

Home-based Record Redesigns That Worked

Lessons from Madagascar & Ethiopia

JSI

Home-based records (HBRs) are an important tool for achieving, monitoring and sustaining vaccination coverage but have often been underutilized in national immunization programs. Over the years, many countries have used a traditional format that may not be easy for health workers to complete accurately and legibly or for caregivers/parents to understand the data that are recorded. Also, all users may not understand or perceive the value of these documents.

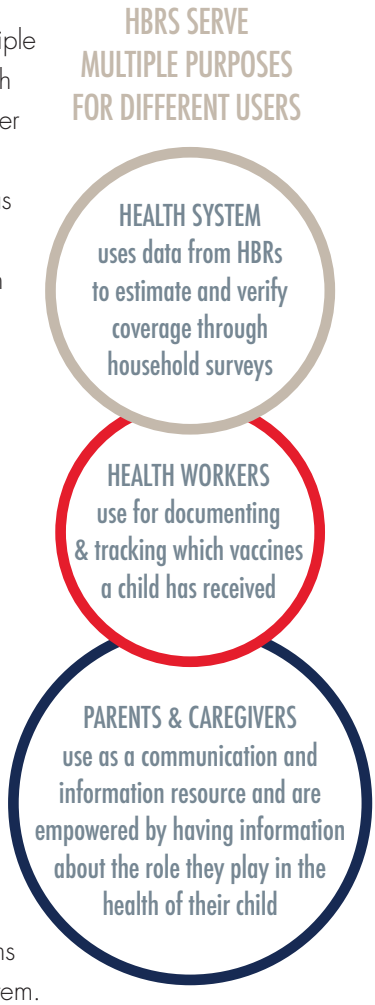
Redesign approaches in some countries have been successful in meeting the needs of health workers, caregivers, and the health system while also increasing the availability and use of these important records (with an overall objective of increasing immunization coverage). Experiences from Madagascar and Ethiopia – where the traditional vaccination card was redesigned and incorporated into an integrated communication tool – are highlighted in the following case studies. We share these experiences to inform countries who may be interested in undertaking their own redesigns as reference on the stakeholders involved, steps in the process, and key points to consider.

BACKGROUND

Home-based records (HBRs) are an important data collection and monitoring tool serving multiple purposes for the caregiver, health worker, and health system. These records can: (a) aid health workers in documenting and tracking which vaccines have been given to a child; (b) empower a parent or caregiver to play a role in the health of their children and have documented information on their child's vaccination history and when to return for services; and (c) serve as public health monitoring tools on vaccination coverage through household and other surveys (with increasing importance, now that more vaccines/antigens are in the system). As noted in the recent research by David Brown and others, "the child immunization card is too often underutilized or inappropriately used by parents and health care workers and therefore does not always fulfil its intended purpose[1]." Multiple problems have been identified including:

1. shortages and stock-outs in HBRs, resulting in children that never receive an HBR;
2. lack of information or lack of emphasis on the importance of the card, which in turn can result in caregivers losing, damaging, or forgetting to bring HBR to the health facility;
3. HBRs not being filled out accurately or completely by the health worker;
4. Insufficient information on actions (such as return dates) or space for entering data

More vaccines are being incorporated into national immunization programs, with multiple antigens being given at each contact. Therefore, this record of which particular antigens an individual has received is increasingly important — both for personal record-keeping as well as for cross-checking during surveys and other monitoring or evaluation visits (notably given potential challenges with parental recall). HBRs now have increased significance in terms of their data tracking and decision-making utility within the broader immunization data ecosystem.



[1] "Child Immunization Cards: Essential Yet Underutilized in National Immunization Programmes", David Brown. The Open Vaccine Journal, 2012.

INTRODUCTION

In this document, we summarize two successful HBR redesign efforts in Madagascar and Ethiopia, including the background and rationale for considering a redesign, the stakeholders involved, and the steps completed in the process to redesign and roll-out a revised HBR. We have also included challenges and lessons learned from both countries.

Although the pathways were similar in Madagascar and Ethiopia, our informational interviews showed that the long-term sustainability and use of the "new" HBRs differed greatly: Madagascar has continued to use the redesigned HBR with minor tweaks and additions, while Ethiopia uses a similar version of the redesigned HBR, but as a communication tool for health promoters (i.e. not as a filled-in vaccination record for each child), with the redesigned version never completely replacing the older "WHO" vaccination card for data entry. Both countries introduced the redesigned HBR as part of an intervention package and larger communication strategy. Thus the impact of solely the redesigned HBR is difficult to measure but project findings showed increased coverage correlated with the new HBR.



A health promoter in Madagscar explains the Immunization Diploma to a new mother.

Building on the experiences in Madagascar and Ethiopia, similar cards have been designed and used in Ghana, Liberia, Myanmar, and elsewhere.

MADAGASCAR'S EXPERIENCE

In Madagascar, before the redesign of the home-based record began around 1997, the Expanded Program on Immunization (EPI) was using the standard WHO vaccination card. The initial rationale for redesigning the HBR was to increase its use as a communications tool for caregivers and community health workers as well as a record for vaccinations received and other child health services. With support from the USAID-funded Jereo Salama Isika project[2], multiple Integrated Management of Childhood Illness (IMCI) counseling cards were being developed to be used by health promoters within the Madagascar health system. The HBR redesign was completed after these cards were developed, as part of the same package of tools for communication and tracking of activities and key health indicators. As these various materials were being used and streamlined, the HBR became one of the primary tools.

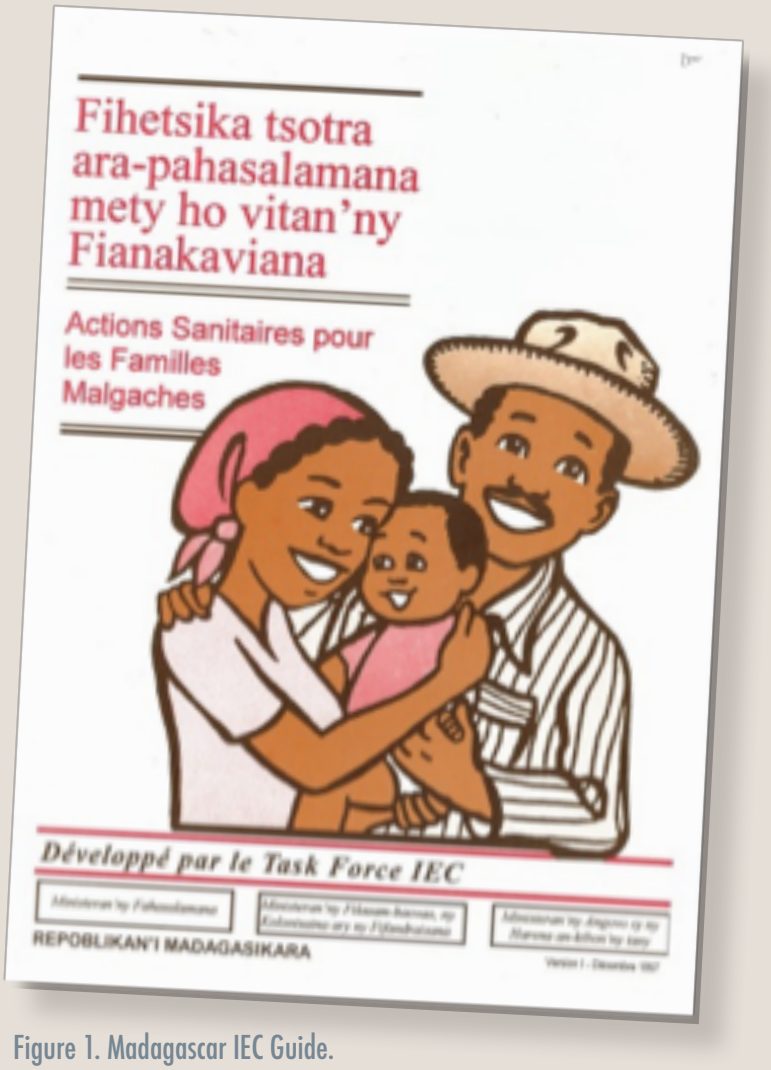


Figure 1. Madagascar IEC Guide.

To provide oversight of communications materials being developed by partners, an Information, Education and Communication (IEC) Taskforce was started by the Ministry of Health. An initial activity for the Taskforce was to bring together individuals from multiple Ministry of Health (MOH) programs, UNICEF, USAID-funded projects and NGOs for a workshop in which partners shared copies of their current materials and messages. From these, a final set of key, actionable messages was agreed upon during this workshop. A guide (Figure 1) was also developed that included these messages and key actions, which NGOs and partners could then choose from when developing additional materials. Any future messages or new/revised materials that NGOs wanted to incorporate or create needed to be approved by the IEC Taskforce first. This included any changes to the HBR.

A user-centered approach was integral to the development of the new HBR.

A local designer was contracted through the Basic Support for Institutionalizing Child Survival (BASICS) project[3] in the initial HBR redesign. He has continued to develop health communications materials for many projects and the MOH, thus adding to the consistency and recognition of the illustrations in the HBR and other health materials.

Early HBR designs were shared with health workers and communities through focus group discussions conducted with community representatives and caregivers to solicit feedback. These inputs were then discussed with the IEC Taskforce and the designer, with revisions then made based on this feedback. At least two different versions of a design were tested in

[2] 1998-2003
[3] USAID, BASICS I 1993-1999, BASICS II 1999-2004

order to get the best model (i.e. not just to test whether the prototype was "good" or not, but rather if it was an easy to understand model vis-a-vis other choices).

A promotional campaign for the IEC strategy and HBR was developed which included intense marketing to families.

A user-centered approach was integral to the development of the new HBR. Village meetings were held to: (1) encourage community involvement, (2) orient them on the health indicators and messages/actions included in the HBR, and (3) increase the value placed on maternal and child health programs, including HBR. The experience from Madagascar showed that families and communities could be engaged through small do-able actions that were included in key tools like the HBR for caregiver and health worker reference and use. In Madagascar, volunteer Community Agents were mobilizers and animators and became positive deviants ("model families") who could reinforce the use of these tools.

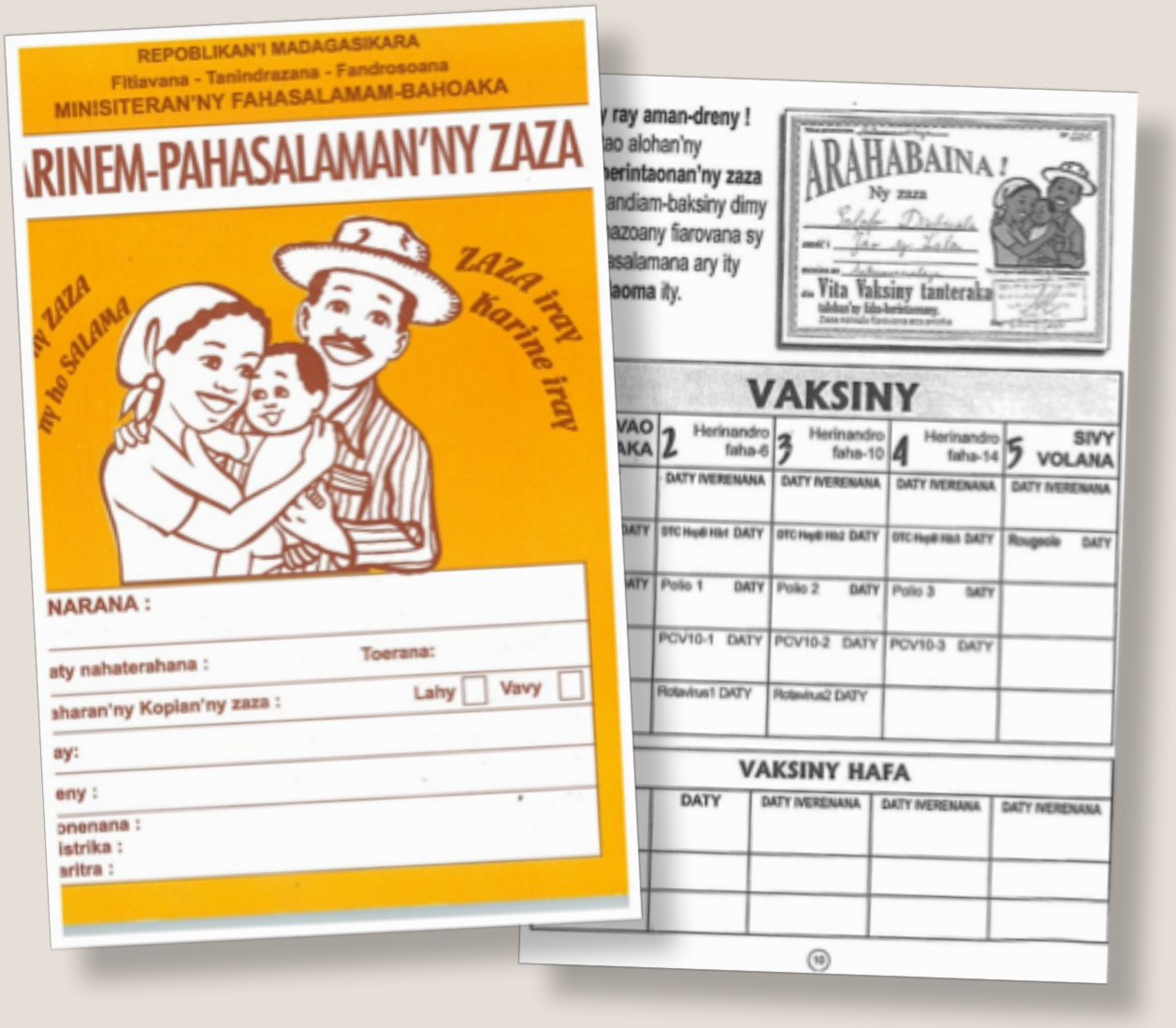


Figure 2. Redesigned Madagascar HBR cover and vaccination page.

The experience from Madagascar showed that families and communities could be engaged through small do-able actions that were included in key tools like the HBR for caregiver and health worker reference and use.

Once a final design was selected and tested, a timeline was set for transitioning from the old HBR to the new version. This was not a quick process; and sufficient time was built in for this transition and ensuring emphasis on the new HBR beyond approval of the new design — for stock management, availability, and to familiarize users with the new version and changes. Clear coordination within the Ministry of Health between different units (i.e. immunization, child health, nutrition and family planning) was needed to ensure sufficient availability of the new HBR. This transition from an immunization card to the integrated booklet took 2-3 years. Subsequent revisions have been faster, given the initial agreement on format and design; however, it was important to maintain communication and advocacy to ensure this.

There was some initial disagreement on the roll-out process for the new HBR. Originally, the decision was made to sell it in the markets. Promotion and marketing were organized to inform communities, but it was then decided by the MOH and partners that the HBR should be free and not sold, causing further confusion and delays. Madagascar's HBR is to be provided free of charge, but inconsistent or lack of funding has caused stock outs in recent years.

Once the new HBRs were printed and distributed to health facilities and/or community mobilizers, an advertising campaign was key to introduce the new card and ensure acceptance and use by the community. A promotional campaign was developed which included intense marketing to families. Messaging was developed to show that the new HBR was modern and empowering: as a tool for families to know their child's health status and as a document which parents themselves could review and own (i.e. the content was not just for the health workers or mobilizers). Rapid project assessments showed that once 20% or more of families started using the HBR, it began to catch on — as these "model families" introduced the importance of the HBR to others.



A mother in Madagascar proudly shows her child's HBR.

Although the HBR (referred locally as the "Zaza Salama" card) has been and continues to be valued by the MOH, development partners and caregivers, the annual funding for printing and distribution is ad hoc and inconsistent. This has led to challenges with the availability of the redesigned HBR. In Madagascar, there are many different materials for training health promoters that are separate from the HBR. The multitude of documents is not sustainable and difficult to manage — both logistically to ensure full distribution of the HBR and for health promoters to use effectively. This then undermines the integrated HBR and suggests the need for the MOH and partners to refocus on this as a central tool for health workers and caregivers.

This desire for a vaccination record that was simple for health workers, health promoters, and caregivers to use and understand was at the core of redesign processes in both Ethiopia and Madagascar.

ETHIOPIA'S EXPERIENCE

After a few years of collaboration (including the HBR redesign) in Madagascar, several members of the former Jereo Salama Isika project team relocated to Ethiopia and soon after, the main USAID counterpart also transferred. Around 2002, this group was interested in replicating the success of the HBR redesign with the MOH and partners in Ethiopia. At least 6 different versions of cards were in use in Ethiopia, so the USAID-funded Essential Services for Health (ESHE) project[4] brought together different partners and conducted a harmonization workshop. Along with incorporating IMCI messages into the HBR, there was also a concern that caregivers did not understand all of the "blank" boxes and could not tell if a child had completed the series of vaccinations. This desire for a vaccination record that was simple for health workers, health promoters, and caregivers to use and understand was at the core of redesign processes in both Ethiopia and Madagascar.

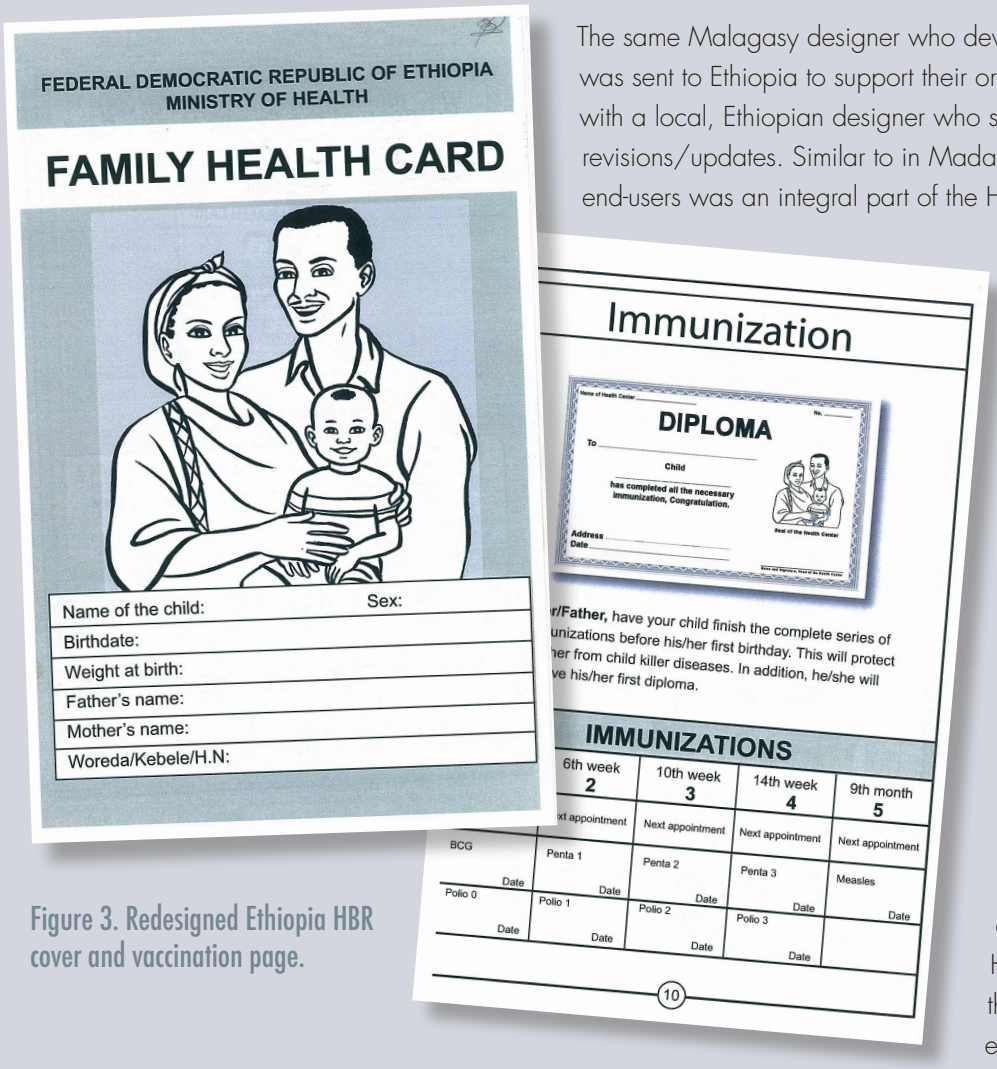


Figure 3. Redesigned Ethiopia HBR cover and vaccination page.

The same Malagasy designer who developed the Madagascar HBR was sent to Ethiopia to support their original redesign, and he worked with a local, Ethiopian designer who subsequently completed later revisions/updates. Similar to in Madagascar, the involvement of end-users was an integral part of the HBR development.

In Ethiopia, the new HBR included detailed pictures and child survival and nutrition messages (Figure 3), which made it easy for health workers and promoters to draw the interest of mothers — particularly those who were non-literate. This HBR was supported by the LINKAGES[5] project and later by the Integrated Family Health Program (IFHP)[6].

The Child Survival Task Force helps to create accountability among partners and provides oversight for the tools, including HBR, with ownership of this by the Ministry of Health. With the exception of adding a new vaccine, any other changes to the HBR are difficult to make and need to be approved by the government. This helps to maintain version control, especially in a large country like Ethiopia where many partners may want to make changes.

In the USAID-funded regions, the HBR was used in the EPI refresher training with health workers to ensure that they knew how to use it and understood its importance as a reporting and communication tool. The HBR was at the center of the

[4] USAID ESHE I 1995-2003, ESHE II 2003-2008
[5] USAID, 2003-2006
[6] USAID, 2008-2016

program and used in all training for healthcare workers, community health workers, and supervisors. Volunteer community health extension workers were involved in the process to build enthusiasm for the new HBR.

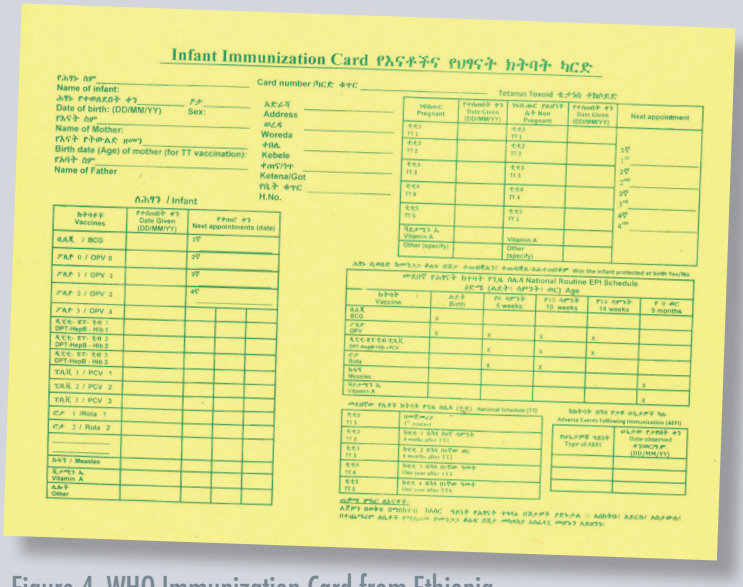


Figure 4. WHO Immunization Card from Ethiopia.

Even though the new HBR was introduced, tested and disseminated by USAID-funded projects in their regions, the WHO immunization card (yellow card, Figure 4) continued to be used, sometimes (Figure 4), sometimes in addition to the redesigned HBR (which has functioned more as a communication tool than a vaccination record). In addition, our key informants felt that the HBR may not have been frequently used by families in Ethiopia because they may not have understood how to navigate it. Currently, the Health Development Army (HDA) is beginning to distribute the integrated HBR to pregnant women and walking through it with them and their families, but this is not uniformly done throughout the country. Health extension workers and the HDA need additional orientation and guidance to emphasize using the HBR with families. Health facilities also do not ask to see the HBR or fill it out which diminishes the value that is placed on it. Without support at the regional level, including training and practical application, health extension workers may not recognize the importance of this new tool. In addition, as the separate Family Folder in Ethiopia is being developed for use at health facilities (which includes immunization tracking), there is therefore a potential disconnect between the vaccination record that is kept at the health facility vis-à-vis an HBR that parents can keep with them for reference (notably for pastoralists, mobile populations who may multiple facilities, and for surveys).

Although used for communication purposes, the new card was never able to supplant the traditional WHO immunization card as an immunization tracking tool.

The new card was never able to supplant this traditional WHO immunization card because of lack of advocates at the higher level to make a change to the HBR from the older card. The "new" HBR has been printed by projects (including the current Last Ten Kilometer [L10K] and the Integrated Family Health Program [IFHP]). However, because the traditional WHO immunization card is also still in use for data tracking, health workers rarely complete the immunization chart in the HBR; therefore, the redesigned HBR is being used just as a communication tool for the HDA (Figure 5). In recent updates to the HBR, the immunization chart has been replaced with a list of ages when a child should be immunized, with no mention of the antigens or space to record vaccinations.

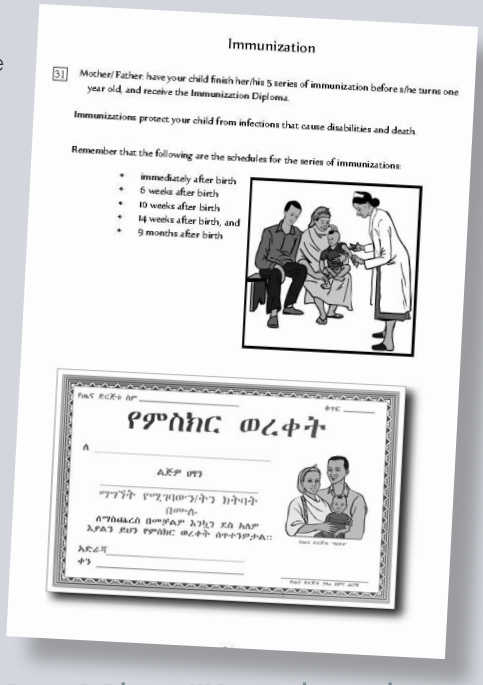


Figure 5. Ethiopia HBR page showing the immunization diploma and key messages.

Another challenge to the success of the redesigned HBRs in Ethiopia has been gaps in sustained funding. The donor-funded projects covered costs for printing and distributing HBR in the regions where they were working, and UNICEF provided cards for the remainder of the country.

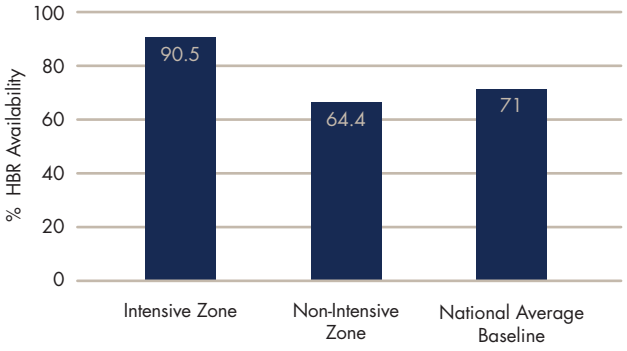
MEASURING THE IMPACT OF REDESIGN AND ROLL OUT

Understanding the impact of a redesigned HBR has been an under-emphasized area in most countries, despite the importance of data from HBRs being used in surveys. Projects that have supported HBR redesign efforts have compared retention before and after redesign as a measure of its success. However, the redesigns have been part of a larger intervention package, so it can be difficult to measure the true impact of the new HBR in relation to immunization coverage and separate from other interventions.

Table 1

	Antananarivo	
	Intervention	Non-intervention
More likely to be fully vaccinated by one year of age	88	36
BCG coverage	96	73
DPT1 coverage	96	74
Had an HBR	56	10

Figure 6. HBR Availability in Madagascar. BASICS 1998.



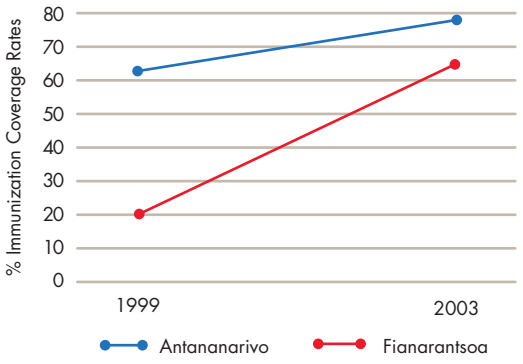
In Madagascar, a survey in two BASICS districts in 1998[7] showed HBR availability was 90.5% (highly significant with p< 0.000001) in the intensive zone, while the non-intensive zones had a non-significant decrease to 64.4% coverage related to the baseline average for the country 71% (Figure 6). Based on the experience from these districts, as part of a larger maternal and child health strategy implemented by USAID's Jereo Salama Isika project from 1998 onwards, the revised HBR was believed to have been a contributing factor to the improvement of immunization coverage rates in the two provinces[8]. An unpublished manuscript highlighting the findings from Jereo Salama Isika further documents an increase of immunization coverage from 1999 to 2003 in ten districts in Antananarivo and Fianarantsoa. As shown in Figure 7, comparisons of immunization rates from DHS over time in each province showed a significant change in the proportion of children aged 12-23 months who were fully immunized at the time of the survey (from 63% to 76% in Antananarivo and from 19% to 65% in Fianarantsoa)[9].

Specific to card retention, the HBR availability was higher in the intervention areas than in the non-intervention areas in both regions (see Table 1). Among children aged 12-23 months surveyed, 56% of those in intervention areas in Antananarivo had an HBR, compared to just 10% in non-intervention areas. In Fianarantsoa, 31% had an HBR in the intervention areas, compared to 22% in non-intervention areas.

Additionally, in Antananarivo, children in the intervention area who possessed an HBR were 2.5 times (88% vs. 36%) more likely to be fully vaccinated by one year of age, compared to those who did not possess an HBR. In Fianarantsoa, they were 75% more likely (68% vs. 39%) to be fully vaccinated.

In both regions, the 2003 DHS data showed that more than 90% of the children aged 12-23 months in the intervention areas had received

Figure 7. Increase in Immunization Coverage Rates in Ten Districts in Antananarivo and Fianarantsoa. USAID's Jereo Salama Isika.



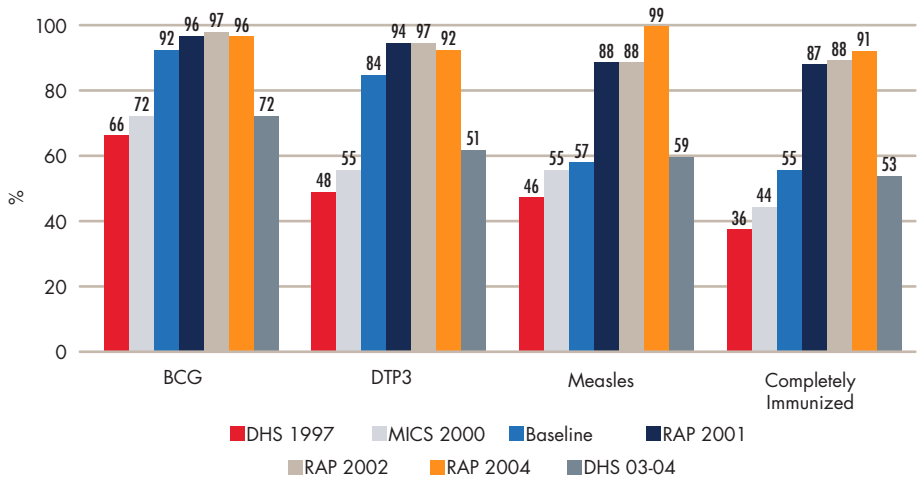
Source: DHS (specific sampling in 10 districts)

[7] Household Survey on Health and Nutritional Status of Children, Antsirabe II & Fianarantsoa II, September 1998.
[8] Note: Although the survey was conducted in coordination with DHS to oversample in the intervention areas, this coverage survey analysis did not take into account other potential differences between the populations that could confound/influence the observed relationship and impact on immunization coverage.
[9] Regional baseline data from 1997 DHS and endline from 2003 DHS, with separate intervention area samples.

A 2004 study under the LINKAGES project in Antananarivo and Fianarantsoa provinces in Madagascar also showed strong improvements in and maintenance of vaccination coverage.

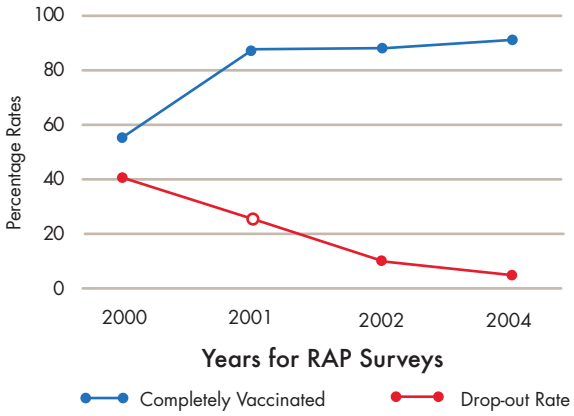
BCG and DPT1 vaccines, which compared to about 75% of children receiving BCG and 77% of children receiving DPT1 in the non-intervention areas. Compared to children living in non-intervention areas, more children also received the third dose of DPT and Polio vaccines in the intervention areas in both regions). As shown in Figure 8, in Antananarivo, BCG uptake was 23 percentage points higher (96% vs. 73%) in the intervention area and DPT1 was 22 percentage points (96% vs. 74% for card and recall) higher than in non-intervention areas. In Fianarantsoa, BCG uptake was 15 percentage points higher in the intervention area and DPT1 was 11 percentage points higher.

Figure 8. Immunization Coverage of Children (12-23 months)



A 2004 study under the LINKAGES project in Antananarivo and Fianarantsoa provinces in Madagascar also showed strong improvements in and maintenance of vaccination coverage. As shown in Figure 8, the baseline rate of infants in 2000 who were completely vaccinated (child receiving BCG, three doses of DTP and polio, and measles vaccines) was only 55%; however, the baseline rate of vaccination coverage of BCG was 92%, but only 57% were immunized against measles. As per annual progress surveys (RAP) conducted by the project in 2001, 2002, and 2004, results showed that the complete vaccination of children 12 to 23 months old in the provinces increased each year from 87%, 88%, to 91%[10], respectively. The dropout rate (BCG - MCV) at baseline was 40%, and the RAP 2004 results showed that the dropout rate was reduced to a very low 5% (from 10%) in 2002.

Figure 9. Improvements in Vaccination Coverage in Antananarivo and Fianarantsoa LINKAGES RAP Study



In Ethiopia, a community assessment in ESHE-focused woredas found that availability of vaccination cards increased from 31% at the time of the ESHE baseline (2004) to 54% at the 2006 community assessment[11]. In Amhara, access to immunization services, defined by DPT1, improved significantly, from 63% to 84% ($p<0.01$). The percentage of children 12-23 months old who were fully immunized showed a significant increase, from 40% to 48% ($p<0.05$). The drop-out rate from DPT1 to DPT3 had shown significant improvement from the baseline to the community assessment (22% to 13%). Similarly, in SNNP, access to immunization services had increased to 93% compared to 66%, and the percentage of children who were fully immunized increased from 38% to 54%. The drop-out rate from DPT1 to DPT3 also showed a significant improvement from baseline in project areas, from 29% to 12%.

[10] "Assessing a Behavior Change Strategy for The Essential Nutrition Actions, Immunization and Family Planning — Antananarivo and Fianarantsoa Provinces, Madagascar." RAP 2004 Final Report.
[11] Community Assessment in Selected ESHE Focus Woredas in Amhara, Oromia & SNNP Regions, Ethiopia, USAID, ESHE and LINKAGES Projects, June 2006.

CONSIDERATIONS FROM THESE HBR REDESIGN EXPERIENCES

Stakeholder Engagement

One of the most important lessons from both Madagascar and Ethiopia's experiences is to actively involve the various stakeholders in the redesign process. An IEC Taskforce is helpful in coordinating and shepherding the process and should include the many different organizations as well as a designer. This taskforce should lead the message development and card redesign processes. If the new HBR will be integrated, it is also important to include someone from each of the program areas (i.e. immunization, nutrition, child health, etc.) to ensure timely approvals. End-users also need to be considered from the initial steps in a redesign, and frequent engagement with each group of users is needed to ensure that their experiences and interactions with the HBR are considered.

Advocacy efforts at all levels of the system are also needed to ensure the successful uptake of a newly-designed HBR, as well as to ensure sustainability, including financing, beyond the initial printing.

KEY STAKEHOLDERS INVOLVED IN REDESIGN

- End-users: Health workers, Parents & caregivers, and the Health system
- EPI & other programs (e.g. MNCH) with sections in the HBR
- UNICEF, WHO, and other partners (e.g. USAID and other bilaterals or donors)
- Ministry of Finance
- Graphic Designer

Redesign – Artists and Elements to Consider

The various key informants emphasized that a competent, professional designer is essential for redesigning an HBR. Several people noted that it is worth the extra money to find an artist who can create a simple, clear design and will work through the process of testing and revising until a final design is selected. A highly-skilled designer will also be able to incorporate and visually organize large amounts of information into a user-friendly format.

RECOMMENDED REDESIGN ELEMENTS TO CONSIDER

- Professional designer
- Simple design and format
- Minimize illustrations to those that are meaningful to users
- Use only key information that can be recorded and monitored for action
- Test HBR with various user groups before finalizing

Along with having a talented designer, it is imperative to keep the design simple by using fewer boxes and removing non-important or non-monitored information (or moving other less-used content to the back of a multi-page card). When redesigning an HBR, existing content should be reviewed to determine whether it is essential or if it can be removed or included in other behavior change communication (BCC) materials or reporting tools[12]. The design should also align with the various users' needs, including how health workers are recording information and how other

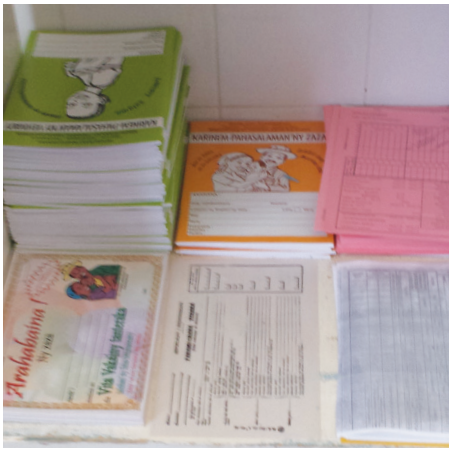
[12] For example, separate boy and girl weight for age and height for age charts are now included in the Madagascar HBR. However the colors and additional pages have increased the cost of the cards, and the charts in the HBR are not being completed by health facility staff; plus stock outs of cards have been reported in 2014 and 2015. The 2013 immunization coverage survey also showed only 55% availability of cards averaged nationwide (compared to >70% from the 2008 immunization coverage survey).

groups are using the card for decision-making. Other information that had previously been included may be less important (or may not be completed without proper training and monitoring), so it is good to be strict and unforgiving when deciding what to keep in a new HBR, particularly to help reduce production costs. A good design follows logical thinking, contains visual clues, and includes a trigger to remind caregivers of their next return date. A good communications specialist can help to determine what information should be included and what can be left out or moved to another section.

Illustrations are great to help reach low literacy populations with targeted messages and create more value and appropriation of the HBR by various users. As with all design, illustrations should be kept very simple and attractive. Illustrations can be kept to a minimum, such as only key information for action, or limited to the cover page. Photographs are another option to include, but this may not have the same effect as illustrations, which are seen as more generic and acceptable to reach a wider and potentially culturally diverse audience. Any images that are used should be tested before the HBR redesign is finalized to ensure that they are recognizable by all users.

Importance of Cards as Part of a Communications Strategy

Both Madagascar and Ethiopia have focused on the communication aspect of the HBR by designing a card which can be used by the health system for tracking and reporting as well as to facilitate the work of health promotes and to educate parents. The HBRs, therefore, serve not only as a tool for the health system and caregivers, but also as a fundamental resource within a comprehensive communication strategy in which the HBRs are part of a package of reference materials by health workers, community mobilizers and educators. (See picture, which shows several tools in use in Madagascar: the maternal and child health cards, the vaccination diploma, tickler file cards for generating due lists, and other tracking forms.) Therefore, although the card was originally designed as a record of immunizations (and other health services) received by a child, the role of the HBR has now expanded to serve other purposes, such as a behavior change communication tool. In many cases, the motivation for initiating an HBR redesign is led by certain interventions or as part of a larger communication strategy; however during this redesign process, it is important to also remember the HBR's daily use as a record of immunizations and a reporting tool (see Madagascar's IEC Strategy in Annex I).



Several tools used in Madagascar including maternal and child health cards, vaccination diploma, tickler file cards for generating due lists, and other tracking forms.

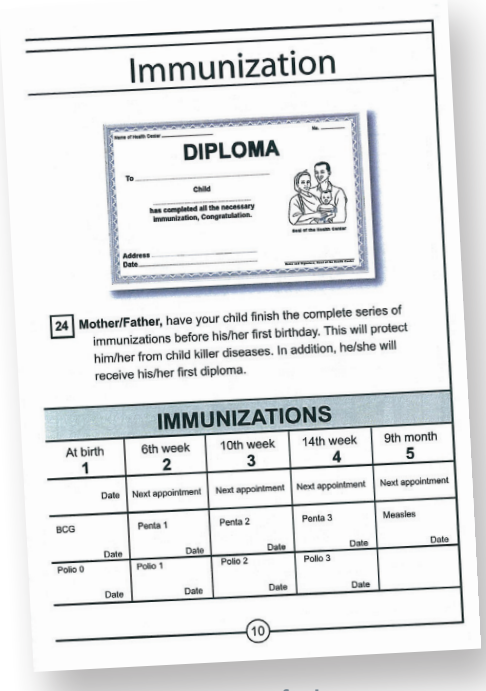
In both Madagascar and Ethiopia, the new HBR was introduced as part of a larger intervention which included a diploma that families received once their child is fully immunized The diploma was proven in both countries to be an effective tool and incentive for encouraging parents to continue to come for immunization and child health services, with their comprehension that they would receive the diploma when their children completed the full series of vaccinations (i.e. through the measles contact) before the child's first birthday. ESHE did a Community Assessment in their focus woredas in SNNP, Ethiopia in June 2006, including assessment of the impact of the diploma on behaviors with model families. Among those that publically received the printed diploma, behaviors were more likely to be sustained 6-12 months later. Even with this measure of success, the project decided not to continue printing the diploma because it was difficult to ensure its delivery at the health post level. In the 2008 coverage survey in Madagascar, approximately 46% of the children surveyed had a diploma. The diploma is still in use in the country; however, its printing and distribution are not regularly assured nationwide.

Card Sustainability

The logistics & printing of cards and BCC materials are always a problem, as evidenced in both of these country examples. If UNICEF or donors stop printing cards or other materials, parts of the country experience stock-outs that can last for months and even years (as has been the case intermittently in parts of Madagascar since 2011). Lack of longer-term assurance of funding for printing and dissemination is another deterrent to success. HBR financing is ad hoc, and frequently reliant on UNICEF, Gavi, or projects (e.g. USAID-funded in certain areas). Additionally, often the EPI unit must take the lead on assuring printing and distribution, although there are other integrated elements in the HBR that have increased the size and cost and for which other units within the MOH should be responsible and co-fund.

Lack of longer-term assurance of funding for printing and dissemination of HBRs is another deterrent to success.

In recent years, many countries have chosen to move towards an integrated child health card rather than having multiple cards for different programs. Benefits of an integrated card have been documented in other papers[13]. However, our key informants also shared some of the challenges posed by an integrated card. For example, immunization has the potential of being lost in a larger integrated card and revisions delayed (e.g. for inclusion of new vaccines or if multiple approvals and alignment of program areas are needed). One could argue this has been the case in Ethiopia, where only a half-page now devoted to immunization, and there is no space for health workers to list and record the dates for every antigen (e.g. including PCV, rotavirus, etc) that a child has received.


Immunization

DIPLOMA

To _____ Child

has completed all the necessary immunization. Congratulation.

Address _____ Date _____

24 **Mother/Father,** have your child finish the complete series of immunizations before his/her first birthday. This will protect him/her from child killer diseases. In addition, he/she will receive his/her first diploma.

IMMUNIZATIONS

At birth 1	6th week 2	10th week 3	14th week 4	9th month 5
Date	Next appointment	Next appointment	Next appointment	Next appointment
BCG Date	Penta 1 Date	Penta 2 Date	Penta 3 Date	Measles Date
Polio 0 Date	Polio 1 Date	Polio 2 Date	Polio 3 Date	

10

Immunization Section of Ethiopia's integrated HBR.

If changes are made to an integrated HBR, review and approval are often required from each program that has a section in the card. This creates numerous delays in the approval and roll-out of new designs, notably if an IEC or Child Survival Taskforce (as emphasized previously) is not leading and well-coordinating this process in a timely way that considers each program's needs. For example, vaccination programs need HBRs for every child in the birth cohort and for each vaccine given, so production delays cause risk that some antigens may not be recorded and/or that cards are not up-to-date. Changes to growth monitoring charts and the introduction of separate boy/girl cards have also been challenges (as previously noted with Madagascar), as these increase costs (pages and colors) and the use of these sections is not judiciously monitored. Also, if the HBR is integrated with multiple pages and colors, than every program that has included content must share in the sustained cost of production and dissemination and monitor the availability and use of the HBR to avoid stock-outs and ensure availability for each new birth cohort.

Part of the introduction process is upfront planning and securing financing for printing and distribution longer-term. Without these resources in place, no matter how well designed the new HBR is, it will not succeed.

Summary of Lessons Learned

The key informants interviewed for this case study shared several of the lessons learned from their experiences with redesigning the HBRs in Madagascar, Ethiopia, and in other countries over the last 15-20 years. The most important lesson that was shared by all is that just redesigning an HBR is not enough to ensure increased availability and use. Many other factors go into the successful redesign and roll-out, including: (1) ensuring that cards are printed in sufficient, long-term supply, (2) making arrangements for distribution to districts, then to health facilities, and finally to health promoters and caregivers; (3) conducting training on why the cards are important tools; and (4) supporting follow-up review meetings and formative supervision to emphasize the use of cards. This requires a sustained commitment from the MOH to ensure success and often the support from other partners.

CRITICAL ELEMENTS WHEN REDESIGNING HBR

- Ministry as champion
- BCC strategy to accompany redesign & dissemination
- Agreed upon timeline for updating, finalizing, & ensuring printing and dissemination – including funding long-term
- Logistics strategy for dissemination and monitoring of card distribution and stock levels

It is also important to limit and simplify the messages that are included, as families can be overwhelmed by the number of health actions they are to take, and health promoters need guidance on how to use the HBR. The most successful HBRs have a balance between behavior change messages and as a reporting tool for services received. Some HBRs, as is now the case in Ethiopia, are primarily used for communication while others are only a record of health services. By combining these, an HBR can bring information into the hands of a family while also serving as a tool for health worker and service reporting.

RESOURCES FOR REDESIGNING A HOME-BASED RECORD

Practical Guide for the Design, Use and Promotion of Home-Based Records in Immunization, World Health Organization, June 2015

Records for Life, Bill & Melinda Gates Foundation, 2014

Specific findings related to design elements included ensuring that the HBR is easy for parents to navigate and understand which can include color coding each section and the use of graphics and acceptable images/pictures. The design should also be simple for health promoters and health workers to reference and complete. Lastly, when designing a new card or redesigning with additional content, it is important to build-in opportunities and financing for monitoring and evaluation in order to track availability and use. This should be a shared responsibility by all MOH programs that have content in the HBR.

Information for these case studies was gathered through a series of informational interviews conducted by Lora Shimp and Kirstin Krudwig, JSI Research & Training Institute, Inc, with the key contacts and their affiliations at the time of the HBR redesign noted in the list below. The research also included a review of reports, articles, and other materials that were published or produced during the time periods that the HBR redesigns were being done. The authors wish to thank these individuals for their time and access to their files/documents, as well as to especially acknowledge the Madagascar staff and Ministry of Health colleagues and communities that worked and collaborated with these projects.

LIST OF INTERVIEWS

Mary Carnell, JSI, Jereo Salama Isika Project & ESHE II
Agnes Guyon, JSI, LINKAGES
Peter Gottert, formerly AED, worked on various projects in Madagascar and Ethiopia
Brian Mulligan, JSI, ESHE II
Alban Ramiandrisoa Ratsivalaka, Malagasy graphic designer
Wuleta Betemariam, JSI L10K Project
Kassahun Mitiku, JSI L10K Project
Jaures Rabemanantena, Jereo Salama Isika and IMMUNIZATIONbasics
Josoa Ralaivo, Jereo Salama Isika and SanteNet

KEY RECOMMENDATIONS AND FINDINGS

Design and Process

- Involving end-users is an integral part of developing an HBR. Specifically, the experience from Madagascar showed that families and communities could be engaged through small do-able actions that were included in the HBR for caregiver and health worker reference and use.
- When redesigning an HBR, it is highly recommended to hire a competent, professional graphic designer who can create a simple, clear design and work through a process of testing and revising before a final design is selected.
- Simple and attractive illustrations that are recognizable by all users should be included in HBRs, especially to help reach low literacy populations with targeted messages.
- It is important to build in sufficient time to support the transition from an old HBR to the new version – including time for stock management, availability, and familiarizing users with changes.

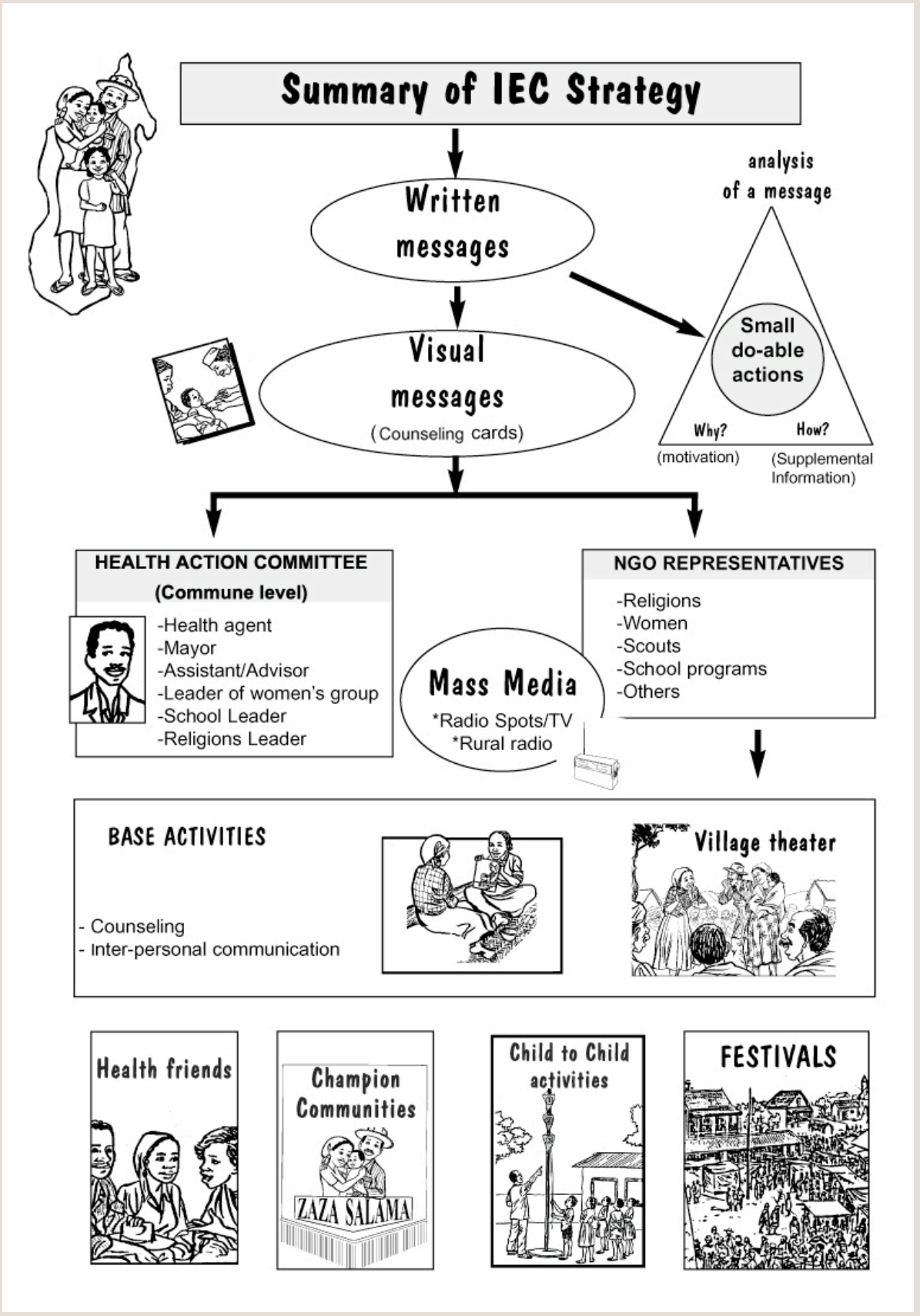
Funding, Availability and Use

- Coordination within the MOH between different units (i.e. immunization, child health, nutrition, and family planning) may be needed to ensure sufficient availability of the new HBR.
- It is critical to ensure a sustainable funding source to support longer-term printing and dissemination of the cards. In addition to the EPI unit, other units within the MOH should be responsible and co-fund.
- Advocacy efforts at all levels of the system are needed to ensure the successful uptake of a newly-designed HBR.
- Involve mobilizers within the communities to reinforce the use of these tools: Community Health Extension Workers in Ethiopia and Community Agents in Madagascar became positive deviants (model families) and demonstrated users within their communities.
- Consider and include, if needed, additional orientation and guidance (e.g. during training, monitoring and supervision) for health workers to Health Workers to emphasize using HBR with families and to help them recognize the importance of the tool.

Lessons Learned

- In Ethiopia, a desire for a vaccination record that was simple for health workers, health promoters, and caregivers to use and understand was at the core of both redesign processes.
- In Ethiopia, accountability and ownership of the card redesign process from the Ministry of Health helped maintain version control of the card.
- In Madagascar, an advertising campaign was key to introduce the new card and ensure acceptance and use by the community.
- In Madagascar and Ethiopia, the diploma for completed vaccination was proven to be an effective tool and incentive for encouraging parents to continue to come for immunization and child health services.
- Integrated HBRs have their own unique challenges not seen in immunization-only cards. For example, if changes are needed in an integrated card, delays exist due to review and approval from multiple program units. Immunization also has the potential of being lost in a larger integrated card. Furthermore, all content in integrated HBRs are not always tracked or monitored to ensure completion and use, thus potentially increasing the cost of printing for information that is not collected.
- The HBR in both Madagascar and Ethiopia serves as a fundamental part of a comprehensive communication strategy.

Annex I: Madagascar's IEC Strategy





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