies and approaches concise in the body of the report, a brief overview of models most commonly used to instigate change is included here:

7-11: WV's platform for delivering health programs through a series of cost effective, preventative interventions drawn from the global evidence base that address the primary causes of maternal, newborn and child malnutrition, illnesses and death. WV works with communities to raise awareness of and increase the knowledge and demand for the supply of services around 7 key interventions focused on the mother and 11 key interventions focused on children under the age of two. The 7-11 interventions include the following:

Targets	Pregnant Women: -9 months	Children: 0-24 months	
Core Interventions	Adequate diet	Appropriate breastfeeding	
	Iron/folate supplements	Essential Newborn Care	
	Tetanus toxoid immunisation	Hand washing	
	Malaria prevention & intermittent preventative treatment	Appropriate complementary feeding (6-24 months)	
	Healthy timing & spacing of delivery	Adequate iron	
	De-worming	Vitamin A supplementation	
	Facilitate access to maternal health service: antenatal and postnatal care, skilled birth attendance, prevention of Mother to Child Transmission, HIV/STI screening		Oral Re-Hydration Therapy/Zinc
			Care seeking for fever
			Full immunisation for age
			Malaria prevention
			De-worming (+12 months)

C-CHANGE: WV's brand of the UNDP's Community Conversations methodology used in Africa. The methodology has been effective in raising awareness of the underlying social norms and traditional practices driving the HIV epidemic. Its application is not limited to HIV, as it is a context-neutral process of facilitation and empowerment that can be used to generate community discussion and action planning on any topic(s) of concern to the community including primary healthcare, nutrition.

CHW-AIM: This tool looks at 15 elements that are required to ensure CHWs are able to function, including training, remuneration, data collection and referral. This contextualised tool was built from the evidence and experience shared by WV and MoH representatives in Kenya who participated in the CHW Functionality assessment, setting of action plans and monitoring of the improvement plans. In addition, the CHW-AIM tool is used in evaluating CHW programs and contributes to sustainability.

CVA: Citizen Voice and Action is a social accountability methodology which aims to improve the dialogue between communities and government in order to improve services (like health care and education) that impact the daily lives of children and their families. It familiarises community members with their rights under current policy, helps them to identify where services fall short of policy intent, and brings them together with appropriate stakeholders including government to plan jointly for resolution of problems. CVA action plans also generate information on local health realities that can be used at higher tiers of governance to inform and influence new policy.

Diet Diversification/Modification Approach: A food-based nutrition approach to addressing malnutrition, which encompasses a variety of models. Diversifying the types of food produced and eaten results in higher-quality diets and contributes to healthier families. The models used are dependent on the assessed nutritional need as well as the context, for example, a combination of promoting small animal production, food preparation methods, home gardens, storing or preservation of foods. WV's programming has been informed by numerous programs, such as MICAH (Ethiopia, Ghana, Malawi, Senegal, Tanzania), ENHANCE (Malawi), Essential Nutrition Package ENP (Kenya, Rwanda, Zambia, Zimbabwe, Tanzania, Mali, Malawi).

Healthy Timing and Spacing of Pregnancy (HTSP): Is using family planning to ensure an adequate time interval (3 – 5 years) between the previous birth and beginning of the next pregnancy for a woman.

M-Health: Mobile Support for Frontline Health Workers (m-Health) was piloted by World Vision in Afghanistan in 2008 and now operates in around 20 countries. It uses smartphones and other mobile technology to connect local health workers and systems to broader information networks and to the patients in their care. Equipped with mHealth devices and training, CHWs can easily and rapidly report, refer, advise, remind and seek guidance for their clients even in remote areas.

Positive Deviance (PD) Hearth: PD Hearth is now widely used by NGOs including World Vision as a highly effective female-led solution to endemic undernutrition. In communities with high prevalence of underweight, women with undernourished children come together over a course of several weeks to identify ways of feeding and childcare that encourage healthy development of infants and young children in the local context. Note that all project locations contextualised PD Hearth principles, rather than applying the model in its usual form, because of the importance of working with the Ministry of Health to create institutional nutrition and childcare systems. This report refers to Nutrition Clubs, Village Child Nutrition Committees and Parents' Support Groups, all local variations of PD Hearth principles.

ttC: Timed and Targeted Counseling is World Vision's preferred approach for instilling knowledge and action on the 7-11 interventions for mothers and their children. Through a series of home visits, trusted community health volunteers combine health checkup with specific advice on self-care and childcare including breastfeeding, supplementary feeding, dietary supplements and early action on signs of illness. This is an evidence based, behaviour change model that has been proven to have specific impact.

ENDNOTES

ⁱ From DFAT AACES Mid-term Review, available at: <http://dfat.gov.au/about-us/publications/Pages/australia-africa-community-engagement-scheme-mid-term-review.aspx>

ⁱⁱ Stata Corp, College Station, TX, USA

ⁱⁱⁱ Measurements were made using lightweight SECA scales (with digital screens) designed and manufactured under the authority of the United Nations Children's Fund (UNICEF). The measuring boards employed were specially made by Shorr Productions for use in survey settings.

^{iv} This information is to be included in later drafts.

^v This is a set of 7 interventions for mothers (during pregnancy and post-natal care) and 11 for children aged 0-24 months, ranging from dietary supplements and vaccination through to child feeding and care practices. More information available here: <http://www.wvi.org/nutrition/7-11-approach>

^{vi} <http://www.who.int/mediacentre/factsheets/fs178/en/>

^{vii} Islam M, Odland J: **Determinants of antenatal and postnatal care visits among Indigenous people in Bangladesh: a study of the Mru Community.** *Rural Remote Health* 2011, **11**:1672

^{viii} For more information, see Every Newborn action plan,

http://www.who.int/maternal_child_adolescent/topics/newborn/every-newborn-action-plan-draft.pdf

^{ix} WHO: **Skilled attendants at birth.** In *Global Health Observatory (GHO) data*. Geneva, Switzerland: World Health Organisation; 2016

^x Adegoke A, Van Den Broek N: **Skilled birth attendance-lessons learnt.** *BJOG: An International Journal of Obstetrics & Gynaecology* 2009, **116**:33-40.

^{xi} Arifeen S, Black RE, Antelman G, Baqui A, Caulfield L, Becker S: **Exclusive breastfeeding reduces acute respiratory infection and diarrhoea deaths among infants in Dhaka slums.** *Pediatrics* 2001, **108**:e67-e67

^{xii} Ezzati M, Lopez AD, Rodgers A, Van der Hoom S, J MC, Group tCRAC: **Selected major risk factors and global and regional burden of disease.** *The Lancet* 2002, **360**:1347-1360.

^{xiii} Ibid.

^{xiv} Headey D, Hoddinott J, Ali D, Tesfaye R, Dereje M: **The other Asian enigma: Explaining the rapid reduction of undernutrition in Bangladesh.** *World Development* 2015, **66**:749-761.

^{xv} Victora CG, de Onis M, Hallal PC, Blössner M, Shrimpton R: **Worldwide timing of growth faltering: revisiting implications for interventions.** *Pediatrics* 2010, **125**:e473-e480.

^{xvi} World Vision Kenya. (2011). Kilifi MNCH Project. Baseline Report

^{xvii} <http://www.who.int/nutrition/topics/bfhi/en/>

^{xviii} <http://www.helpingbabiesbreathe.org/about.html>