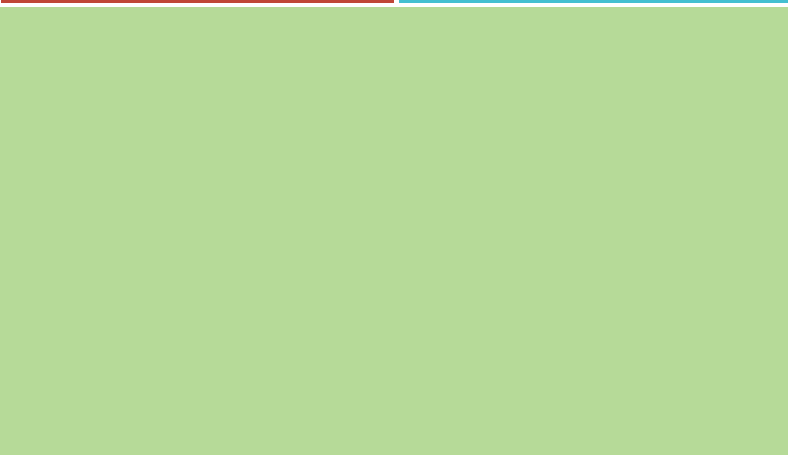
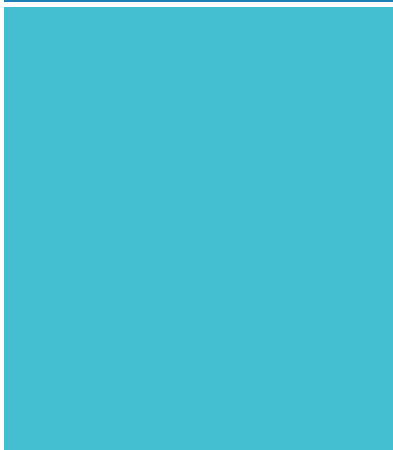
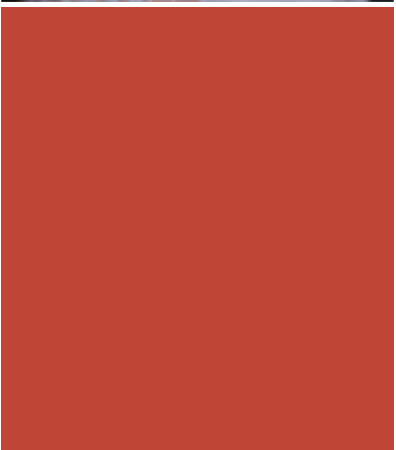




PRACTICAL GUIDE
FOR THE DESIGN, USE AND PROMOTION OF
HOME-BASED RECORDS
IN IMMUNIZATION PROGRAMMES



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World Health
Organization

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Preface

Home-based vaccination records play an important role in documenting immunization services received by individuals, yet current evidence suggests these tools are too often underutilized. Furthermore, home-based records currently vary in complexity across and sometimes within countries and lack standardization in content. This observation is of little surprise as guidance on the content and design of home-based records to date has largely been limited to brief references within existing immunization texts.

Against this backdrop and in response to a recognized need for a more comprehensive guide on the design and implementation of home-based records, the World Health Organization (WHO) set up a project for the purpose of:

- (1) **Assessing** the current form and content of home-based childhood vaccination records;
- (2) **Identifying** critical elements of existing practices and documentation standards that reflect the importance of complete, timely, and accurate recording of information;
- (3) **Developing** specifications for a prototype home-based record and testing its use;
- (4) **Publishing** and disseminating a guide on home-based vaccination records and promoting their use in immunization programmes.

This practical guide, developed by WHO in consultation with partners, is intended to provide direction to immunization programme managers and other national health programmes on how to improve the use and design of home-based records and to serve as a reference when developing or revising home-based records. This document will be useful in countries where there is low prevalence and utilization of home-based records; where stock-outs of home-based records occur; when a country is introducing a new vaccine; and other circumstances in which a country is considering a revision of the home-based record. The guidance within incorporates relevant experience and ideas observed across countries and current practices in the field, and can be applied in a wide variety of settings.

Keeping in mind that home-based records exist in various forms and may serve additional programmatic purposes beyond the recording of vaccinations, this document aims to facilitate greater standardization in the immunization content of home-based records while acknowledging that these tools are meant to be reviewed, adapted and implemented by national programmes to suit local health needs and priorities.



Photo ©UNICEF/Christine Nesbitt.

1

What is a Home-based Vaccination Record?

A home-based vaccination record is a medical document (more often physical rather than electronic) — issued by a health authority (such as a national, provincial or district health department) on which an individual's history of vaccinations received (including the name and number of doses of vaccine(s) along with dates given) from all healthcare providers is recorded. In contrast to a facility-based record, the home-based record is maintained in the household by an individual or their caregiver (e.g., mother, father, grandparent, etc.) and brought to the health clinic/post to be completed by a health worker at each time of vaccination.



Home based vaccination records are normally provided to caregivers free of charge (gratis), and should be replaced if lost or damaged beyond repair.

Caregivers should be encouraged to bring the home-based record to every encounter the child has with the healthcare system, including sick- and well-visits. However, policies requiring presentation of the record should be considered with care, as some children may drop out of the system if the child is turned away from immunization services just because the caregiver forgot the child's record.

Home-based vaccination records can generally be classified into three broad groups:

- 1) **Vaccination only cards:** documents designed exclusively to record basic identifying information and immunization services received
- 2) **Vaccination plus cards:** more inclusive documents that record, in addition to vaccinations, a broader range of health services received, as well as child growth and development (e.g., child growth charts) and a limited set of basic information related to child survival (e.g., infant and young child feeding)

- 3) **More comprehensive child health books** that often include a record of birth characteristics, health services received beyond vaccination, growth charts, etc. These books also provide detailed guidance to parents in the areas of infant and young child feeding, developmental milestones, prevention of diarrhoea, malaria and other illnesses, and family planning.

A review of current practice found that home-based records of varying degrees of detail and complexity are in use across countries. In order to achieve wide applicability, this guide will focus primarily on the elements in the immunization component of these records used to record and monitor the child immunization series. However, the core concepts and principles extend to the design and implementation of more comprehensive home-based records, and also align with the increasing attention to the role of immunization beyond infancy and across the life-course.

ALTERNATIVE TERMINOLOGY FOR HOME-BASED RECORDS

Home-based records have different names and take on continuously evolving forms across countries. Below is a sample of the variety of terms used for referring to home-based records:



Also see [Annex 1. Terminology and history of HBRs](#), and www.immunizationcards.org for further information.

2

Functions and Benefits of Home-based Vaccination Records

Home-based vaccination records play an important role in tracking and documenting immunization services and, in some cases, additional health interventions received by individuals. If designed and used properly, the home-based vaccination record can facilitate improvements in:

- caregiver awareness, compliance and empowerment to seek out health services,
- communication between health workers and caregivers,
- continuity and coordination of care across health workers, and public health monitoring and reporting.

Therefore, the design and functionality of the home-based vaccination record must meet the needs of three primary user groups: caregivers; health workers (i.e. those delivering immunization services); and the public health community (e.g., monitors, survey administrators). In order for home-based vaccination records to serve the needs of these groups, the record must be available in adequate supply to field level health workers, distributed, filled-in and updated by health workers at the point-of-service, retained by caregivers, and brought to each health contact with the child.

Unfortunately, the ability of the home-based vaccination record to fulfil its primary functions is often compromised as a result of shortages or stock-outs at health facilities, illegible or improperly completed records, loss/damage of the record itself, or lack of importance placed on these documents by healthcare workers and/or caregivers.

Facilitate caregiver education

When properly used, home-based vaccination records provide an inexpensive and effective tool for promoting childhood immunization. Home-based records facilitate caregiver learning and understanding about their child's immunization status as well as the timing of vaccinations recommended for the child, thereby establishing expectations and enabling planning to receive the expected services.

Research has shown that the primary reasons for missed opportunities for immunization (apart from service delivery gaps) include the caregiver's lack of awareness (or not being adequately informed) of the benefits of vaccines, the recommended vaccination schedule, and/or the date of the child's next vaccination visit. A well designed home-based record, complemented by appropriate counseling and messaging by health workers, can fill these gaps in caregiver knowledge and may also translate into increasing demand for immunization services, not only for the child in question but for other children in the family and community.

To ensure a timely start of the full infant immunization series, home-based records should be given to

caregivers at the birth of the child or at the first contact with a health worker after birth. Discussion of home-based vaccination records during pre-natal care provides a unique opportunity for early education of mothers on the role of vaccination in protecting the health of their child. When part of a general child health book, the home-based record directly places immunization in the context of the child's overall health and development rather than being viewed as an end in itself.

Facilitate coordination of care

The home-based vaccination record provides a standardized form for recording all relevant information about an individual's vaccination history and recommended vaccinations yet to be received. In doing so, the home-based record fosters coordination and continuity of immunization service delivery within and between health workers as well as facilitates communication between health workers and individuals or their caregivers. It also allows the vaccinator to know which vaccinations a child is eligible for, helping to ensure that vaccinations are given on time. This information is especially important to maximize 'every opportunity' vaccination by informing all health workers of which vaccinations a child still needs when they present for illness management or other routine care.

In many countries, a child's immunization status is recorded in registries, electronic or paper, that are maintained at health facilities. However, because of improper or incomplete recording practices and mobile populations that visit facilities across multiple locations, facility-based registries may be difficult to use for tracing back an individual child's vaccination history. Fortunately, the home-based vaccination record, as a simple personal health record, can be used to fill these gaps.

Within the context of coordination of care also lie issues of effective vaccine usage. In routine immunization, health workers are expected to open vials and vaccinate children regardless of potential wasted doses. However, high levels of wastage could be reduced in the presence of appropriate documentation on whether a child has already received a recommended vaccine.

Facilitate public health monitoring and reporting

Home-based vaccination records maintain an important role in monitoring community immunization status, an essential public health activity. Although facility-based registries provide important information for assessing immunization system performance, for responding to emerging threats, and for guiding development of policies and interventions, registries are often not used in outreach activities to identify unimmunized children.

Beyond registries and other administrative reports of the number of children vaccinated, immunization system performance is monitored using periodic population-based, representative coverage surveys (such as Demographic and Health Surveys, UNICEF-supported Multiple Indicator Cluster Surveys, Immunization Coverage Surveys, etc.). Within these surveys, home-based vaccination records are used to collect and verify documented information on immunization services received by children.

In the absence of an available or completed home-based record, surveys often rely on caregiver recall of the child's immunization history. The prevalence of home-based records available during surveys varies considerably. Even when retention of home-based records is high, information may be incomplete or may contain errors leading to misclassification of immunization status. Misclassification through caregiver recall is a major concern in monitoring immunization coverage. The increasing complexity of immunization schedules with multiple injectable vaccines and multiple orally administered vaccines¹ (as well as integrated interventions such as vitamin A) scheduled to be given at the same vaccination visit makes caregiver recall even more challenging.

Despite the importance of home-based records for monitoring, reliance on them as a source of documented evidence of vaccination status will almost certainly underestimate coverage until the proportion of home-based record holders is more nearly equal the proportion of children immunized. This further reinforces the need to improve distribution, use and retention of home-based vaccination records, and increase the acceptance and value the community places on them.

¹ Some national programmes offer up to 3 injections and 2 oral vaccines during the same visit.

**WHO ARE THE USERS OF HOME-BASED RECORDS (HBR) AND
WHAT ARE THE ROLES OF THE HBR FOR EACH?**

USER	ROLE OF THE HBR
CAREGIVER	<p><i>Facilitate caregiver education</i></p> <p>Received by caregivers either at birth of the child or at first contact with a health worker after birth, the HBR is a:</p> <ul style="list-style-type: none"> • source of information on the importance of immunization • source of information on vaccination status • source of information on vaccinations yet to be received • source of information on other child survival interventions • tool to encourage caregiver participation in health care of child
HEALTH WORKER	<p><i>Facilitate coordination of care</i></p> <ul style="list-style-type: none"> • tool to improve the detection of at-risk children • tool to improve continuity of care over time • tool to improve coordination of care across health workers • tool to promote other child survival interventions • tool to prevent unnecessary revaccination of children already vaccinated
PUBLIC HEALTH MONITORING COMMUNITY	<p><i>Facilitate public health monitoring and reporting</i></p> <ul style="list-style-type: none"> • tool to support immunization system performance assessments through coverage surveys • tool to facilitate triangulation of data with registries • tool to improve health worker accountability to the community • tool to assess population immunity through household surveys



Photo ©UNICEF/Jim Holmes.

3

Designing for multiple target users

Home-based vaccination record design varies considerably across countries and in some places, across subnational units within countries. It is well known that different cultures have different ways in which they communicate, comprehend, interpret and trust information. It is therefore important to maintain an awareness of the groups that interact most often with the home-based record, namely the caregiver and the health worker, and that their interactions with the record differ. The design of the home-based record should reflect these different needs.

For example, health workers need to be able to quickly assess a child's vaccination status at a glance. Caregivers may want to have information on the date of the next required visit, which disease(s) a vaccine protects against and other detailed child survival-related messaging, available in an easy-to-read format.

Creating a document that serves the needs of both caregivers and health workers is challenging. As such, the process of designing or revising a home-based record should include consultations with target user groups (caregivers, health workers) on the design and content of the record. As well, before any home-based vaccination record is introduced it is important that the document goes through appropriate pre-testing in the community and with health workers at different levels (see more below on the importance of pre-testing).

Designing a home-based record with caregivers in mind

As home-based records can make an important contribution to continuity of care throughout a child's early life, the retention of the home-based record by caregivers is critical. Therefore, the document should be designed so that caregivers appreciate its value, and the importance of the record should be emphasized. In some settings, the home-based record may be the sole government issued document that a caregiver has identifying the existence of a child. In some areas, home-based records are valued as proof of vaccination that is required later in life for school entry or travel out of the country. In other parts of the world, home-based records including comprehensive health education messaging may be one of the few pieces of printed reading material that will be kept in the household. Some caregivers may be unfamiliar with keeping their own health record at home and may be afraid to keep the record, if they cannot guarantee its safe storage (i.e. preferring it be kept at the facility). Research suggests this may be especially relevant in low literacy settings, and should be taken into account in the design process, as well as in training health workers to convey appropriate messaging to caregivers.

Caregivers' preferences for document size and colour, font style, print layout, and direct messaging all deserve careful consideration as part of the record design. An awareness of the complexity of the design and language is also important, as an overly complex home-based record will mean little in low-literacy settings. The introduction of personal identification marks of the child or caregiver (for example, a photograph) may increase individual emotional attachment and sense of caregiver ownership of the document. With help from health workers, caregivers can learn to use home-based records themselves to better understand the role of vaccination in preventing many diseases as well as to prompt them to take action and seek out vaccination services and other preventive and promotional health activities.

Designing a home-based record with health workers in mind

The home-based record should also be designed with health worker needs and working environment in mind. Consideration should be given to the constraints placed on health workers in scarcely resourced, well-attended health posts where time and patience may be limited. Thus, it is important for home-based records to include only essential and relevant information that will be regularly used in decision making or the management of healthcare for the child. For example, health workers need to quickly assess a child's vaccination status and missed doses at a glance in order to take appropriate and timely action.

The document should be simple and easy to fill in. Collecting and writing down excess information that will never be used wastes time that could otherwise be spent listening and providing health education to the caregiver. Moreover, it is well known that the accuracy and quality of recorded information decreases as the quantity increases. Health programs should regularly review what content is being used in the record (by the health worker and by the caregiver and/or community mobilizers) to help with revision and updating. Data or information on the record that is not being used could be removed or minimized, to help reduce number of pages and complexity of the home-based record and potentially lower the cost for reprinting.

The importance of pre-testing the home-based vaccination record

Before launching a new or revised home-based vaccination record, some level of pre-testing must be conducted. Pre-testing is the introduction of the home-based record to a small set of respondents from the population of target users (e.g., parents/caregivers, health workers) of the record. If problems occur during the pre-test, it is likely that similar issues will arise when introduced broadly. The purpose of pre-testing is to identify any aspects in need of clarity or improvement before printing and distributing large quantities of the home-based record.

Pre-testing must be conducted among people that are representative of the actual users of the document. For example, if a re-designed home-based record is pre-tested only among health workers or caregivers with a second-level education or greater, then it is possible that the terminology used on the document may not adequately serve the needs of those who are less educated, semi-literate or illiterate. The document should also be pre-tested in each of the languages and local dialects in which it will be translated. Pre-testing of graphics and images is also very important as graphics that seem persuasive or informative to caregivers in one setting may be confusing or offensive to caregivers in another.

Pre-testing often takes the form of conducting focus groups of a small number (8-12) of persons and a group leader who will direct discussions to obtain insights about community concerns, beliefs, reactions, and vocabulary. Interviews can also be used to explore individual responses, feelings or concerns. To be effective, the pre-testing should be carried out separately for each user group; that is, participants in focus group discussions should be similar in terms of their background, characteristics and needs.

The following issues may be assessed by focus group discussions:

WITH CAREGIVERS:	WITH HEALTH WORKERS:
<ul style="list-style-type: none">• Size, colour and shape of the home-based record using visual cues where possible.• Protective cover options.• Design of the home-based record including graphics, layout.• Whether the language used on the document is locally understandable.• How caregivers receive their information on immunization, and how they would like to receive such information.	<ul style="list-style-type: none">• How the records can improve communication between health care providers, or between health workers and caregivers.• Filling in the home-based record, whether it is currently simple or complex, and whether the space provided is adequate for legible recording.• The integration of the home-based record with other recording and monitoring practices used at health facilities.

Thorough planning and an experienced facilitator will determine the success of pre-testing. Unfortunately, in a field where new vaccines are being introduced at rapid pace in many settings, revisions to recording tools are often carried out under very tight timelines, requiring findings of pre-testing to be turned around immediately. It is often difficult to budget the time into a study to conduct a thorough pre-test, but doing so is but doing so is critical in order to ensure that any changes have net positive effects and no unintentional negative consequences. The more significant the revisions are to the home-based record, the more important the pre-test becomes.

The following resource contains useful information on how to conduct effective focus groups:



Handbook for Excellence in Focus Group Research, available online
www.globalhealthcommunication.org/tools/60



Photo ©UNICEF/ Patricia Esteve.

4

Core content of a home-based vaccination record

Given the lack of standardization, multiple design formats and varying complexity of existing home-based vaccination records, it is important to ensure that all home-based records contain at least a core set of essential elements. Although not exhaustive, the listed elements below are believed to be necessary in order for the home-based vaccination record to fulfil its role and functions related to immunization services.

RECOMMENDED CORE CONTENT OF A HOME-BASED VACCINATION RECORD

- Unique identification number
- Basic child identification information
- Medical service contact information
- Vaccine name and disease the individual should be protected against
- Structured field for date of receipt of each vaccine and each dose
- Structured field for date of next routine vaccination visit
- Space for vaccines received outside of the routine schedule (including vaccines administered during Supplementary Immunization Activities (SIAs)) and new vaccine introductions
- Health worker narrative notes / known allergies and adverse reactions to vaccination
- Space for health worker signature/ authorization stamp
- Form version control information

Unique identification number

A unique identifier is needed in order to identify and authenticate an individual against an existing record. Unique identification numbers are used by many immunization programmes to establish a linkage between home-based vaccination records and immunization registration books used at facilities or during outreach sessions. Linking information from home-based records with existing health information systems can support programme planning, management, surveillance, monitoring and evaluation, and assessment of child health status.

The unique identifier may be a serial number pre-printed on the home-based record itself, or may be a birth registration number, national identification number or other local health facility assigned number. The unique identifier should follow the structure, form and presentation used by complementary information systems (e.g., birth registry, national identifier). By doing so, this will avoid confusion by health workers and will facilitate future linkages with other information systems that employ the same unique identifiers.

It is critical that the home-based record can be linked to the facility-based immunization registry for tracking and reporting.



Basic child identification information

It is recommended that the vaccination record include the following basic identification information:

- **the child's name** (family name and given name, nick-name or pre-name in settings where the given name is not available until months after birth),
- **the child's date of birth** (with a structured format preferred),
- **the child's sex** (unless the home-based record is gender-specific),
- **the child's caregiver information** (including name and contact information such as mobile number)

Medical service contact information

Contact details (phone number or address) for the health facility and local medical services should be prominently displayed on the vaccination record for quick reference by caregivers in case of an adverse event following immunization (AEFI). Local medical service contact information should be updated if the caregiver moves to a new location or if the emergency contact detail information changes.

EXAMPLE

The sample below demonstrates space for a unique identifier, basic child information and prominently displayed contact details for local medical services.

**WEN DNALAEZ
VACCINATION
RECORD**

CHILD'S IDENTIFICATION NUMBER

CHILD'S GIVEN / FIRST NAME

CHILD'S FAMILY / LAST NAME

CHILD'S DATE OF BIRTH: D D M M Y Y Y Y BOY GIRL
CHILD'S SEX (MARK ONE)

CHILD'S PLACE OF BIRTH (VILLAGE / TOWN / CITY)

CHILD'S PLACE OF BIRTH (DISTRICT)

GIVEN NAME OF CHILD'S MOTHER

GIVEN NAME OF CHILD'S FATHER

NEXT VISIT DATE

**IN CASE OF EMERGENCY
CONTACT YOUR LOCAL
HEALTH PROVIDER**

Name of Your Local Health Centre

Health Center Phone Number

**KEEP THIS DOCUMENT SAFE FROM HARM OR DAMAGE
AND BRING TO EVERY HEALTHCARE VISIT**

FORM 1.1.2 GA 1.1

Vaccine name and disease targeted

A comprehensive vaccination record should include the name of each recommended vaccine per the national immunization schedule and the disease(s) that the individual will be protected against following vaccination.

Naming each vaccine and the disease it targets, combined with verbal messaging from trained health workers, is a useful way to increase awareness of the role of immunization in protecting against vaccine-preventable diseases and to facilitate caregiver understanding around services they are being offered. In low literacy settings, verbal explanation is especially important, given the complexity of the immunization schedules and challenges in presenting the information in a meaningful manner.

Depending on space and the nature of the home-based record, it may also be appropriate to include additional information on complementary and integrated health interventions (for example, vitamin A supplementation, promotion of breastfeeding, oral rehydration therapy or zinc treatment for diarrhoea).

WHO position papers describing recommended vaccines can be found online at:



www.who.int/immunization/documents/positionpapers/en/

Consolidated summary tables of WHO recommendations for routine immunization and complementary user's guide can be found online at:



www.who.int/immunization/policy/immunization_tables/en/

Further information on strategies to prevent measles can be found online at:



whqlibdoc.who.int/publications/2012/9789241503396_eng.pdf

Further information on comprehensive approaches to the prevention of pneumonia and diarrhoea can be found online at:



www.who.int/maternal_child_adolescent/documents/global_action_plan_pneumonia_diarrhoea/en/

Structured field for date of receipt of each vaccine and each dose

Every entry in the vaccination record should be dated. Ideally, the date field should be of a structured format to clearly communicate across health providers, as well as between providers and caregivers, the appropriate information on when a vaccine was received.

It is important that the dates of vaccination are recorded separately for each antigen and each dose. This is imperative as there may be situations where not all vaccines that are scheduled for a given visit are delivered on the same date (for example, due to stock outs, parental refusal of certain vaccines, previous receipt of a vaccine during periodic intensification of routine immunization, etc.).

Qualitative research suggests caregivers and health workers prefer designs that group vaccines by visit. Designs that group vaccines by visit are acceptable provided there is still a space to record administration of each vaccine individually. Grouping by visit (i.e. first, second, third) is preferable over grouping by age, as the latter may cause confusion in cases where a child presents at the clinic past the recommended age. In all cases where recommendations are grouped by age or visit, it should be emphasized that the vaccination series should still be started (or continued) even if the child arrives late. See examples in following box.

EXAMPLE



PREFERRED PRACTICE

The example below lists each vaccine along with the disease(s) targeted, and provides space to record a single date for each vaccine by each dose administered.

VACCINES						
VACCINE Disease targeted	DATE RECEIVED					
BCG tuberculosis or TB	D	D	M	M	Y	Y
Polio, birth dose polio	D	D	M	M	Y	Y
DTP-HepB-Hib 1 diphtheria, tetanus, pertussis or whooping cough, hepatitis B, Hib disease	D	D	M	M	Y	Y
Polio 1 polio	D	D	M	M	Y	Y
PcV 1 pneumococcal disease	D	D	M	M	Y	Y
DTP-HepB-Hib 2 diphtheria, tetanus or whooping cough, hepatitis B, Hib disease	D	D	M	M	Y	Y



NOT ADVISED

The example below provides space to record a single date for all vaccines recommended at a certain age or certain visit. This practice is not recommended as it does not allow the vaccinator an opportunity to record different dates of vaccine administration, for example, in the instance of a vaccine stock-out for one antigen during a recommended visit.

VACCINES				
AT BIRTH	6 WEEKS	10 WEEKS	14 WEEKS	9 MONTHS
BCG	DTP-HepB-Hib 1	DTP-HepB-Hib 2	DTP-HepB-Hib 3	MMR1
Polio, birth	Polio 1	Polio 2	Polio 3	Vitamin A
	PcV 1	PcV 2	PcV 3	
Date Received	Date Received	Date Received	Date Received	Date Received
Next Visit Date	Next Visit Date	Next Visit Date	Next Visit Date	Next Visit Date

Structured field for date of next vaccination

Timely vaccinations are important for disease prevention. One of the most important roles of the home-based vaccination record is to effectively communicate the date of the next vaccination and minimal intervals between doses to the caregiver. In this regard, the home-based record serves as a reminder, regardless of whether or not caregivers have been verbally counselled by health workers on when to bring the child back.

In many places, current field practice is to record the date of a vaccination received in ink and to record the date of the next visit in pencil. Unfortunately, the effectiveness of this practice is not well studied

but may be constrained by the availability of both pens and pencils, the correct use of the approach, and the durability of handwritten pencil marks which can smudge or be wiped clean if exposed to water. Retrospectively, this may also lead to confusion about whether doses have actually been administered after the recommended date of next vaccination has past.

Another approach is to clearly and prominently display the next visit date in a designated place on record, separate from the vaccine recording area.

See examples below and next chapter on design-related elements for more information.

EXAMPLE

Structured field for date of next visit.

VACCINES												
VACCINE Disease targeted	DATE RECEIVED						DATE OF NEXT VISIT					
BCG tuberculosis or TB	D	D	M	M	Y	Y	D	D	M	M	Y	Y
Polio, birth dose polio	D	D	M	M	Y	Y	D	D	M	M	Y	Y
DTP-HepB-Hib 1 diphtheria, tetanus, pertussis or whooping cough, hepatitis B, Hib disease	D	D	M	M	Y	Y	D	D	M	M	Y	Y
Polio 1 polio	D	D	M	M	Y	Y	D	D	M	M	Y	Y

EXAMPLE

Prominently displayed date of next vaccination.

Photo Courtesy of the Bill & Melinda Gates Foundation.



Space for vaccines received outside of the routine schedule (including vaccines administered during SIAs) and new vaccine introductions

It is recommended that the home-based record have additional space or structured fields for recording vaccines administered outside of the routine schedule (for example, during supplementary immunization activities (SIAs)). This space can also be used to record the administration of any other non-routine vaccines that an individual may require (for example, for travel).

Recording of every vaccination, including those given during SIAs, is an important need highlighted by the Strategic Advisory Group of Experts (SAGE) on Immunization. However, if SIA doses are included in the home-based record, they must be clearly recorded as such in a separate section from vaccine doses received

during routine immunization services. Countries conducting SIAs on a periodic basis may consider the average number of SIAs anticipated to take place during the first five years of a child's life and provide sufficient space to record these SIA doses.

This extra space is also important for new and underutilized vaccines that may be administered during introduction periods or campaigns prior to the development and distribution of revised HBRs. Ideally, there will be a link between multi-year planning exercises and the revision of the home-based record to ensure that space is allocated for all anticipated vaccine introductions over the planning period (e.g., next five years).

EXAMPLE

The records below contain extra spaces for recording additional vaccines received.

Schedule Of Immunisation

Did the mother get TT Yes No

At birth/	B.C.G Mokento wa kgottholo e tona	1 dose...../...../.....
At birth, 2 & 9 months	Hepatitis B Mokento wa bolwetse jwa sebetse	1st dose (at birth) Date/...../.....
At 2,3,4 months & booster at 18 months	D.P.T. Mokento wa dikodu tse di tshweu, sehuba sa monganganyego, kitlano ya ditlhaa	1st dose (2 mths) Date/...../.....
	Polio Mokento wa go swa mhama	1st dose (2 mths) Date/...../.....
9 months	Measles Mokento wa mmokwane	dose (9 mths) Date/...../.....

Minimum interval between 1st, 2nd and 3rd DPT, Polio and Hepatitis B

Special Immunisation Campaigns /

Name of campaign	Name of campaign
Date	Date

Príomh-ímdhíonadh Óige

Ainm an Imdhíonta/ na Vacsaine	Aois tugtha	Déantúsóir	Uimhir baiste
Cuairt 4 4			
MMR			
PCV			
Cuairt 5 5			
Men C			
Hib			
Vacsainí Eile			

PCV = Vacsainí níúmeacocúil trí-chloigeann
Men C = Galar Meiningeacocúil C

Health worker narrative notes / known allergies, prior reactions and adverse events following immunization

When possible, it is encouraged to include open space in the home-based vaccination record for narrative clinical notes where health workers can record any relevant information including known allergies and prior adverse reactions to vaccinations or other medication.* Awareness of contraindications by healthcare providers is important for minimizing the risk of serious adverse events following immunization (AEFI). Some home-based records may contain a specific space for documenting known allergies or prior AEFI; if not, this documentation can be made in the narrative notes section.

**Note that to avoid misconceptions between allergies or AEFI and side effects of a vaccine (e.g., fever), it is important that contraindications be documented by healthcare professionals and not by a caregiver.*

Space for health worker signature/authorization stamp

Every entry in the vaccination record should include a space for authenticating the service received. Authentication may take the form of the printed name or signature of the health worker, a stamp of the health facility where the vaccination took place, or a sticker with an embedded unique electronic identifier. The health worker's name should be legibly printed or signed. Deletions or alterations should be countersigned in the record. Authentication of the vaccination service reinforces accountability for the service, and is very important to prevent faking doses (as sometimes occurs to meet requirements for conditional cash transfers, school entry, etc.)

EXAMPLE

The record below contains a space for health worker signatures or stamps, as well as space for narrative notes and observations related to the vaccination.

Nom: _____ Prénom: _____ Date de naissance: _____

Une ligne par vaccin; indiquez tous ses composants au moyen d'une croix (X) ¹ Vaccination complémentaire

Vaccinations de base (état 2005)		Composants										Timbre/Signature	
Vaccins	Date	Diphthérie - diphtérie	Tétanos - tétanos	Coprovaccin	Poliovirus - Poliovirus	Hépatite B - Hépatite B	Hépatite A - Hépatite A	Hépatite A - Hépatite A	Coqueluche - Coqueluche	MM	MM		MM
Infanrix DTPa-IPV-Hb SM D, T, Pa, IPV, Hb	23.8.07	✓	✓	✓	✓								spéc. PNH Pédiatrie
Infanrix DTPa-IPV-Hb SM D, T, Pa, IPV, Hb	6.7.02	✓	✓	✓	✓								spéc. PNH Pédiatrie
OH SM (DTPa) D, T, Pa, IPV, Hb	22.8.03	✓	✓	✓	✓								spéc. PNH Pédiatrie
	17.9.07								✓				YODER
MERCK 0918U	DEC 10 2007								✓				YODER
MERCK 0039 X	APR 9 2008									✓	✓	✓	YODER
SP C2799AA	6-13-08	✓	✓	✓									YODER
SP VF342AB	6-13-08								✓				YODER
Glaxo-Smyth Klein Aflibercept 47RA	10.7.08								✓				YODER
KINRIX Glaxo	3.23.11	✓	✓	✓									R. LEWIS
MMIP	3.23.11									✓	✓	✓	R. LEWIS
<p>Observations importantes relatives aux vaccinations: Anamnèse de réaction anaphylactique? Contre-indication? Effets indésirables à une vaccination?</p> <p>_____</p> <p>_____</p> <p>_____</p>													
Diagnostic de varicelle en date du: _____												Timbre/Signature: _____	

Form version control information

A home-based vaccination record should be revised over time when new vaccines are introduced, other information is added to or removed from the record, or features are added to utilize emerging technology. Version control information includes the use of version numbers and/or document dates to track different versions of the home-based vaccination record as it evolves over time.

Refer to **“Handling transitions between versions of a home-based vaccination record”** in **Chapter 6: From Design to Implementation** for factors to consider when transitioning between versions of home-based vaccination records.

EXAMPLE



Other Reporting Information

VACCINE MANUFACTURER AND LOT NUMBER

Manufacturers produce and distribute vaccines in quantities known as “lots.” In many countries, healthcare providers are required to record specific information on the vaccine manufacturer and the lot number in the patient’s medical record to facilitate investigations of adverse events that follow immunization (AEFI). Maintaining information on the vaccine manufacturer and lot numbers for vaccines used in each vaccination session is important for vaccine safety monitoring systems.

This information must be recorded on health facility-based recording tools for all vaccination sessions (including outreach and mobile sessions).

Although not programmatically feasible in many contexts, where possible, a space may be provided to record this information on the home-based record as well.

For further information related to vaccine safety, refer to the Global Vaccine Safety Blueprint and Global Vaccine Safety Initiative:



www.who.int/vaccine_safety/initiative/en/

5

Additional design-related elements to consider

Although its importance is often underestimated, good visual design of the home-based vaccination record is essential for effective communication. For example, the placement or sequencing of information in the record has implications for whether it will be noticed, read, and reinforced among caregivers. Use of inappropriate font size (too small or too big) and inadequate space for legible hand-writing may impact the overall effectiveness of the home-based record.

Executing design guidance to create a new or revised record: why consider using a designer?

Immunization programmes are encouraged to engage a professional designer, where possible, to assist in the development or revision of a home-based record. Designers have specialized knowledge and skills in graphic layout, information design, visual communication, story-telling and user experience that can contribute to the creation of a home-based record that is effective, attractive, and user-friendly for multiple target audiences. In fact, qualitative studies have shown that records produced by designers are generally preferable (among caregivers, parents, and technical professionals) to those designed by public health professionals alone.

There are several design-related elements to consider when creating or re-designing a home-based vaccination record. The following list is not exhaustive.

Information layout

TEXT AND DATA FIELDS

Language

Effective communication within low literacy communities is challenging and may give rise to problems with understanding immunization-related instruction. To assist all users of the document, the home-based vaccination record must be easy to read and understand.

The records should be prepared in the national and local languages, if possible, to maximize understanding of the document in local contexts. The language should be clear, simple and concise, using everyday terms with few words per sentence and few sentences per paragraph. Minimal use of acronyms, medical or technical terms is recommended. It is important that the document be tailored to mirror the caregiver's needs, thinking and language.

Font type and size

The typeface used to produce a document is important. Serif fonts (i.e., the decorative stroke that extends from letters) are considered more readable and legible than sans serif fonts and should be used for the text information in the home-based record.

A review of home-based vaccination records suggests a strong correlation between the font size used on a record and the space provided to health workers for their handwritten inputs. Font size should be chosen

with corresponding data input fields that are large enough to be legibly completed, but small enough so as not to occupy too much space on the page. There is no standard recommended font size, but it is important to maintain awareness of this aspect during the design process. Accommodating all of the information placed in a home-based record within a given space or paper size is important, but should not be done to the detriment of reader accessibility.

EXAMPLE

ARIAL FONT	SIZE	IMPLICATIONS OF FONT SIZE
A	6	Immunization saves lives.
A	8	Immunization saves lives.
A	10	Immunization saves lives.
A	12	Immunization saves lives.
A	16	Immunization saves lives.
A	20	Immunization saves lives.
A	26	Immunization saves lives.

Structured data input field formats

Because most home-based vaccination records will involve hand-written completion of the record, the legibility of recorded information is of great concern. The use of structured data input formats, such as character boxes, provides a clear visual cue to users to fill in individual numbers and letters in a more defined way, encouraging character separation and discouraging the practice of cursive writing for data recording.

In addition to increasing legibility, the use of defined guides or grids for character entry will facilitate the use of optical character recognition (OCR) software or other emerging technologies that may be introduced as digital solutions are implemented in the future.

Character boxes are an often used approach for encouraging character separation. A good character box design will allow users to write their characters completely within each box. Unfortunately many forms contain boxes that are too small for the entire character to fit within the box. Each box should ideally be square in shape, rather than rectangular; however use of character boxes (including size and shape) should be adjusted to fit the local language needs.

Date values may be recorded in a variety of formats (MM/DD/YY, DD/MM/YY or YYYY/DD/MM). In order to ensure consistency in recording, the format to be used should be clearly specified. A review of existing home-based vaccination records revealed that while most records provide a field to record the child's date of birth, only half of the records reviewed use a structured date format.

EXAMPLE



PREFERRED PRACTICE

Character boxes for text input and clearly specifying expected date format.

Name:

J	O	H	N		S	M	I	T	H		
---	---	---	---	--	---	---	---	---	---	--	--

Date of birth:

D	D	/	M	M	/	Y	Y	Y	Y
---	---	---	---	---	---	---	---	---	---



NOT ADVISED

Name:

John Smith

or

John Smith

SEQUENCING OF INFORMATION

Flow and sequencing have an impact on what is noticed, read and reinforced by readers. Attention to how data fields are placed in relation to each other can impact whether they will be recognizable and clear, or a source of confusion.

Clustering information by theme

The sequencing of information should be clustered by theme. For example, information for child identification should be kept together on the record rather than splitting such information across different pages. Fragmentation of information may increase the risk for recording or transcription errors and require additional time to identify the child in health facility records. Headers, titles, or descriptors are also useful in helping users to understand and navigate sections of the record.

Prominently displayed next date of vaccination

As discussed earlier, often times the next visit date tends to be buried within the vaccination recording table itself, making it difficult for the caregiver to find this important information on the record. Focus group findings suggest that caregivers prefer placement of the next visit date reminder outside of the vaccination recording area. Such a design might include space on the front (and the back) of the home-based record for the health worker to write the next visit date on a sticker (perhaps brightly-coloured to grab attention) that is replaced at each subsequent visit by simply placing a new date sticker on top of the old one. Research suggests that prominently displaying the date of the next visit is associated with increased follow-up immunization visits (i.e. lower drop-out).

EXAMPLE

Example of the placement of a prominent next visit date field, using stickers.

The image shows a form for recording child information. On the left, there are several input fields: 'Child's Name', 'Child's Date Of Birth' (with a calendar icon), 'Mother's Name', 'Father's Name', 'Address', and 'Notes: (change in address, etc.)'. On the right, there is a large circular sticker with the text 'Place Next Vaccination Sticker HERE' and a white arrow pointing downwards. Below the sticker, it says 'BRING THIS DOCUMENT WHEN YOU VISIT THE DOCTOR'.

Photo courtesy of Bill & Melinda Gates Foundation, Records for Life Final Report.

Order of vaccine presentation

Vaccines may be listed vertically or horizontally in the vaccination recording areas. Preliminary research shows that reading and completion of a vaccination record table that is vertically oriented (on an axis that represents time) is more intuitive for health-workers. However, as this may be influenced by script or direction of writing, like all other elements this aspect should be adapted to fit the local language.

Placement of the national immunization schedule and recommended age for vaccination

As discussed previously, grouping the listed antigens according to recommended visits or ages in the national immunization schedule implicitly puts pressure on health workers to fill in all vaccines for a given visit at the same time, and may lead to falsification of the dates of vaccination or confusion if children arrive later than the recommended ages.

Therefore, it is advisable to display the national immunization schedule and recommended age for vaccination separately from the space for recording vaccinations administered. See example at right.

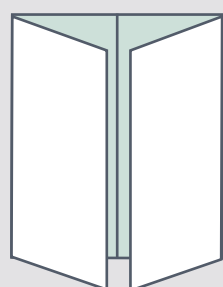
Flexible design layout that accommodates future changes to schedule

As introduction of new and underutilized vaccines and changing disease epidemiology may necessitate changes to immunization schedules, development of a flexible design structure that accommodates such modifications without disrupting the overall design of the home-based record is important.

EXAMPLE

✓ PREFERRED PRACTICE

The area for recording vaccinations administered and the national immunization schedule with recommended vaccines by age group should be presented in separate areas on the home-based record.



Inside card



Back of card

VACCINE Disease protected against	DATE RECEIVED					
BCG tuberculosis or TB	D	D	M	M	Y	Y
Hepatitis B, birth dose hepatitis B	D	D	M	M	Y	Y
DTP-HepB-Hib 1 diphtheria, tetanus, pertussis or whooping cough, hepatitis B, Hib disease	D	D	M	M	Y	Y

NATIONAL IMMUNIZATION SCHEDULE			
VACCINE	RECOMMENDED AGE		
BCG	Birth		
Hepatitis B, birth dose	Birth		
DTP-HepB-Hib 1	2M	4M	6M

✗ NOT ADVISED

The example below is designed with the recording area for each vaccine immediately next to the recommended age, creating a potential opportunity for the health worker to record according to the recommended age, rather than the actual date of receipt.

VACCINE Protects against	Recommended age of vaccination				Total number of doses	Volume of doses (mL)	Administered	Ana-tomical region	Date of vaccination		
	1st	2nd	3rd						D	M	Y
BCG tuberculosis	Birth	—	—		1	0.05	ID	Left deltoid			
HepB Hepatitis B	Birth	—	—		1	0.5	IM	Upper thigh			
DTP-HepB-Hib diphtheria, tetanus, pertussis or whooping cough, hepatitis B, Haemophilus influenzae type b	2M	4M	6M		3	0.5	IM	Upper thigh			

USE OF GRAPHICS AND IMAGES

First impressions are important. When including icons, images, graphics, line-drawings, etc., it is important to ensure adequate field testing of the images with the target user groups. Overly stylistic patterns, or use of images unrelated to health or vaccination may be misinterpreted by caregivers, or downplay the importance of the home-based record. Realistic illustrations with human forms and daily objects drawn as users view in their everyday lives are usually

most relatable and intuitive to understand. For good understanding and correct interpretation, images need to be of reasonable size and clarity. The inclusion of too many illustrations of small size may merely confuse the reader.

In some cases, including a photograph of the child may increase individual emotional attachment and sense of caregiver ownership of the document.

EXAMPLE



VACCINE NAME	DATE GIVEN (dd/m/yyyy)	DOSE #
Penta 1 Pentavalent Combination	25/10/2013	1 of 3
PCV1 Pneumococcal Conjugate Vaccine	25/10/2013	1 of 3
OPV2 Oral Poliovirus Vaccine	25/10/2013	2 of 4
RV1 Oral Rotavirus Vaccine	25/10/2013	1 of 3
Other:	/ /	of ...

VACCINATION NAME	AGE AT BIRTH	18 WKS	9 WKS	10 WKS	15 WKS
BBIG Egins tuberculosis	18 WKS	<input checked="" type="checkbox"/>			
HayR Egins liver disease	18 WKS	<input checked="" type="checkbox"/>			
OPV Egins polio	18 WKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Penta Egins whooping cough, meningitis, tetanus, & more	18 WKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PCV Egins pneumonia	18 WKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
RV Egins stomach infection	18 WKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ME Egins measles, mumps, & more	18 WKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Photo courtesy of Bill & Melinda Gates Foundation, Records for Life Final Report.

Physical design

MATERIAL

The home-based vaccination record must be durable enough to withstand regular use through the childhood years (at a minimum). A review of existing home-based vaccination records observed a variety of sizes and paper types being used from standard copy paper to thicker card stock.

Because home-based vaccination records may be exposed to a variety of harsh environments, both inside and outside the household, consider paper materials that resist moisture, fire, pests, bacteria and tearing. For example, hybrid synthetic papers (e.g., Tyvek®) will accept ink and pencil while remaining extremely durable. The material should be able to be written on with a standard ball-point pen without information being smudged or wiped off.

Given the cost of the fully vaccinated child and the opportunity costs associated with unnecessarily vaccinating a child an infinite number of times in the absence of documentation, it is worth considering a higher initial investment to provide document material of better quality which will be more durable, perhaps for as long as 8–10 years if not beyond.

Some countries further protect the home-based vaccination record by including a protective sleeve or cover such as a thin plastic envelope, or a zipper-locked plastic bag.

In countries using child health booklets, using page tabs, slightly thicker or larger paper size, or placing the vaccination table at the front or the back of the booklet may be used to easily identify the vaccination history recording page by the health worker. Although a seemingly small issue, identification of the recording page within a 100 page child health book requires additional time.

SIZE AND FORMAT

While size of the home-based record will be determined by national context and preferences, it is encouraged that the record is small enough to easily carry but not so small that it is easily misplaced. Larger cards may allow for spacing of information but can be impractical to carry and may be more expensive to produce. Many countries utilize a record that is the same size as the national passport, perhaps in an effort to align the home-based vaccination record with other official documents that are widely valued and kept safe. In contrast, other countries utilize larger formats similar to international ISO standard A3 size paper.

Some research suggests booklets, bi-folds or single page records are preferred, while accordion folds are more prone to tearing at the folds and are not as easy to handle.

EXAMPLE

The images below show the variation in size of home-based records. For scale, the centre image is roughly the size of a standard passport.



COLOUR

Although using coloured paper for the home-based record may be more costly, the improvement in appearance and appeal for the caregiver may justify the additional expense (vis-à-vis the cost of unnecessary revaccination, for example). Colour selection should be carefully considered so that the home-based vaccination record is not confused with other official documents. Lighter colours are preferred over darker colours. Because different colours may have different associated connotations across cultures, home-based vaccination records should be designed with this in mind.

In some countries, home-based records may be gender-specific (this is usually when additional content is included, such as nutrition information and growth-monitoring charts). In these cases, different colours (often pink and blue) may be chosen to differentiate between the cards.

The type and quality of printing will depend on financial resources and printing facilities available. As there may be considerable differences in cost, it may be preferable to print the record's text and graphics in only one single colour. Darker ink colours are recommended to provide greater contrast with the base colour of the document and the blue or black inks or pencil marks used by health workers to complete the records.

Recognition and Value

RECOGNIZABLE AS AN OFFICIAL PUBLIC HEALTH DOCUMENT

Regardless of whether the home-based vaccination record is simply a vaccination card or a comprehensive child health book, the record should be easily recognizable as an official document with a relevant and meaningful title displayed on the cover that succinctly declares the purpose of the document. Use of design features on the front page or cover such as official seals and logos, intricate borders or markers that suggest alignment with an official institution may help in visually establishing the record as an important official document.

REFLECT VALUES OF CHILD SURVIVAL AND CHILD PROTECTION

The home-based record may also communicate the value and significance of immunization as an important child survival intervention. In areas where a birth certificate is difficult to obtain, as civil registration facilities are far fewer than health facilities, the document might also serve as a civil identification means and lead to social protection services or in-kind goods access.

PROMINENT MESSAGING ON THE IMPORTANCE OF THE VACCINATION RECORD

The home-based vaccination record should contain prominent, literacy- and language-appropriate messaging on the need to keep the document safe from damage and reminders to bring it to each healthcare encounter. Of course messaging on the record itself must be complemented by verbal explanation from health workers to the caregiver on the importance and value of the record.

Future readiness: incorporating digital solutions for transitions to electronic systems

With the growing emergence of applied technology solutions to data capture, storage, retrieval and management, it may be important to incorporate, where possible, the best design practices associated with intelligent character recognition (ICR) and optical mark recognition (OMR) technologies. Paper-based vaccination records will remain the norm in many

settings for the foreseeable future, but even in such settings, the use of scannable barcodes or QR codes will become increasingly possible with the widening availability of hand-held devices such as mobiles and smartphones. In some countries, digital HBRs are already available and in use.

ACTIONS TO BE AVOIDED WHEN REVISING THE HBR:

- ⊘ Do not include so much information that the record looks cluttered and confusing.
- ⊘ Do not design records containing dense written material for use in areas where literacy among caregivers and health workers is low.
- ⊘ Do not use colours or languages that are foreign to the local culture or context.
- ⊘ Do not include subject matter that requires excessive writing or time to complete.
- ⊘ Do not print large quantities of home-based records before pre-testing the format and content changes.





Photo ©UNICEF/Niklas Halle'n.

6

From Design to Implementation

Incorporating home-based records into health programme policies and procedures

The importance of home-based records should be reinforced by incorporating practices for their use into health programme policies and procedures. For example, recording the presentation of the home-based record at visits along with other clinic-based health information may be tracked as a key indicator of immunization system performance, and can identify areas where retention of records is low.

Incorporating the duty to review and update home-based records into the standard procedures of treatment for all sick children, as well as those attending for routine care, is a way to ensure that home-based records become an integral part of primary health care, and to maximize ‘every opportunity’ for vaccination when children come in contact with the health system.

Orienting health workers with repeated training and feedback through supportive supervision

In order to maintain health worker awareness and understanding of the content and completion requirements of home-based records, it is important to carry out repeated training backed by supportive supervision and periodic monitoring and review.

Similar to other areas of vaccine delivery, appropriate training material should be developed in country, emphasizing the importance of home-based vaccination records and good recording practices. During pre-service and in-service training, instructors or training programmes are encouraged to not only demonstrate how to fill out the home-based record but also to stress the importance of completeness and writing plainly, carefully and clearly.

For legibility, fields should be completed using block letters. Consideration may be given to displaying character examples, such as how an “A” or a “2” are formed, and including the use of handwriting exercises during training sessions. In some settings, the use of date stamps may be encouraged.

It is important to remind health workers that home-based records should be distributed to caregivers of all children and replacement records are to be provided as necessary (for example, after updating or revising the record) to ensure it reflects the child’s current status per the health facility-based registry.

The importance of recording the date of vaccination at the time of vaccine administration – and only after the vaccine is actually given – should be encouraged during health worker training. As discussed earlier, a properly designed home-based record with a separate recording space for each vaccine and each dose, will facilitate proper recording practices.

Besides administering the vaccine, vaccinators should be trained to deliver these key messages to the caregiver:

- **What vaccine was given** and what disease(s) it prevents
- **What minor side effects to expect** and how to deal with the side effects
- **When to come** for the next visit
- **To keep the home-based record safe** and to bring it to every health visit
- **Explain the need to complete all doses** of each vaccine for the child to be fully protected

In addition, the health worker should be trained to:

- **Invite questions** and respond to doubts and fears
- **Congratulate the caregiver** for bringing the child to be vaccinated
- **Congratulate the caregiver** for bringing the home-based record

Unfortunately, many health workers do not complete the home-based record, either because they are too busy, they get distracted, they have not been given appropriate communication training or because they assume the caregiver is unable to read the record.

Often health workers fail to recognize the importance of making sure parents know when and where to return, or to ask if they understand what vaccines were administered and why. Beginning the childhood vaccination series does not guarantee that a child will receive all doses of all vaccines in the national immunization schedule. Children of caregivers who are counseled about the importance of vaccination at the time of their child's birth may be more likely to complete the series than those of caregivers who are not counseled.

Key vaccination messages must be given to the caregiver at each vaccination encounter.



Further information on incorporating a complementary focus on proper completion and utilization of home-based records can be found online in Training for mid-level managers (MLM) at



<http://www.who.int/immunization/documents/mlm/en/>

Increasing motivation for retaining the home-based record

Highlighting achievement of immunization milestones along the life-span

While there is growing emphasis on the role of immunization across the lifespan, completing the infant immunization series per the national immunization schedule represents an important accomplishment. Health communication programs have developed creative ways of motivating and rewarding individual parents for finishing a child's vaccination series as well as rewarding communities for immunizing large numbers of children by a particular age.

Highlighting the completion of the infant immunization series on the home-based record itself as is done, for example, in Madagascar. Similarly, in Liberia a separate document is given to the caregiver if the child completes the infant immunization series before 12 months of age. Emphasizing these accomplishments is also a means to reinforce the caregiver's role and responsibility to ensure their child is vaccinated in a timely manner.

Concerns that caregivers will perceive that the child has "graduated" from the immunization programme after the infant immunization series before additional childhood vaccinations are received can be mitigated by emphasizing a continuity approach, with multiple milestones along the way. See below for an example from Tuvalu, where achievements are noted at 15 months and then again at 5 years.

Proof of vaccination

In some settings, policies dictate that children are required to receive certain vaccines before they enter child care facilities and/or school. In such cases, providing proof of vaccination history for the child is also often an important motivating factor for encouraging retention of the home-based vaccination record. Requirements for proof of vaccination for international travel may also serve as motivation for maintaining a home-based vaccination record.

EXAMPLE

Image from Tuvalu highlighting indication of fully vaccinated child to 15 months of age and fully vaccinated to 5 years.

Immunisation Certificate

This certificate is required by the Health (Immunisation) Regulations 1995. It is to be shown when a child starts at an early childhood centre, kōhanga reo or primary school.

Child's family name

Child's first name

Birth date

Vaccinator to complete information on early childhood immunisations, according to the National Immunisation Schedule. If not confident about receipt of all doses required to be fully immunised, either give necessary dose(s) or record as 'not fully immunised.'

1 Fully immunised to 15 months Not fully immunised

If not fully immunised, tick boxes for diseases where either all doses of vaccine given, or laboratory proven infection/immunity:

Rotavirus <input type="checkbox"/>	Pertussis <input type="checkbox"/>	Pneumococcal <input type="checkbox"/>
Diphtheria <input type="checkbox"/>	Hib <input type="checkbox"/>	Measles <input type="checkbox"/>
Tetanus <input type="checkbox"/>	Hepatitis B <input type="checkbox"/>	Mumps <input type="checkbox"/>
	Polio <input type="checkbox"/>	Rubella <input type="checkbox"/>

Vaccinator's declaration
I agree that this immunisation information is correct. I have explained what may happen if all immunisations are not given.

Signature

Date

Practice Stamp, or name and address of vaccinator

2 Fully immunised to 5 years Not fully immunised

If not fully immunised, tick boxes for diseases where either all doses of vaccine given, or laboratory proven infection/immunity:

Rotavirus <input type="checkbox"/>	Pertussis <input type="checkbox"/>	Pneumococcal <input type="checkbox"/>
Diphtheria <input type="checkbox"/>	Hib <input type="checkbox"/>	Measles <input type="checkbox"/>
Tetanus <input type="checkbox"/>	Hepatitis B <input type="checkbox"/>	Mumps <input type="checkbox"/>
	Polio <input type="checkbox"/>	Rubella <input type="checkbox"/>

Vaccinator's declaration
I agree that this immunisation information is correct. I have explained what may happen if all immunisations are not given.

Signature

Date

Practice Stamp, or name and address of vaccinator

EXAMPLE

Image for fully immunized infant certificate used by the Solomon Islands.



Handling transitions between versions of a home-based vaccination record

When new vaccines or other commodities are introduced or there is a change to the national immunization schedule, the home-based record should be updated accordingly. See [Annex 2](#) for other considerations that may determine the need for an update or re-design of the home-based record. Ensuring a smooth transition between versions of a home-based vaccination record requires good advanced planning, and immunization programmes should include updating of the records as part of micro-planning and preparatory activities for a new vaccine introduction. Orienting health workers to changes made to a revised form will require appropriate time and resources and should include guidance on when to start using the revised records and what to do with old stock.

There are different options for transitioning between versions of a home-based record.

- **One option is to ensure an adequate supply** of the revised home-based record and to begin distribution while at the same time collecting and destroying un-used stock of the previous versions of the home-based vaccination record. Doing so may minimize confusion and avoid situations where a facility continues using the remaining supply of out-dated home-based vaccination records in lieu of putting the revised home-based record into the operation.
- **In situations where modifications between versions** of a home-based record are isolated to one or two pages of the document, a second option is to create an overlay sticker that mirrors the look of the revised pages and can be affixed/placed into prior versions of the document, covering the outdated pages or sections. The revised sticker page is then distributed with the remaining supplies of out-dated home-based records and placed in the home-based record at the time of distribution to the caregiver. There are several examples of this in practice in the field (e.g. Maldives, see below).

EXAMPLE

In this example from the Maldives, the sticker below, which includes the introduction of Pentavalent vaccine, is placed into the child record (orange), covering the old immunization chart.

CHILD RECORD P 05

Registration Details

Child Name: _____ Birth Weight (Kgs): _____ Blood Group: _____

Temporary ID: _____ Sex: Male Female Hermaphrodite

National ID: _____ Breastfed within 1 hour: Yes No

Thalassaemia Major: Yes No Not yet tested Gross Congenital Anomaly - GCA: Yes No

Immunization Dates

Vaccines	1st Dose	2nd Dose	3rd Dose	4th Dose
BCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DPT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hepatitis B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Measles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vitamin 'A' 1st Dose at 9 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sticker

Vaccines	1st Dose	2nd Dose	3rd Dose	4th Dose
BCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hepatitis B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pentavalent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Measles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MMR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vitamin 'A' 1st Dose at 9 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

From the Introduction of Pentavalent vaccine (from 01st January 2013), this sticker has been pasted on this page and is being used.

Forecasting needs and dealing with stock-outs of home-based vaccination records

With forecasting and monitoring systems in place, stock-outs of home-based vaccination records should not occur. Just as with vaccines and injection supplies, it is important to monitor the quantity of home-based records available at the operational, district, provincial and national levels and to accurately forecast future needs to prevent stock-outs as well as unnecessary over-stocks.

Forecasting the needed quantity of home-based records is based on consideration of the target population size and expected number of home-based records that will need to be replaced due to loss or damage. Ideally 100%, but at least 80%, of the annual birth cohort should be targeted to receive a home-based record. Home-based vaccination records may be bundled with other commodities in the vaccination delivery system. For example, stock management of cards should be included as part of dry store management for other reporting tools (registries, vaccine stock ledgers, etc.). If quantities are printed for more than one birth cohort, ensure that consideration

is given to any upcoming vaccine introductions or planned changes to the schedule.

Refer to existing documentation and tools for vaccine forecasting, online at



http://www.who.int/immunization/programmes_systems/supply_chain

When stock-outs do occur, standard operating procedures should require funds be available for health workers to produce photocopies on which to record the vaccines delivered to an individual. In such cases, because the durability of a photocopy is poor, it is critical that the health worker encourage the caregiver to keep the document safe and damage free, particularly from moisture.

It is also important to encourage health workers to transcribe the information from the temporary document to the home-based vaccination record once available so that the child's vaccination history is maintained in a single document.

Considerations for separate recording of doses administered during supplementary immunization activities

As discussed earlier, using the home-based record for recording vaccine doses received during SIAs reinforces integration of the SIA dose as an important component of the overall immunization programme. However, if included in the home-based record, SIA doses must be recorded in a separate section from vaccine doses received during routine immunization services. On the other hand, vaccinations given during periodic intensification of routine immunization (PIRI) activities should be recorded as routine doses.

Appropriate policies, training and supervision must be in place to ensure that health workers involved in SIAs and PIRI activities know how to make appropriate use of the home-based records and where to record the doses administered.

Recording practices for SIA doses will depend on countries' national policy. While in polio endemic countries with frequent OPV vaccination, it is not recommended to record these in the home-based record; in countries conducting periodic SIAs (for example, MR, yellow fever, or meningitis) using the child's existing record should be considered. This practice will need to be accompanied by appropriate training and sensitization of caregivers to bring the immunization cards to the SIAs. If the parent/caregiver does not bring the home-based record to the SIA, replacement cards should be provided. In some cases, specific SIA vaccination cards may be used.

Considerations for a decentralized health system

There may be situations where public health responsibilities and immunization services are delivered in a decentralized health system setting, or in areas with a significant private medical sector. Ideally, the same home-based record should be used across operational units, and in both private and public health systems. If different records are used, maintaining some level of uniformity with regards to the core, minimum elements and formatting should be emphasized, in order to facilitate continuity of care for mobile individuals.

Adopting a life-course approach to immunization: implications for recording and monitoring

Many countries' current home-based vaccination records are focused on the infant immunization series while others allow for recording immunizations received through the first five years of life. There are only a few examples that extend beyond five years of age in a single document. Instead, current practice relies on separate vaccine-specific records for recording doses of human papilloma virus vaccine, tetanus-toxoid vaccine or yellow fever vaccine in adolescence or adulthood. Adult doses of influenza vaccine may rarely be recorded outside of a facility-based administrative record. In the absence of a focused effort to re-join the vaccine-specific cards, the records are likely to become scattered, ultimately compromising continuity of care.

The adoption of a "life-course" approach to immunization in order to extend the benefits of immunization to all those at risk in every age group (per the Global Vaccine Action Plan for 2011-2020) implies the need to record immunizations received during infancy, childhood (through the fifth year of life), as well as through adolescence and beyond. However, the challenge of adopting a life-course home-based record must balance the need to ensure sufficient space/pages in the card as well as encouraging retention as a long term reference document.


EXAMPLE

This child immunization record from the Philippines includes spaces for catch-up doses given beyond the first year.

Department of Health - NCR
CHILD IMMUNIZATION RECORD

(2012 VERSION)





HEALTH CENTER _____ FAMILY NO. _____ CN: 93
 CHILD'S NAME _____ BIRTHDATE _____ SEX _____ WEIGHT _____ HEIGHT _____
 MOTHER'S NAME _____ FATHER'S NAME _____
 ADDRESS _____

TO BE FILLED-UP BY HEALTH FACILITY

BAKUNA	PETA NANG IBINIGAY					REMARKS
	1st Dose	2nd Dose	3rd Dose	4th Dose	Catch-Up Doses (If given at > 1 yr of Age)	
BCG (1dose only given as early after birth)	0-27-13					TCA 05-8-13 FOR PENTAVIV
HEPATITIS B (At Birth, 6,10,14 wks)						
ORAL POLIO VACCINE (OPV)	05-08-13	08-07-13	10-16-13			
DIPHTHERIA, PERTUSSIS, TETANUS (DPT)						FFUP IN JUNE 19, 2013 → PENTAVIV 2 OPV
MEASLES (AMV 1)	01-08-14					
MEASLES, MUMPS, RUBELLA (MMR)						
DPT, HEPATITIS B-Hib	05-08-13	08-07-13	10-16-13			FFUP IN SEPT. 11, 2013 → PENTAVIV, OPV
IBA PANG MGA BAKUNANG IBINIGAY:						for Measles 02 JG 02
1						
2						
3						
4						
5						

MGA URI NG BAKUNA

BCG – Proteksyon laban sa sakit na tuberkulosis
 Hepatitis B – Proteksyon laban sa sakit dulot ng Hepatitis B virus na sumisira sa atay
 Diptheria, Tetanus, Pertussis – Pinagsama-samang bakuna laban sa sakit na Diptheria, Tetano at Pertussis (Whooping Cough)
 Hib – Proteksyon laban sa sakit na Haemophilus Influenzae Type B
 Polio – Proteksyon laban sa sakit na polio
 MMR – Proteksyon laban sa Tigdas, Beke at German Measles (Rubella)

MGA PAALA-ALA

Dalhin ang inyong anak sa health center para sa kailangang bakuna. Kung ang inyong anak ay lampa na ng isang taong gulang at hindi pa kumpleto ang bakuna, dalhin siya sa pinakamalapit na center upang makumpleto ang bakuna.

Considerations for comprehensive health services home-based records

In many countries immunization is part of an integrated child health programme and other health interventions are usually provided during immunization sessions. As discussed earlier, in many cases, home-based records may include messages and tracking for other health indicators (for example, nutrition and growth standards).

If various programmes are involved in the development of the home-based record, there should be a consultative process and agreed upon schedule between all programmes involved for updating, printing and disseminating the records. A process for regular review should be in place to ensure that all of the content of the record is useful and relevant.

EXAMPLE

In Mexico, an integrated health booklet, distributed free of charge in all medical units of the national health system, is used to document an individual's vaccination history across the life-span as well as provide other health promotion, nutrition, physical activity, disease control and prevention information. Five distinct, yet similar, home-based records comprise the lifetime home-based record, each containing messaging to keep the documents in good condition and to bring them to every health encounter. More information can be obtained at <http://salud.edomex.gob.mx/salud/cartillas.htm>.



Men
20-59 years

Boys and girls
0-9 years

Women
20-59 years

Older Adults
(>60 years)

Adolescents
10-19 years

Conclusion

The important role of the home-based vaccination record as a basic medical record is clear. However, in order for home-based records to fulfill their functions effectively, the importance and value to be placed on these documents, along with appropriate education and training for use, must be continually emphasized to health workers and to the community at large. It is hoped that a greater awareness of the home-based vaccination record will eventually lead to a pooling of experiences across countries, particularly if similar systems of immunization recording and monitoring are used. As national immunization programmes consider revisions to current home-based records in use, they are encouraged to incorporate the standards and best practices noted here, while taking into account local health needs, context, and priorities.

Online Resources

Immunization in Practice: A Practical Guide for Health Staff.

<http://whqlibdoc.who.int/publications/2004/9241546514.pdf>.

Immunization Essentials: A Practical Field Guide.

http://pdf.usaid.gov/pdf_docs/PNACU960.pdf.

Training for mid-level managers.

<http://www.who.int/immunization/documents/mlm/en/>.

Principles and considerations for adding a vaccine to a national immunization programme.

http://www.who.int/immunization/documents/general/ISBN_978_92_4_15068_92/en/.

Increasing immunization coverage at the health facility level.

http://whqlibdoc.who.int/hq/2002/WHO_V&B_02.27.pdf.

Home-based maternal records. Guidelines for development, adaptation and evaluation.

http://whqlibdoc.who.int/publications/1994/9241544643_eng.pdf.

Home-based vaccination record repository.

www.immunizationcards.org.

Global Vaccine Action Plan.

http://www.who.int/immunization/global_vaccine_action_plan/en/.

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Annex 1.

Terminology and history of HBRs

Use of home-based vaccination records pre-dates the 1974 initiation of the Expanded Programme on Immunization.

Some early forms of home-based records include those emanating from the development of child growth charts such as the 'Road-to-Health' card introduced in the municipal area of Cape Town, South Africa in 1971 and more widely across South Africa in 1973. In 1973, Markellis described the Markellis Card utilized in two semi-urban communities in upstate New York, USA.

In its simplest form, the **vaccination card** typically includes the child's name, date of birth, and a structured area where the name of each recommended vaccine, by dose, in the immunization schedule is listed as well as a place for recording the date of vaccination, by dose.

First established to record childhood immunizations and monitor growth and child development until the fifth year of life, **vaccination plus cards** (such as the 'Road-to-Health' cards/charts used in South Africa) provided caregivers and healthcare professionals information for early detection of malnutrition while at the same time creating health education opportunities. During the 1980s following on initiatives such as UNICEF's primary healthcare GOBI strategy focused on growth monitoring (G), oral rehydration (O), breastfeeding (B), and immunization (I) (FFF were later added to include female education, food supplementation for children and pregnant women, and family spacing), the vaccination plus card progressed beyond immunization and growth monitoring by including advice on breastfeeding and timely addition of semisolid foods and for recording receipt of vitamin A supplementation, deworming medicine, and treatment of other illnesses.

Today, comprehensive **child health books** have further expanded on the vaccination plus card to include ante- and post-natal care of the mother, public health communication messaging on child development, diarrhoea prevention and treatment, water and sanitation, malaria prevention, oral hygiene to name a few.

For the purpose of this document, **home-based vaccination records** include each of these forms (vaccination cards, vaccination plus cards, child health books) with the common characteristic of a patient- or caregiver-held document, issued by an official authority, which includes space for recording immunization services delivered by a health worker.

Annex 2.

Evaluating the immunization component of an existing home-based record

The following questions may be included during a country level evaluation to determine if a re-design of an existing home-based record is needed.

- Is the home-based record recognizable as an official public health document?
- Is there a place to record each antigen in the current immunization schedule by dose and by date?
- Is there adequate space to legibly enter information so that another person can read it?
- Is the date of the next visit prominently displayed on the home-based record?
- Is there adequate space to record patient-specific or contextual information?
- Does the home-based record have a unique identifier or adequate information which will help to match the individual's records in a facility-based immunization registry?
- Does the home-based record include the national immunization schedule?
 - o If so, is the vaccination schedule located separately from the vaccination history recording area?
- Are there additional spaces on the record to write in a vaccine that is not currently included in the national immunization schedule?
- Is there a place to record vaccines received during supplementary immunization activities (SIAs)?
- Is there space for the health worker to provide their authentication signature following provision of vaccination service?
- Does the home-based record have a version number and/or version date?
- If the home-based record is provided free of charge in your country, is “free of charge” or similar language written on the record?
- Is there a place on the home-based record to write the contact information of the nearest health facility?
- Does the home-based record include comprehensive information on how to protect from vaccine-preventable diseases?
- Does the home-based record recognize completion of the (infant/child) immunization schedule?
- Can the home-based record withstand wear and tear while remaining writable?
- Does the structure and design of the home-based record support messaging on the value of the record?
- Does the existing home-based record reflect values of child survival, development and protection?
- Does the home-based record design and content empower caregivers to feel confident about their child's health care status?
- Are the colours of the home-based record culturally appropriate?
- Is there periodic health worker training (including in-service supervision) on the appropriate filling and value of the home-based record?
- Are health workers instructed to educate caregivers to keep the home based record and bring it to every visit?



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