Stakeholder Perspectives on Shifting MCV1 to 6 Months

Insights from a multi-country qualitative study on measles vaccination timing (Malawi, Pakistan, Nigeria and DRC; 2024-2025)

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Executive Summary

This brief synthesizes findings from a multi-country qualitative study examining stakeholder perspectives on a proposed shift of the first dose of measles-containing vaccine (MCV1) from 9 months to 6 months of age. For clarity, this brief uses the term MCV1 to refer to the first dose of a measles-containing vaccine, including measles-rubella (MR) in countries where it is used. Globally, there is ongoing debate about whether shifting MCV1 to 6 months could provide earlier protection, despite concerns about reduced immunogenicity at younger ages. As part of a broader study examining barriers to immunization at the 9-month touchpoint in the Democratic Republic of the Congo (DRC), Nigeria, Pakistan and Malawi, caregivers, health care workers, community influencers and Expanded Programme on Immunization (EPI) officials were asked to share their perspectives on this proposed policy change.

Acceptability of shifting MCV1 to 6 months differed between respondent groups across all four countries. On-time caregivers and health care workers expressed conditional openness to a shift to 6 months, provided there is strong safety and effectiveness evidence and adequate training. In contrast, delay and dropout caregivers expressed conditional resistance driven primarily by safety concerns, while EPI officials emphasized the need for stronger country-specific evidence and rationale as well as careful implementation planning. All stakeholders expressed a need for clear communication around the rationale for change.

Perceived benefits of moving MCV1 from 9 to 6 months included:

- Improved recall and reduced dropout by introducing an additional touchpoint within the long gap between vaccinations at 14 weeks and 9 months.
- Earlier protection in high-risk and outbreak-prone settings, where measles infection before 9 months is observed, though this benefit was consistently weighed against concerns about immune response.

Dominant concerns expressed across countries included:

- Perceived infant readiness and safety at 6 months, including fears related to immature physiology, increased side effects and vaccine clustering; these concerns were strongest among delay and dropout caregivers.
- Health system and programmatic risks, including increased workload, implementation complexity and the risk that poor communication or abrupt schedule changes could undermine trust and reduce coverage.

Overall, findings suggest that while shifting MCV1 to 6 months may help address recall-related delay or dropout, it would also introduce new acceptability risks. Safety perceptions emerged as the dominant constraint to acceptance at 6 months, and acceptance was consistently conditional and varied by respondent type. Any schedule change would therefore require robust clinical evidence, clear and consistent communication, and intensive provider training and community engagement. Importantly, respondents emphasized that a change in vaccination timing alone is unlikely to resolve the broader structural and behavioral barriers affecting coverage at the 9-month touchpoint.

This brief summarizes stakeholder perspectives on a proposed policy shift; it does not assess clinical efficacy or recommend a change in the measles vaccination schedule.

Background

The World Health Organization (WHO) currently recommends that the first dose of measles-containing vaccine (MCV1) be administered at either 9 or 12 months of age, depending on the level of measles transmission in a given setting. In low-risk, low-transmission contexts such as the United States, MCV1 is typically given at 12–15 months, whereas in higher-risk settings it is administered at 9 months to provide earlier protection.[1]

During outbreaks or periods of elevated transmission, WHO has considered or recommended an earlier supplemental dose of MCV as young as 6 months to protect infants as maternal antibodies wane. Vaccinating at younger ages is perceived to offer the advantage of earlier protection. However, vaccination at 6 months may lead to a weaker immune response compared with vaccination at 9 or 12 months.[2] Doses administered before 9 months are not typically considered sufficient for long-term protection. This brief explores whether shifting MCV1 to 6 months as part of the routine immunization schedule, rather than as a supplemental outbreak response, is acceptable to stakeholders and feasible in practice.

The debate around moving MCV1 from 9 months to 6 months centers on the trade-off between earlier protection against measles infections and the potential for reduced immunogenicity. As part of a larger study exploring the barriers and drivers of vaccination at 9 months of age in DRC, Nigeria, Pakistan and Malawi, caregivers of MCV1 delay, dropout and on-time children between the ages 12-18 months, heads of household, health care workers, community influencers and EPI officials were asked for their perspectives on the proposed policy change. In each of the four study countries, the immunization schedule between 6 and 9 months varies (Table 1).

Table 1: Immunization and Supplementation Schedule for Children Aged 6-9 months

Age	DRC	Nigeria	Pakistan	Malawi
6 month	Vit A (optional)	Vit A (optional)	-	-
7 months	-	-	-	RTS,S
8 months	-	-	-	-
9 months	MCV1, YF, IPV2	MCV1, YF, MenA	MR1, TCV, IPV2	MR1, TCV, IPV2

[1] World Health Organization. Weekly Epidemiological Record. 2017;92(17) (April 28, 2017). Geneva: WHO. Available at: https://iris.who.int/server/api/core/bitstreams/3eb838f7-724d-41d4-9a66-47ed008deb48/content

[2] Nic Lochlainn, L. M., de Gier, B., van der Maas, N., Strebel, P. M., Goodman, T., van Binnendijk, R. S., de Melker, H. E., & Hahné, S. J. M. (2019). Effect of measles vaccination in infants younger than 9 months on the immune response to subsequent measles vaccine doses: a systematic review and meta-analysis. The Lancet Infectious Diseases, 19(11), 1246–1254. https://doi.org/10.1016/S1473-3099(19)30396-2

Findings

Findings are presented below by perceived benefits and disadvantages, with each theme labeled as strongest, moderate or limited based on frequency, consistency across countries and diversity of respondent types. Four advantages and eight disadvantages were cited by respondents as they discussed their perceptions of this proposed policy shift (Table 2).

Overall, the biggest advantage to shifting MCV1 from 9 months to 6 months is improving recall by shortening the gap between 14-week and 9-month vaccination appointments, which could improve measles vaccination coverage. Additionally, some respondents cited earlier protection from measles and maintaining urgency of adhering to the vaccination schedule. A limited number of respondents also cited reduced risk of side effects by spacing vaccines across vaccination visits.

The strongest disadvantages are related to the perceived safety of the proposed switch. Across all four countries and among all types of respondents, there was concern that 6-month-old infants are not developmentally ready for the measles vaccine. In Malawi, where the malaria vaccine is already administered at 7 months, there was strong concern about adding the measles vaccine due to the perception that younger infants would be more susceptible to adverse reactions.

Table 2: Respondent perceived advantages and disadvantages of moving MCV1 from 9 months to 6 months

Perceived Advantages	Perceived Disadvantages
1. Improved recall and reduced dropout due to a shorter gap (strongest) 2. Provide earlier protection against measles in outbreak-prone areas (moderate) 3. Maintain urgency and improve adherence because child is still perceived as vulnerable (moderate) 4. Perception that spacing vaccines may reduce side effects (limited)	1. Fear and perception that younger infants are physiologically less ready (strongest) 2. Concerns about clustering of too many vaccines at 6 months, causing worry about increased side effects (strongest) 3. Increased workload and implementation burden for the health system to shift MCV1 to 6 months (moderate) 4. Risk of poor communication around the shift to families, which would lead to lower uptake (moderate) 5. Hesitancy among caregivers and heads of household to change established vaccination routines (moderate) 6. Concerns about decreased immunogenicity of measles vaccine at 6 months (moderate) 7. Adding a new touchpoint increases logistical and financial burden for families (limited) 8. Perception that the switch to 6 months will not be sufficient to address the barriers (limited)

Perceived Benefits of Moving MCV1 from 9 months to 6 months

1. IMPROVED RECALL AND REDUCED DROPOUT DUE TO A SHORTER GAP (STRONGEST)

Many caregivers, heads of household and health care workers across countries felt that shifting timing would address a key barrier of low MCV1 coverage rates: forgetfulness due to the long gap between vaccination appointments at 14 weeks and 9 months of age. Across all countries and all respondents, this is the most common and consistently mentioned advantage of shifting MCV1 to 6 months.
Shortening this gap was believed to have the potential to keep families engaged:

> *"I just want it [MCV1] to be [administered at] six months old so we can remember. When it's at nine months, we can forget because the child is already grown, he is already walking." - Caregiver of a MCV1 dropout child, DRC*

> *"A person can't remember the whole year which specific month their child needs to be vaccinated. So, if the measles vaccine is given to children in the sixth month, it would make things easier... If it takes 6 months, then it is better. Because time will be saved. This is what I mean. The gap will be reduced so that it will be easy for us." – Head of Household of a MR1 dropout child, Pakistan*

Health care workers echoed these perceptions, noting that the long interval between visits contributes to missed appointments and confusion about whether vaccination is finished.

> *"Yes, honestly [moving to 6 months] will improve coverage...Because that gap of 3 months, it will make the caregivers to be relaxed. Some will even think that their children have finished their immunisations...It will increase the coverage." – EPI official, Nigeria*

2. PROVIDE EARLIER PROTECTION AGAINST MEASLES IN OUTBREAK-PRONE AREAS (MODERATE)

In all four countries, respondents emphasized the perception that administering MCV1 at 6 months could offer earlier protection against infection, beyond improving adherence. Several described firsthand experiences or observations of children contracting measles before reaching 9 months, reinforcing perceptions that the current schedule leaves a window of risk. Health care workers highlighted that measles could occur well before 9 months, particularly in high-transmission areas.

> *"I think giving the first dose of MCV at 6 months is better because before, my child at the age of 8 months had measles... So I feel that MCV1 should be given at 6 months... measles can happen at any age before 9 months too... It will have a good effect on my experience. I even think that all children should be given MCV at 6 months." – Caregiver of a MR1 on-time child, Pakistan*

> *"Some children develop the measles infection before they reach 9 months, so if they were given the vaccine at 6 months, it will prevent them from contracting the virus." – EPI official, Nigeria*

3. MAINTAIN URGENCY AND IMPROVE ADHERENCE BECAUSE CHILD IS STILL PERCEIVED AS VULNERABLE (MODERATE)

Some respondents in Malawi, DRC and Nigeria felt that administering MCV1 at 6 months would reinforce caregiver motivation and adherence as older children are often seen as stronger and "done" with immunization. Caregivers and heads of household emphasized that parents are more vigilant earlier in a child's life, while confidence in the child's health regardless of vaccination status increases by 9 months:

> *"For some children, they have started walking at 9 months So, they feel what is the need of taking a grown child to the facility for vaccination but when a child is 3-6 months the child still looks fragile and so you want to give him/her everything at that time. if changed to 6 months, I believe caregivers will take their children for the vaccines" – Caregiver of a MCV1 delayed child, Nigeria*

Health care workers echoed this perception, and moving MCV1 earlier was viewed as a way to engage caregivers before this decline in perceived risk:

> *"Yes, it would help reduce our workload because at nine months, parents often feel their children are healthy enough to wait. If they come in earlier, it allows us to manage follow-ups better." – Health care worker, Malawi*

Overall, moving MCV1 to 6 months could take advantage of caregivers' heightened sense of concern for their infant's health within the first few months of life, helping to sustain urgency and improve adherence before perceptions of vulnerability diminish.

4. PERCEPTION THAT SPACING VACCINES MAY REDUCE SIDE EFFECTS (LIMITED)

A few respondents mentioned that moving MCV1 to 6 months will help minimize side effects by reducing the number of vaccines administered at the 9-month touchpoint.

> *"Because administering the three vaccines suddenly makes the child... the child becomes ill in a way, the vaccines exceed the number, we give him three injections at a time, it is better to administer the other one at 6 months, and at 9 months we administer the other two remaining vaccines to avoid this... this discomfort" - Caregiver of a MCV1 dropout child, DRC*

Perceived disadvantages of moving MCV1 from 9 months to 6 months

1. FEAR THAT YOUNGER INFANTS ARE PHYSIOLOGICALLY LESS READY (STRONGEST)

Across all four countries, many respondents felt that infants are not physically or developmentally ready for MCV1 at 6 months, and so the vaccine should remain at 9 months. These perceptions were not necessarily based on technical knowledge of vaccine safety but rather a belief that an additional 3 months of age were sufficient to improve physical resilience.

> *"My opinion on the vaccine is that it should remain at 9 months because at 6 months, the child may not be fully developed, but at 9 months, I see it as being more appropriate." – Head of Household of a MR1 dropout child, Malawi*

"I feel this will be a heavy dose for the baby. I think 9 months is better because by 6 months the baby is still small and only on milk, so giving a vaccine immediately after Penta 3 is not good. And because the baby already receives Penta 3, the gap in between is better for the child's health." - Caregiver of a MR1 delayed child, Pakistan

2. CONCERNS ABOUT CLUSTERING OF TOO MANY VACCINES AT 6 MONTHS, CAUSING WORRY ABOUT INCREASED SIDE EFFECTS (STRONGEST)

Across countries, respondents raised concerns that administering MCV1 at 6 months would overwhelm younger infants due to existing interventions at 6 months, with some expressing worry that this could increase side effects and provide caregiver resistance, ultimately risking decreased acceptance rather than improving coverage. In Malawi, where malaria vaccination is administered at 7 months, respondents preferred keeping measles vaccination at 9 months to avoid overlap. Some felt that infants may be more able to handle multiple injections at an older age.

"I prefer the measles vaccine should be given at 9 months. Administering it at 6 months alongside the malaria vaccine might not be ideal for the child. It's better to give the malaria vaccine at 6 months and then wait an additional three months for the measles vaccine. This approach allows the child some time to rest between vaccinations, which could be beneficial for their overall health." – Head of Household of a MR1 vaccinated child, Malawi

Health care workers echoed these concerns, anticipating resistance from caregivers if another vaccine was introduced at or near 6 months:

"It would be difficult to convince some parents as at 6 months the children are still receiving other vaccines ... Parents may not allow us to inject them so much in such a short period and they would complain that the child is just too young." – Health care worker, Malawi

In DRC, where Vitamin A is provided at 6 months, a few respondents were concerned about making changes to the immunization schedule, raising concerns about overlapping interventions in a new way.

"It will be bad...the vaccination schedule provides for this at 9 months...Not possible, at 6 months there are eye vaccines [sic], Vitamin A...It won't work, it will produce complications" - Caregiver of a MCV1 vaccinated child, DRC

3. INCREASED WORKLOAD AND IMPLEMENTATION BURDEN FOR THE HEALTH SYSTEM TO SHIFT MCV1 TO 6 MONTHS (MODERATE)

Health care workers in Nigeria, Pakistan and Malawi expressed concern that introducing MCV1 at 6 months would increase workload. Respondents noted that this shift would require adjustments to workflows, and additional staffing effort. These additional demands were seen as difficult to manage alongside existing responsibilities.

"The problems may exist because the workload will be more, we will only be vaccinating the children once, so we have increased the workload at 6 months" – Health care worker, Malawi

At the national level, there was concern that changing the schedule would require expanded health education to explain the rationale for the change.

"In terms of health education, we would have to go back to the community and explain. People will want to know why the change was made... it would be a cumbersome process. And even after that, we would need to explain to the community." – EPI official, Malawi

"If vaccinations are administered continuously, parents might refuse, saying they are being done too frequently." This suggests that a reduced interval could increase workload due to parental hesitancy and more frequent interactions." – Health care worker, Pakistan

4. RISK OF POOR COMMUNICATION LEADING TO LOWER UPTAKE (MODERATE)

Some health care workers warned that shifting measles vaccine to 6 months could undermine vaccination coverage if not communicated clearly. The 9-month vaccination touchpoint has been established for many years, and sudden changes could confuse caregivers, erode trust and lead to an increase in misinformation.

"Right now, parents are already used to the idea that after the 9-month vaccine, their child is done — they consider the 9-month vaccine as the final one. This idea is deeply rooted in their minds. So, if the government suddenly announces that the 9-month vaccine will now be given at 6 months, it will require time and thorough sensitization before the change is implemented. People need time to adjust and understand the change clearly. If this isn't done properly, even the EPI may see a drop in its performance — the immunization coverage graph could decline significantly. And this drop could lead to outbreaks of vaccine-preventable diseases because children will miss vaccines due to parents feeling overwhelmed. In the end, this will reduce the immunity levels of the children due to the sudden change, and it will feel like parents are abandoning the process." – Health care worker, Malawi

5. HESITANCY TO CHANGE ESTABLISHED VACCINATION ROUTINES (MODERATE)

Some caregivers and health care workers expressed resistance to changing the vaccination schedule that is already familiar. Several respondents, particularly in DRC, expressed resistance to change.

"The 9-month vaccines are known. But when we shift them to 6 months, it would bother me. We are already used to 9-month vaccines. But when we change, it can complicate us." - Head of Household of a MCV1 delayed child, DRC

6. CONCERNS ABOUT DECREASED IMMUNOGENICITY OF MEASLES VACCINE AT 6 MONTHS (MODERATE)

Technical staff across countries raised concerns that administering measles vaccines at 6 months could reduce immunogenicity compared to later ages. They explained that the current schedule is informed by evidence on seroconversion rates. From this perspective, earlier vaccination could result in a higher proportion of vaccinated children failing to develop adequate immunity, potentially undermining the effectiveness of the program even if coverage increases.

"There's a reason MR1 is scheduled at 9 months — maternal antibodies decline around 6–7 months. Our 50% mothers are also anemic, malnutritional. Changing the schedule requires evidence and consideration of demographics and epidemiology. Not in support of doing this in Pakistan. MR1 is given at 12 months in most countries, in others at 6 months." EPI, Pakistan

EPI in DRC also pointed to program experience from past campaigns:

> *"I know that at one point there was a strain that was used but during the campaigns, we vaccinated at 6 months, right, but its efficacy is lower at 6 months than when we give it at 9 months, even... even the one we are currently using, it also has an efficacy of 85% when it is given at 9 months, but the efficacy is 95% when it is given at 12 months." EPI, DRC*

7. ADDING A NEW TOUCHPOINT INCREASES LOGISTICAL AND FINANCIAL BURDEN FOR FAMILIES (LIMITED)

In Pakistan, Nigeria and DRC, caregivers and some health care workers expressed concern that shifting MCV1 to 6 months would add an extra vaccination visit. This extra visit would increase the time and cost required of families, making it more difficult to complete the full vaccination schedule.

> *"If MCV1 happens at 6 months, then it means an extra visit will be added. We'll have to go at 6 months and at 9 months too. So that will be even more difficult. That's why, as it's happening now after Penta 3 at 9 months, that is better for us. Because after that, there's also the 15-month vaccine." - Caregiver of a MR1 vaccinated child, Pakistan*

A health care worker pointed out that these additional demands could ultimately reduce attendance, particularly during the transition period.

> *"The challenge is that the women may not turn up. The turn up will be very poor, because before they become used to it, it will take time... They will find it difficult to adapt with the system; Coming at six months, not nine month" – Health care worker, Nigeria*

In contexts where the malaria vaccine will be introduced, this perception may evolve.

8. PERCEPTION THAT THE SWITCH TO 6 MONTHS WILL NOT BE SUFFICIENT TO ADDRESS THE BARRIERS (LIMITED)

A few caregivers and health care workers expressed skepticism that shifting MCV1 from 9 months to 6 months would meaningfully improve uptake. These respondents emphasized that common barriers to vaccination (such as competing priorities and access challenges) would persist despite a change to the schedule. From this perspective, caregivers who do not attend 9-month vaccination appointments are unlikely to do so at 6 months.

> *"The difficulty is always the same. Because it's always the same parents, there, they're not going to change. Just as they always have to go about their concerns to have something to survive. I do not support the facts of reducing the vaccines from 9 months to 6 months." Health care worker, DRC*

Discussion

Comparisons by country and respondent type

There was no clear consensus within any of the four countries on the acceptability of shifting MCV1 from 9 months to 6 months. However, a consistent pattern emerged by respondent type across all four study countries. On-time families and health care workers expressed conditional openness to the shift, contingent on the availability and communication of robust safety and effectiveness evidence. In contrast, delay or dropout families and EPI officials were conditionally resistant to this shift, citing infant safety fears (among delay and dropout families) and sufficient epidemiological justification (among EPI officials) (Table 3).

Table 3: Overall perceptions of shifting MCV1 to 6 months by respondent type

Respondent type	Overall perceptions of shifting measles vaccine from 9 months to 6 months
On-time vaccinated caregivers and heads of household	*Conditional acceptance:* Open to moving earlier to improve recall if sufficient evidence of safety
Delay or dropout caregivers and heads of household	*Conditional resistance:* Safety fears not outweighed by improved recall
Health care workers	*Conditional acceptance:* Mixed perspectives, but leaned toward being open to 6 months for coverage gains but evidence and training are needed
Community influencers	*Conditional acceptance:* Belief that caregivers may be more motivated when the child is younger and would help them remember, however would need advance notice of the change and staff training
EPI officials	*Conditional resistance:* Shared the strongest technical reservations due to reduced seroconversion at 6 months and that if the change were to go through it would need epidemiological review, training and strong community communication

Policy Considerations

Across all countries, there was a minority who were reluctant to express an opinion, preferring instead to defer to guidance from health officials. This included primarily caregivers but also some health care workers.

> *"For me, we're just going to give it to him because I don't know anything, it's the nurses who know (know) what to do." - Caregiver of a MCV1 dropout child, DRC*

> *"Well, that really depends on the established vaccination schedule. We give the vaccines at 9 months according to the established vaccination schedule. In any case, I don't know. It will depend on the Ministry of Health."- Health care worker, DRC*

If a decision were made to move to 6 months, our findings suggest that implementation would need to meet the following conditions:

1. **Evidence threshold:** The shift must be justified with robust clinical evidence, including expected immune system response and implications for long-term protection.
2. **Communication plan:** Clear communication of how shifting MCV1 fits within the full vaccination schedule, including how to coordinate with other antigens.
3. **Implementation readiness:** Before rolling out the policy change, health care worker training and community sensitization is needed to address concerns and questions, particularly amongst populations at risk for delay or dropout.

Without these conditions, respondents cautioned that a schedule change could undermine trust and coverage rather than improve measles protection.

FOR MORE INFORMATION, PLEASE CONTACT

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