

Immunization Supply Chain Management: Digital Supportive Supervision and Mentoring Tool for Health Surveillance Assistants

Pilot in Mangochi, Malawi

www.villagereach.org // info@villagereach.org

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Acronyms

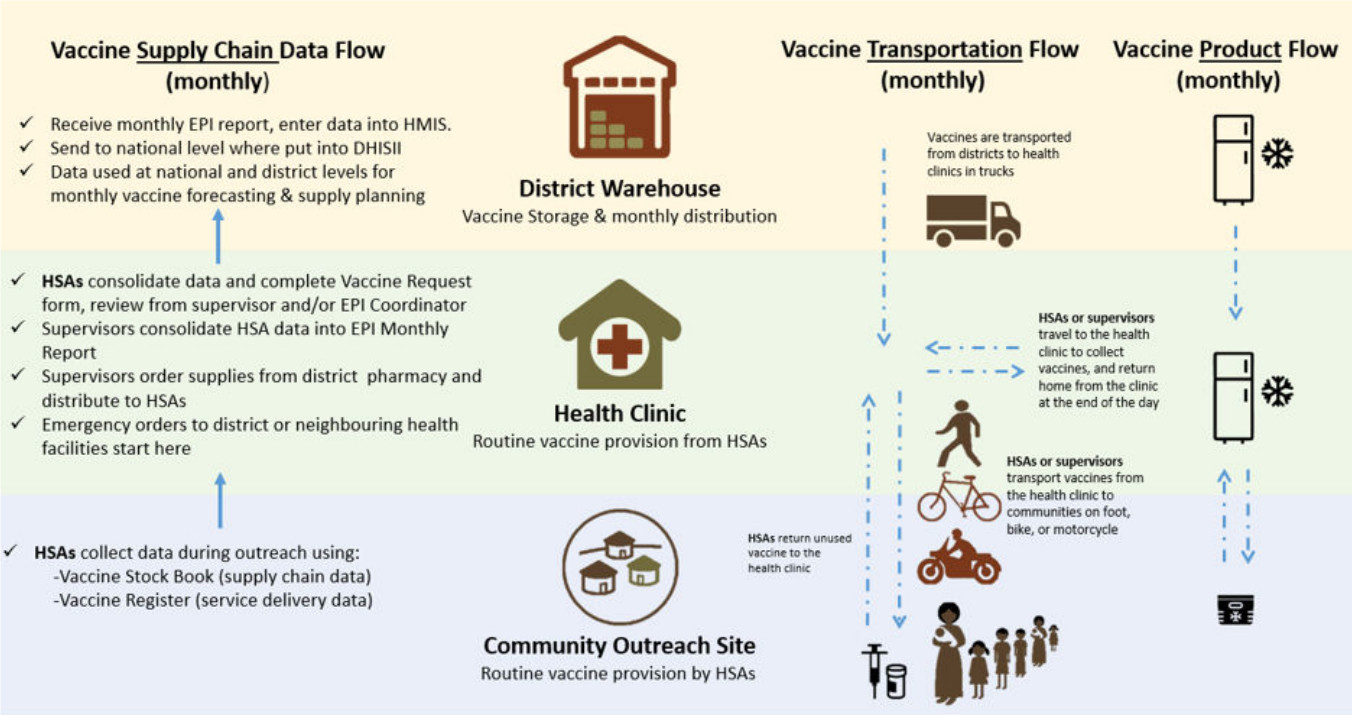
FEFO	First-to-expire, first-out
OJT	On-the-job training
SOP	Standard operating procedure
ODK	Open Data Kit
CHWs	Community health workers
HSAs	Health Surveillance Assistants
CCTs	Cold chain technicians
MoH	Ministry of health
EPI	Expanded program for immunization
iSC	immunization supply chain
EVM	Effective vaccine management

Introduction

WHY IS SUPPORTIVE SUPERVISION IN ISC IMPORTANT?

Last mile Immunization supply chain (iSC) management is critical for HSAs because it ensures that sufficient quantities of high-quality vaccines and other immunization supplies are available at the last mile to protect communities from preventable diseases. Effective supply chains that are responsive to patient needs, are the backbone of Malawi's EPI program (Expanded Programme on Immunization). A properly managed immunization supply chain will guarantee that vaccinations and associated supplies are available in the appropriate amounts, at the appropriate time, and in the appropriate location, as well as that they are kept and transported under the appropriate conditions. As noted in the figure below, HSAs have many important roles and responsibilities when it comes to ensuring smooth product and data flow in the vaccine supply chain (Figure 1 of the HSA role in the iSC). If HSAs are not well versed in iSC best practices (ie: how to keep vaccines cold, how to dispose of used needles, how to manage inventory, and how to avoid vaccine stockouts), it can present significant health and safety risks to the population. It can also compromise supply chain data quality, negatively impacting the MoH's ability to plan and budget for vaccine supplies. To ensure routine access, potency and availability of vaccines, it is important for HSAs to use best practices in various areas of immunization supply chain management such as vaccine storage, vaccine transport, vaccine vial monitor checks, vaccine waste disposal etc. These best practices are captured within the recently updated National standard operating procedures (SOPs) for immunization supply chain.

Figure 1: Diagram of the HSA Vaccine Supply Chain



WHAT IS THE GAP WE ARE FILLING BY PROVIDING SUPERVISION IN ISC AT THE LAST MILE?

HSAs in Malawi don't have access to routine training on iSC best practices and require support and mentorship to effectively follow and make adequate use of the immunization supply chain SoPs. According to the Malawi effective vaccine management assessment done in 2021, a planned schedule or guidance materials for doing supportive supervision are absent across the supply chain. Coupled with this is the lack of a feedback mechanism for the visited sites. The supportive supervision section scored 19% on policies and procedures, which was the lowest score relative to all other sections. The overall score for this category was 73% below the WHO recommended score of 80%. In

addition, Gavi-funded research from Malawi confirmed that knowledge among HSAs regarding best practices for immunization stock management needs to be periodically refreshed and recommended that mentorship and supervision be strengthened in this area. One of the major findings during the 2021 Gavi audit in Malawi was ineffective supervisory activities and the lack of feedback from these supervisors to build HSA capacity. The audit reported inadequate and ineffective integrated monitoring and supervision of immunization supply chain management at national and sub-national levels. The report noted that although 64% of health facilities reported that they had received at least one supervision visit from either national, regional or district Level, there was no documented feedback or evidence that such support supervision visits took place in 57% of the health facilities. This clearly points to a need for structured, data-driven, routine supportive supervision visits focusing in iSC for HSAs which speaks to the recommendations of the EVMA.

WHAT DO WE MEAN BY SUPPORTIVE SUPERVISION?

Supportive supervision is a key component of building capacity in the healthcare workforce. It provides a unique opportunity to both observe current practices and engage directly with healthcare workers for mentorship, to build their knowledge and skills over time based on identified gaps. In CHW programs, supportive supervision is critical to ensuring high-quality service delivery. It promotes constant and regular interactions between CHWs and CCTs, positive criticism, and collaborative problem-solving. Furthermore, it is linked to increased motivation, better work engagement, higher levels of job satisfaction, and better performance among CHWs. It is a proven best practice toward improving clinical practices of healthcare workers, but also for systems level improvements, such as immunization supply chain management.



HSA Chifuniro Chuyendowsika provides polio vaccine to a child.

Through supervision and monitoring at the facility level (and really at any level of the system), a CCT can identify and immediately address challenges within the immunization supply chain (such as issues related to product storage, inventory management, data quality, faps in the cold chain, etc.) and actively work with HSAs to resolve them. Supervision provides a unique opportunity to learn how HSAs perform their routine immunization supply management functions such as storing of vaccines, preparing ice packs, checking VVM, and conditioning cold boxes for outreach services. During iSC supervisory visits, CCTs will use the Supervisory Checklist Tool (Part 3 of this document) to identify gaps of HSA iSC knowledge, practices, or deviations from the iSC SOPs. In response to any gaps identified by the checklist, the CCT will provide on-the-job training. The overall goal of this intervention is to improve vaccine access, quality, and availability.

HOW WILL WE DOCUMENT AND TRACK ISSUES IDENTIFIED DURING SUPPORTIVE SUPERVISION?

All supervisory data collected using the ODK mobile app will be housed on the Ona server, the Ona server will be linked in real time to Microsoft Power Bi to track the status of challenges identified. This dashboard will be used to provide periodic feedback to the MoH and EPI. Providing periodic feedback to the district and national EPIs on the outcomes of each supervisory activity is very important, the supervisory data on the dashboard would provide summary of areas of strengths and challenges in immunization supply chain management, to aid decision making amongst MoH and EPI.

This document provides basic operational guidelines and tools for supervision and OJT of HSA at the fixed site and outreach level. The tools within the document will help the CCT and HSAs to identify and address areas that need attention and subsequently improve HSAs and build their capacity on immunization supply chain management. These operational guidelines and the iSC Supportive Supervision Checklist are tailored around the iSC standard operating procedures (SOPs) Finally, these operational guidelines and tools specified within this document can be customized and combined with other available tools or resources that focus on other areas of fixed and outreach site operations, such as service delivery, demand generation or other administrative supervisory tools.

This guide is divided into three main sections:

1. “Supportive Supervision and On-the-Job Training” (OJT) defines and provides general information about supportive supervision and OJT to guide CCTs.
2. “Operational Guidelines for conducting On-the-Job Training for Immunization Supply Chain Management (iSC)” provides general information on supply chain management and conducting OJT on immunization supply chain management functions.
3. Appendices A include “the supervisory checklist tool” provides questionnaires for need assessments and guideline to bridge identified skill gap in accordance with the SOPs.

Supportive Supervision and On-the-Job Training

WHAT IS SUPPORTIVE SUPERVISION?

Supportive supervision is a facilitative approach to supervision that promotes mentorship, joint problem-solving, and communication between CCTs and HSA. It is a process of guiding, monitoring, and coaching workers to promote compliance with standards of practice and to ensure the delivery of quality services. Supportive supervision is different from traditional supervision, which is often more focused on compliance and fault-finding. Supportive supervision, on the other hand, are more interested in helping their HSA develop their skills and knowledge, and to overcome any challenges they may be facing.

During a supportive supervision visit, the CCT, together with his/her HSA, must take time to build relationships to ensure successful mentorship. CCT must assess the needs of the HSA through a quick checklist. Both CCT and HSA must be able to set clear goals and objectives. Both CCT and HSA should agree on dedicated visit days and time towards achieving the set objectives and goals. The CCT must review and evaluate to assess progress on the program objectives and goals.

Some key characteristics of supportive supervision are:

- Regular and planned visits
- Two-way communication
- Focus on problem-solving.
- Professional development
- Empowers health surveillance assistants to improve their own performance.
- Provides feedback and recommendations.
- Motivates and empowers staff

WHAT IS ON-THE-JOB TRAINING?

Within this context, On-the-Job Training refers to transferring of knowledge, experience, and skills in immunization supply chain management. The CCT will develop HSA's knowledge in immunization supply chain management using the standard operating procedures (SoPs). CCTs can take advantage of supervisory visits to conduct OJT.

The success of this training will be determined by the knowledge, experience, and skills transferred from the CCT to the HSA, as demonstrated by improvements in immunization supply chain management such as the storage of vaccines, preparing ice packs, checking VVM, conditioning cold boxes for outreach services, etc., and other areas within the SoP.

OJT also allows for much more interaction and real work together, as well as a less formal atmosphere. However, it also requires the CCT, who is acting in the capacity of a trainer, to be prepared and ready to manage the more direct interaction (Supply Chain Management System 2009). Effective OJT should take place as soon as a performance need is identified. A performance need can be the result of many things, but OJT addresses performance needs that are the result of the following:

When conducting OJT, CCTs must take note of the following:

- Be ready to engage in open communication. Pay close attention to the health assistant. Be open to queries. Encourage them to compile a list of questions as they prepare for the interview. Make time to respond to these questions.
- Have patience. Allow for errors. Mistakes, when handled professionally by you, can be extremely valuable learning opportunities for the HSAs

- Always make favorable remarks. Make use of constructive criticism. Provide specific approaches for HSAs to improve their performance. For example, if someone is not managing commodities in accordance with the first-to-expire, first-out (FEFO) principle, work with them to reorganize the storeroom by expiration dates and ask them how not following FEFO would have affected their stock.
- If you are working with more than one HSA, involve them all, even if it is simply observing. It will aid in the formation of a team atmosphere.
- Begin with what the HSA understands and grow from there, but don't be hesitant to share your own knowledge and expertise about the issue at hand. What matters is that you do not take over and begin lecturing. Make it a two-way conversation.
- Regularly quiz the HSAs. This should be done throughout the supervisory session. Simply asking a question can be enough. Reinforce what they've learned by having them constantly define, explain, identify, list, and demonstrate how to do the function, etc.
- Make a note of what they have been trained on. Do not wait until the session is over to evaluate learning. It is simpler to undertake continual evaluation.
- Discuss their findings with their supervisors. Inquire about how it will be used in their job. Encourage them to use their SOPs and other written rules wherever possible. Remind them that all they need to know about performing various logistics functions, including their roles and duties, can be found in the SOP manual.
- Ask them if there is anything they do not understand or anything they need to enable them to successfully complete the task they have learned.

Operational Guidelines for Implementing the iSC Supportive Supervision Checklist

GOAL AND OBJECTIVES

The goal of implementing the iSC Supportive Supervision Checklist is to improve immunization supply chain management in accordance with effective vaccine management (EVM) standard operating procedures. This operational guideline will ensure the use of Malawi's iSC SOPs by HSAs and also serve as a source of documented feedback from the fixed and outreach sites.

TRAINING REQUIRED

Prior to implementing the iSC Supportive Supervision Checklist, it is important that CCTs are oriented on the following:

- The EVM Standard Operating Procedures for immunization supply chain management
- The use of the Open Data Kit application for digital data collection
- Immunization supply chain management Supportive Supervisory Checklist

MATERIALS

To conduct and document necessary feedback from supportive supervision visits, include:

- Mobile device, Android device preferably
- Installed Open Data Kit
- Supportive supervision checklist tool
- Immunization supply chain management standard operating procedures

SUPPORTIVE SUPERVISORY CHECKLIST TOOL

Using the supervisory checklist tools in Appendix A of this document, CCTs will identify iSC challenges that HSAs face, and focus on filling iSC knowledge and skills gaps during visits to fixed sites and outreach posts.

CCTs must assess the knowledge, skills, and performance gaps of HSA through the administration of the supervisory checklist tool. Administering the checklist list entails the following:

- The checklist functions as a guide for CCTs to know which areas to observe and to provide OJT in areas where they have identified gaps while documenting their observations.
    - In some cases, CCTs should simply serve as observers, observing how HSAs execute their activities relating to iSC, as specific on the checklist. Then the CCT will need to use their own judgment to assess the situation to determine if OJT and/or mentorship is needed in a certain area, or if additional external support is needed in order to fill any gaps.
        - If OJT/mentorship is needed, the checklist provides suggested key messages for the CCT to impart to the HSA. And also reminds the CCT to provide positive reinforcement in response to good performance, to motivate HSAs.
    - In other questions on the checklist, the CCTs must ask HSAs questions directly using the checklist and select an accurate HSA response on the checklist. Based on the response provided, the checklist will automatically generate suggested key messages to support the CCTs capacity building efforts.
- It is important for CCTs to know that the checklist has been designed to have single, multiple, integer, and text-choice options for each question. The use of dropdown boxes to categorize responses is important, and that CCTs must not miss or skip data entry points.
- CCTs should then identify specific areas where OJT support is required by HSA based on their responses to the checklist tool.
- If the HSA does not have specific gaps related to an area mentioned above, the CCT and HSA should agree on areas where health workers require further guidance.

USING ODK TO IMPLEMENT THE CHECKLIST

The supervisory checklist tool will be digitized using Open Data Kit technology. The ODK is a suite of open-source software tools that helps organizations collect and manage data. ODK is primarily used by organizations working in humanitarian aid and global development, and is already in use by the Malawi MoH.

ODK includes the following tools:

- ODK Build is a drag-and-drop form designer that makes it easy to create complex forms without any coding experience.
- ODK Collect is a mobile app that allows users to collect data offline and sync it to a server when a connection is found.
- ODK Central: A server that stores and manages form data and provides tools for analyzing and exporting data.

ODK is a popular choice for data collection because it is:

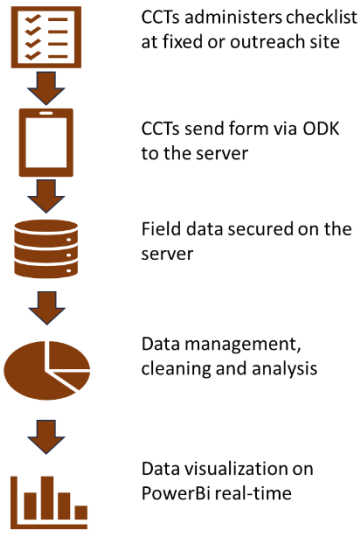
- Open source: ODK is free to use and modify, which makes it accessible to organizations of all sizes.
- Flexible: ODK forms can be designed to collect a wide range of data types, including text, numbers, photos, GPS locations, and more.
- Offline: ODK Collect allows users to collect data offline, which is essential for working in areas with limited or no internet access.
- Scalable: ODK can be used to collect data from a small number of people or from a large population.

DATA FLOW

The following highlights the steps and flow for data collection

1. CCT visits fixed or outreach sites, administering the ODK checklist.
2. CCT sends ODK checklist to the VillageReach server (all of this is configured on mobile devices).
3. Data from ODK checklist sits on the VillageReach server (A secure and encrypted database)
4. Data analyzed and presented by VillageReach to EPI/MoH
5. Data is linked to PowerBI for real-time analysis and presentation.

Figure 3: Data Flow



ON-THE-JOB TRAINING SESSIONS

The CCT should visit the HSA at least three times in a quarter, and each visit will last approximately 3 hours.

- First Visit (Baseline Visit): The CCT will provide on-the-job training to HSA based on prompts provided during the administration of the supervisory checklist tool. For each question or observation that is not accurate, the CCT will explain and teach the HSA the best practices on how to address the identified gap according to the SOP that is provided within the ODK tool. This phase will help HSAs identify their objectives and goals.
- Second Visit (follow-up): The CCT will visit to assess improvements from the baseline visit. During the follow-up visit, the CCT is expected to do the following:
    - *Re-administer the supervisory checklist tool:* The CCT will administer the checklist tool during the follow-up visit. This is to measure improvement and discover new areas where OJT is required.
    - *Review:* CCTs must review learnings from the previous session, a review of learnings put into practice, and a review of goals for current visit.
    - *Instructions:* CCTs should share knowledge to address HSA goals. Knowledge sharing and instructive teaching can occur through case studies, role-playing, and other exercises.
    - *Hands-On Help:* CCTs should provide hands-on, on-the-job training to help HSA gain practical skills while also helping to improve the pharmacy situation at the HSA facility.
    - *Put in Practice:* CCTs should assign HSA tasks to put learnings into practice, schedule the next visit, and confirm agenda for next visit.
- Subsequent visits (recommended once every 2 months): During the subsequent visit, the CCTs are expected to carry out the following:
    - CCTs and HSA must reflect and reinforce the knowledge and skills gained through the supervisory and on-the-job training programs.

    - If any, CCT should work with HSA to identify additional a) skills gaps and b) gaps in theoretical knowledge.
- In addition to following the structure guidelines above, it is critical for the CCT to make courtesy visits to the facility in charge to inform him/her of his/her arrival and take his/her leave when the visit is over.
- The CCT must review the goals and activities for each visit and prepare for next visit well in advance. Furthermore, the Instruction and Hands-on Help section needs to be customized and tailored to address HSA's goals and needs.
- After each visit, the CCT must ensure to complete all visit reports using available documents at the fixed or outreach site. CCTs must encourage HSAs to also complete all necessary documentation after each visit. sheets. These documents include vaccine stock books, immunization registers, and immunization tally sheets.

Conclusion

A supportive supervisory visit combined with OJT is a fantastic opportunity to expand the health surveillance assistant's knowledge and abilities at the facility. During a visit, reviewing some basic iSC tasks and providing feedback and guidance will not only reinforce the importance of good iSC management practices but will also help to ensure that vaccines are always available, accessible, and potent to meet the clients' needs.

The tools will assist the CCTs and HSAs in identifying and addressing areas that require attention, as well as improving the HSA's capacity to manage their vaccine supplies. The new supervision documentation and tools are timely since they will be used to reinforce key principles from recently updated country-level standard operating procedures (SOPs) on immunization logistics. It is quite handy to keep these checklists on a digital platform. Such electronic systems streamline data gathering, processing, and visualization while allowing managers to monitor and access data in real time.

Appendix A: The iSC Supervisory Checklist

	Observations/Questions	Action by CCTs – OJT
	SoP specific questions for OJT	
S/No	**HSA Competency: Storing vaccines at the right temperature**	
1	**Observe:** Are ALL vaccines stored at the correct temperature? • Yes, all • Some, but not all • None	If "Yes, all" commend the HSA on their good performance and skip to the next question If "Some" and "None", provide guidance to HSA on accurate vaccine storage temperature ; a. Store at -15°C to -25°C in freezer room or vaccine freezers. These vaccines are OPV, MR. b. Store at +2°C to +8°C in cold rooms or vaccine refrigerators. These vaccines are HPV-4, MR, PCV-13, RV-1, DTwP-Hib-HepB, OPV, BCG, Td, IPV, Malaria **Ask the HSA:** What is the primary challenge for keeping the vaccines at the correct temperature? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
2	**Observe:** Are diluents stored at the correct temperature? • Yes, all • Some, but not all • None	If "Yes, all" commend the HSA on their good performance and skip to the next question If B or C: Provide guidance to the HSA: Diluents MUST NEVER be frozen. In fixed sites, ALL diluents must be stored at +2°C to +8°C. **Ask the HSA:** What is the primary challenge for storing diluents at the correct temperature? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required*

		• *Compliance unclear: We could not answer this question*
	HSA Competency: Planning for emergency vaccination activities	
3	**Observe:** Are there functional cold chain equipment in the facility or during fixed services (Freezer, Fridge, Vaccine carriers) • Yes, all • Some, but not all • None	If "Yes, all" skip to the next question If B or C, CCT provide guidance to HSA OPV and all the lyophilized vaccines can safely be stored temporarily at +2°C to +8°C. All other vaccines must only be stored at +2°C to +8°C – they MUST NOT be frozen. **Ask the HSA:** What is the primary challenge for lack of functional cold chain equipment at fixed sites? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
4	**Observe:** Are there functional cold chain equipment during outreach services (Cold boxes, Vaccine carriers) • Yes, all • Some, but not all • None	If "Yes, all" skip to the next question If B or C, CCT provide guidance to HSA **Ask the HSA:** What is the primary challenge for lack of functional cold chain equipment at outreach sites? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
5	**Ask:** What do you do if there is a cold chain equipment failure? (select multiple as needed) a. Check whether there is a power cut in electrical refrigerators	If "G" CCT to provide guidance by going over the accurate options which are a-f **Ask**: Who do you notify if there is a failure? Do you usually get the support that you need?

	b. Move vaccines to the district vaccine store c. Report the problem d. Use another refrigerator if available e. Use cold box f. Check VVM status before use g. I dont know	**CCT comment:** • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required (add comment)* • *Compliance unclear: We could not answer this question*
	HSA Competency: Conditioning frozen icepacks for outreach services	
6	**Ask:** Describe the process you use to prepare your ice packs for vaccine transport during outreach **Observe:** Is the description made above consistent with the best practices? • Consistent, no mentorship required • Somewhat consistent, some mentorship required • Not consistent, a lot of mentorship required • Not applicable	If "Yes" commend the HSA on their accurate knowledge and skip to next question If "No", CCT provide guidance to HSA Place the required number of water packs in a freezer room or freezer which is kept at a temperature between -5°C and -25°C. Leave them until they are fully frozen. If an ice pack fast freezer is used to freeze the ice packs, move the fully frozen ice packs to a conventional freezer or to cold boxes for storage purposes. **Ask the HSA:** What is the primary challenge in preparing ice packs for outreach services? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
7	**Ask:** Describe the process you use to prepare cool water packs for outreach services? **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required. • Not applicable	If "Yes" commend the HSA on their knowledge and skip to the next question If "No", CCT provide guidance to HSA If No, Place the required number of water packs in a cold room or refrigerator which is kept at a temperature between +2°C and +8°C. Leave them to stabilize for a minimum of 12 hours. -Cold rooms: DO NOT allow the temperature of the cold room to rise above +8°C during the cooling process. DO NOT allow water packs to touch the vaccines.

		-Refrigerators: Use a dedicated refrigerator. DO NOT cool water packs in a refrigerator which contains vaccines. **Ask the HSA:** What is the primary challenge in preparing cool water packs for outreach services? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
	HSA Competency: Packing vaccine and diluents for transport, using cold boxes for outreach	
8	**Ask:** Kindly explain how to pre-condition cold boxes for cool water packs for outreach services? **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If "Yes" skip to the next question If "No", CCT provide guidance to HSA If No, Place the cold boxes in a cold room at +2°C to +8°C for a minimum of four hours before packing with vaccine. If a cold room is not available, place the cold boxes in an air-conditioned room for a minimum of four hours before packing with vaccine. If there is no cold room and no air-conditioning, always store the cold boxes in the coolest room available. **Ask the HSA:** What is the primary challenge in pre-conditioning cold boxes for cool water packs for outreach services? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
9	**Observe:** Are HSAs observing necessary hand hygiene during fixed/outreach services?	If "Yes" skip to the next question If "No", CCT provide guidance to HSA

	a. Yes b. No	If No, Wash hands thoroughly before handling vaccine cartons and vaccine vials **Ask the HSA:** What is the primary challenge in observing hand hygiene at fixed and outreach site? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
	Conducting a physical stock count	
10	**Ask:** Can you describe the process you use to conduct physical stock count **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If "Yes" skip to next question If "No", CCT provide guidance to HSA If No, describe the following process to health workers a. Plan the count: Set a date, make arrangement for assistants to help with the count, identify items to be counted (routinely these are vaccines, diluents, syringes, safety boxes) b. Prepare for the count: Ensure that all items are properly arranged by batch number and expiry date, and ensure to have sufficient count sheets printed. c. Conduct the count: Do not issue any supplies until counting is completed and reconciled. Do not include incoming supplies into the stock count **Ask the HSA:** What is the primary challenge with effective conduct of physical count? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
	HSA Competency: Using Vaccine Vial Monitors (VVM)	

11	**Ask:** Which of the following vaccine from this image can be administered during immunization *(Insert Image of usable and unusable VVM)* **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If "Yes" commend and skip to next question If "No", CCT provide guidance to HSA If No, Use image above as guidance to HSAs **Ask the HSA:** What is the primary challenge for checking the VVM status? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
12	**Ask:** When do you check VVM status on vaccine vials during fixed and outreach sessions? **Observe:** Is the description made above aligned with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If "Yes" skip to the next question If "No", CCT provide guidance to HSA If No, describe the following process to health workers a. When vaccines are received by a lower level store • Check a sample of each batch of each vaccine received. Record VVM status on the arrival voucher. Compare the observed VVM status with the VVM status recorded on the issue voucher and report any differences to the supplying store. • Ensure that the vaccine that shows the most VVM exposure is clearly identified so that it can be issued as soon as possible to lower level stores or health facilities. b. When vaccines are administered • Immediately before opening the vial, check that the VVM status is usable and that the expiration date has not passed. If both these checks are OK, use the vaccine. If the VVM status is unusable OR the expiration date has passed, DO NOT use the vaccine. Put it to one side until the end of the session and then dispose of it safely **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*

13	**Observe:** Were the opened vaccine vial accurately labelled with dates during fixed or outreach vaccination according to the multi-vial dose policy? • Yes, all • Some, but not all • None	If "Yes, all" skip to the next question If "Some " or "None", CCT provide guidance to HSA All opened WHO-prequalified multi-dose vials of vaccines should be discarded at the end of the immunization session, or within six hours of opening, whichever comes first, **UNLESS** the vaccine meets all four of the criteria listed below. If the vaccine meets the four criteria, the opened vial can be kept and used for up to **28 days** after opening. The criteria are as follows. 1. The vaccine is currently **prequalified** by WHO. 2. The vaccine is approved for use for **up to 28 days after opening the vial**, as determined by WHO. 3. The expiration date of the vaccine has not passed. 4. The vaccine vial has been, and will continue to be, stored at WHO- or manufacturer- recommended temperatures; furthermore, the vaccine vial monitor, if one is attached, is visible on the vaccine label and is not past its discard point, and the vaccine has not been damaged by freezing. **Ask the HSA:** What is the primary reason for not labelling vaccine vials according to the multi-dose vaccine policy fridge? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
	HSA Competency: Safe disposal of expired or damaged vaccine, diluents, and syringes	
14	**Ask:** How do you check for damaged and expired vaccines and diluents **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If "Yes" skip to the next question If "No", CCT provide guidance to HSA Guide HSA on how to check for batch expiry date
15	**Observe:** Are there expired or frozen reconstituted vaccine vials in the fridge a. Yes	If "No" skip to the next question If "Yes", CCT provide guidance to HSA

	b. No	**Ask the HSA:** What is the primary reason for keeping frozen and reconstituted vaccine in the fridge? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
16	**Ask:** What do you do when vaccine and diluents expire? **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If "Yes" skip to the next question If "No", CCT provide guidance to HSA If No, describe the following process to health workers a. Use the expired items report to identify the items. b. Locate the items. Place them in a container clearly marked: 'EXPIRED VACCINE FOR DISPOSAL – DO NOT USE'. Store the container in a cold room or vaccine refrigerator until permission is given to take it out of the cold chain. c. If diluents also need to be removed from stock, place them in a container clearly marked 'EXPIRED DILUENT FOR DISPOSAL– DO NOT USE'. Store the container in a safe place in the dry store. d. Record the expired vaccine and/or diluents in the stockbook. e. As soon as permission is given to dispose of the vaccine, move the container to a safe place outside the cold chain **Ask the HSA:** What is the primary challenge in managing and discarding expired vaccines and diluents? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*

17	**Ask:** What do you do when a vaccine or diluent vial is broken or damaged? **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If No, describe the following process to health workers a. Write down the number and type of broken vials or ampoules and the batch number(s) and put them to one side. b. If vials or ampoules have been contaminated with spilled vaccine, write down the number and type affected. Place the broken and contaminated vials or ampoules in a closed leak-proof plastic container and treat the contents with disinfectant. c. If vaccine has been spilled, carefully collect all broken glass and clean the area of the spillage with disinfectant. d. Clearly mark the container: 'DAMAGED VACCINE FOR DISPOSAL– DO NOT USE'' and store it in a safe place outside the cold chain. e. Record the breakages in the stockbook **Ask the HSA:** What is the primary reason for the inability of HSAs to manage damaged vaccines and diluents? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
18	**Observe/Ask:** Are there safety boxes (biohazardous waste box) used to dispose syringes? a. Yes b. No	

19	**Ask:** How do you do dispose of used vaccine syringes? **Observe:** Is the description made consistent with best practices? • Consistent, no mentorship required. • Somewhat consistent, some mentorship required. • Not consistent, a lot of mentorships required	If No, describe the following process to health workers • All needles, syringes, scalpel blades, disposable instrument, etc. will be disposed of at the point of use in rigid, leak proof sharps containers, labeled as biohazardous waste with the biohazardous symbol and phrase. • Always wear gloves and other appropriate personal protective equipment when performing procedures using needles and syringes. • Needle-locking syringes, butterfly catheters, catheter-needle units, or disposable syringe-needle units should be used for the injection or aspiration of infectious/hazardous materials. • Upon completion of a procedure involving use of a syringe and needle, discard entire needle and syringe system into a clearly labeled puncture – resistant hazardous waste container located in the work area. Needles are single-use only and not to be re-used. • New sharps containers will have a label placed on them that states: "CAUTION: DO NOT RECAP NEEDLES PRIOR TO DISPOSAL" when they are received and before placement within the facility. • Needles should never be recapped, bent, broken, removed, or otherwise manipulated by hand. • When a Sharps container is three-fourth's full, don gloves, seal container, and place in the designated area for collection and disposal. • Syringe disposal containers will be checked and changed on an as needed basis. • If a needle stick should occur, wash area with soap and water, report incident to your supervisor, and seek medical attention as soon as possible. **Ask the HSA:** What is the primary reason for the inability of HSAs to manage damaged vaccines and diluents? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
	HSA Competency: Immunization Stock Data Management	

20	**Observe:** Are data tools for recording vaccine usage available at fixed/outreach site a. Yes, all. b. Yes, some. c. None	If "Yes, all" skip to the next question If B or C, CCT provide guidance to HSA CCTs to physical check if all data tools are available. These tools are the immunization register, immunization tally sheets, and vaccine stockbook **Ask the HSA:** What is the primary reason for the unavailability of data tools at the fixed and outreach site? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
21	**Observe:** Are HSAs recording data on the tools accurately and regularly as expected a. Regular and Accurate b. Regular, but inaccurate c. Accurate, but irregular d. Not recorded	If "A" skip to the next question If "B,C,D", CCT provide guidance to HSA CCTs to check if data tools are accurately completed, check for errors, and support HSAs to address errors. **Ask the HSA:** What is the primary reason for the irregular or inaccurate documentation on the data tools? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
22	**Ask:** What platform do you use to document data on immunization supplies such as syringes. These data may include syringe stock, expired syringes, used syringes etc. Select multiple • EHIN • iHMIS • Stock book • None • Other	

23	**Ask:** Are you aware of the Electronic Health Information Network (EHIN) management system? a. Yes b. No	If Yes, probe further **Ask:** What are your roles in ensuring that data is entered into the EHIN system? If "No", CCT provide guidance to HSA **Ask the HSA:** Why are you not aware of the EHIN management system? **Joint problem-solving**- discuss some of the root causes for the issue; and determine whether the issue needs further escalation (due to lack of resources, supplies, or equipment issues) or whether OJT will suffice **CCT comment:** (*a few suggestions for dropdown box)* • *Compliant: No follow up needed* • *Non-compliant: OJT completed* • *Non-compliant: No OJT completed* • *Non-compliant: Escalation required* • *Compliance unclear: We could not answer this question*
	Closing comments by CCTs	
	Comment: CCTs should provide summary of findings that require urgent escalations	For example: Unavailable data tools, Waste management, Stock out, Faulty CCE etc
	Action: Ask the HSAs if they have any question and answer accordingly	
	Action: Let the HSAs know you will be visiting again in few months	

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