International Journal of Community Medicine and Public Health
Dixit S et al. Int J Community Med Public Health. 2026 Sep;13(9):5494-5504
https://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20263244

Review Article

ASHA-community health nurse collaboration for improving maternal and child health outcomes in India: a narrative review

Sneha Dixit[1], Valarmathi. C.[2], Divya Trivedi[3], Gurupada K. P.[4], Ushakiran Thirunavukarasu[5], Pradeep Kumar[6], Khumbongmayum Chetanmala Devi[7], Ghanshyam Singh[6], S. Tongpangkokla Ozukum[8], Vidyashri R.[9], Deepa N. R.[10], Mohammed Umar[11]*

[1]Department of Community Health Nursing, College of Nursing, Rama University, Kanpur, Uttar Pradesh, India
[2]Department of Child Health Nursing, K.G. College of Nursing, Coimnatore, The Tamil Nadu Dr. M.G.R. Medical University, Chennai, Tamil Nadu, India
[3]Department of Community Health Nursing, DIT College of Nursing, DIT University, Dehradun, Uttarakhand, India
[4]Department of Community Health Nursing, Kodagu Institute of Medical Sciences Government College of Nursing, Rajiv Gandhi University of Health Sciences, Madikeri (Kodagu), Karnataka, India
[5]Department of Obstetrics and Gynaecological Nursing, Narayana College of Nursing, Dr. NTR University of Health Sciences, Nellore, Andhra Pradesh, India
[6]Department of Community Health Nursing, Saraswathi College of Nursing, Atal Bihari Vajpayee Medical University (ABVMU), Hapur, Uttar Pradesh, India
[7]Department of Community Health Nursing, College of Nursing, Regional Institute of Medical Sciences (RIMS), Manipur University, Imphal West, Manipur, India
[8]Department of Child Health Nursing, College of Nursing, IMDH Mokokchung, Nagaland University, Mokokchung, Nagaland, India
[9]Department of Community Health Nursing, Shridevi Institute of Nursing Sciences, Rajiv Gandhi University of Health Sciences, Tumakuru, Karnataka, India
[10]Department of Obstetrics and Gynaecological Nursing, ESIC College of Nursing, Rajiv Gandhi University of Health Sciences, Kalaburagi, Karnataka, India
[11]Department of Nursing, Uttar Pradesh University of Medical Sciences, Saifai, Etawah, Uttar Pradesh, India

Received: 10 July 2026
Accepted: 26 August 2026

***Correspondence:**
Mohammed Umar,
E-mail: umarrathore0786@gmail.com

ABSTRACT

India has achieved substantial progress in maternal and child health; however, preventable morbidity, mortality, inequitable access, delayed referral, and discontinuity of care remain important public health challenges. Accredited Social Health Activists and community health nurses occupy complementary positions within the primary healthcare system. Accredited Social Health Activists provide household-level mobilisation, counselling, surveillance, and linkage to health services, whereas community health nurses contribute clinical assessment, risk identification, skilled care, referral coordination, supervision, and continuity across community and facility settings. This narrative review examines how collaboration between these frontline cadres can improve maternal and child health outcomes in India. A structured literature search was undertaken using PubMed, Google Scholar, and relevant government and international health agency sources. Evidence suggests that effective collaboration can strengthen early pregnancy registration, antenatal care utilisation, identification of high-risk pregnancies, birth preparedness, institutional delivery, postnatal follow-up, home-based newborn care, breastfeeding support, immunisation, growth monitoring, and timely referral. However, fragmented communication, role ambiguity, hierarchical relationships, excessive workload, uneven supervision, delayed incentives, inadequate transport, weak referral feedback, and digital fragmentation limit the effectiveness of this partnership. This review proposes the CONNECT-MCH model, an integrated framework based on community identification, ongoing information exchange, nursing assessment and risk stratification, navigation and timely referral, escalation of high-risk cases, closed-loop continuity, and team learning with supportive supervision. Strengthening structured collaboration between Accredited Social Health Activists and community health nurses may transform parallel frontline activities into a coordinated continuum of care and improve equity, responsiveness, continuity, and accountability within India's maternal and child health system.

Keywords: Accredited social health activist, Community health nursing, Maternal health, Child health, Primary healthcare, Interprofessional collaboration

INTRODUCTION

Maternal and child health is among the most sensitive indicators of the accessibility, equity, responsiveness, and overall performance of a health system. India has achieved substantial improvements in institutional delivery, antenatal care, immunisation, and maternal and child survival. The national maternal mortality ratio declined to 88 maternal deaths per 100,000 live births during 2021-2023.[1] Nevertheless, preventable maternal and child morbidity and mortality continue to occur, and substantial inequalities persist across states, districts, rural and urban populations, socioeconomic groups, and hard-to-reach communities.

Adverse maternal and child health outcomes rarely result from the absence of a single intervention. They frequently emerge through a sequence of failures across the continuum of care, including delayed identification of pregnancy, incomplete antenatal care, failure to recognise danger signs, inadequate birth preparedness, delayed transport, weak communication between community and facility providers, incomplete postnatal follow-up, and missed opportunities for newborn and child surveillance. These gaps are particularly important among women and children affected by poverty, geographical isolation, limited health literacy, migration, gender-related barriers, and restricted access to timely clinical services.[2,3]

India's primary healthcare architecture depends heavily on frontline health workers who connect households with the formal health system. Among them, the Accredited Social Health Activist (ASHA) has become a central community-level health worker. ASHAs undertake community mobilisation, counselling, facilitation of service utilisation, home visits, support for institutional delivery, newborn care, immunisation, and health promotion.[4] Their proximity to households allows them to recognise pregnancies, identify missed services, reinforce health messages, understand family-level barriers, and facilitate timely contact with formal health services.[5]

Community health nurses occupy a complementary position. Depending on the organisational context, community-based nursing functions in India are undertaken by auxiliary nurse midwives, public health nurses, staff nurses, community health officers with nursing backgrounds, and other nursing personnel working across community and primary healthcare settings. These professionals contribute clinical assessment, risk identification, preventive care, skilled nursing interventions, referral coordination, health education, follow-up, documentation, and supervision.[6]

The distinction between community reach and clinical competence creates a major opportunity for collaboration. ASHAs often possess detailed knowledge of household circumstances, pregnancy status, treatment adherence, social vulnerability, health beliefs, and care-seeking behaviour. Community health nurses possess the clinical competence required to assess risk, provide or coordinate skilled care, initiate referral, and monitor clinical outcomes. When these functions operate independently, information may be lost between the household, outreach session, subcentre, primary health centre, referral facility, and home. When deliberately integrated, the ASHA can identify and connect individuals with services, while the nurse can assess, intervene, escalate, and ensure continuity.

Evidence from India indicates that exposure to ASHA services is associated with improved utilisation of maternity services, particularly among marginalised populations.[7] However, frontline-worker effectiveness is influenced by training, supervision, health-system responsiveness, referral capacity, motivation, teamwork, and relationships with other healthcare professionals.[8,9] Trust and coordination between community workers and skilled providers may determine whether a woman merely receives health information or successfully reaches appropriate care at the right time.[10]

The literature on ASHAs is extensive, but much of it evaluates their performance as an individual cadre. Similarly, nursing and primary healthcare literature frequently describes community-based maternal and child health responsibilities without examining the operational relationship between nurses and ASHAs as a distinct collaborative mechanism. This separation may underestimate the importance of the interface between household-level engagement and professional clinical care.

This narrative review therefore examines the complementary roles of ASHAs and community health nurses in maternal and child healthcare, synthesises the mechanisms through which their collaboration may influence health outcomes, identifies barriers that weaken coordination, and proposes an integrated collaborative model for strengthening continuity from pregnancy identification through early childhood.

METHODS

A structured narrative review approach was adopted to identify and synthesise literature relevant to collaboration between ASHAs and community-based nursing personnel in improving maternal and child health outcomes in India. The review integrated empirical research, programme evaluations, systematic reviews, qualitative studies, policy documents, and operational guidance.

Electronic literature searches were undertaken using PubMed and Google Scholar. Relevant policy and programme documents were identified from the Ministry of Health and Family Welfare, National Health Mission, Office of the Registrar General and Census Commissioner of India, and World Health Organization. The search focused primarily on literature published from January 2010 to June 2026, although earlier landmark

publications were retained when necessary to explain the evolution of the ASHA programme and frontline health-worker collaboration.

The search strategy combined the terms "Accredited Social Health Activist", "ASHA", "community health nurse", "public health nurse", "auxiliary nurse midwife", "ANM", "frontline health worker", "maternal health", "newborn health", "child health", "antenatal care", "postnatal care", "institutional delivery", "home-based newborn care", "referral", "continuity of care", "collaboration", "teamwork", "supervision", and "India". Terms were combined using Boolean operators according to the requirements of each database.

Publications were considered relevant when they addressed the contribution of ASHAs to maternal or child health, the role of nurses or auxiliary nurse midwives in community-based care, coordination among frontline health workers, referral and continuity mechanisms, supervision of community health workers, or barriers and facilitators affecting integrated maternal and child health service delivery. Publications unrelated to maternal and child health, lacking relevance to frontline care, or providing insufficient information for meaningful interpretation were excluded.

Because of substantial heterogeneity in study designs, populations, interventions, outcomes, and programme settings, statistical pooling was not undertaken. Evidence was synthesised narratively and organised into the major domains of role complementarity, mechanisms of collaboration, maternal health outcomes, newborn and child health outcomes, barriers, digital opportunities, policy implications, and future research priorities. The review was designed to move beyond a description of individual cadres and to analyse collaboration as a health-system function.

EVOLUTION OF COMMUNITY-BASED MATERNAL AND CHILD HEALTH SERVICES IN INDIA

The introduction of the ASHA programme under the National Rural Health Mission represented a major transformation in India's strategy for connecting communities with the formal health system. ASHAs were envisioned as locally selected women who would create awareness, mobilise communities, facilitate access to services, and support the utilisation of maternal, newborn, child health, family planning, and other public health interventions.[4]

The programme created an extensive household-level platform for maternal and child healthcare. ASHAs counsel women regarding antenatal care, birth preparedness, safe delivery, breastfeeding, complementary feeding, immunisation, contraception, and prevention of common illnesses. Their proximity to families enables them to recognise pregnancies, identify missed services, reinforce health messages, and accompany beneficiaries to health facilities when required.[5,11]

At the same time, nurses and auxiliary nurse midwives have remained central to the delivery of skilled maternal and child health services. Their responsibilities include antenatal assessment, immunisation, identification of high-risk conditions, counselling, postnatal care, family planning, documentation, referral, and coordination with higher-level facilities. Community outreach platforms provide opportunities for ASHAs and nursing personnel to work together in antenatal care, immunisation, counselling, and other preventive services.[6,12]

The functional relationship between ASHAs and community health nurses should therefore be understood as a continuum rather than a hierarchy. The ASHA extends the reach of the health system into households, while the nurse brings clinical assessment and professional decision-making closer to the community. Maternal and child health outcomes are most likely to improve when these roles are connected through regular communication, shared planning, rapid referral, feedback, and clearly assigned responsibility for follow-up.

COMPLEMENTARY ROLES OF ASHAS AND COMMUNITY HEALTH NURSES

Community intelligence and household engagement

ASHAs often possess information that is not readily available in clinical records. They may know which woman is pregnant but remains unregistered, which family is hesitant about institutional delivery, which newborn has feeding difficulties, which child has missed vaccination, and which household faces transport, financial, social, or cultural barriers. Qualitative research from India has shown that ASHA home visits may improve equity by helping socially and economically disadvantaged women overcome barriers to perinatal care.[13,14]

This community intelligence is highly valuable for nursing practice. A nurse cannot effectively prioritise high-risk households if relevant information remains confined to separate registers or informal conversations. Regular exchange of household-level information enables clinical resources to be directed towards women and children at greatest risk.

Clinical assessment and risk stratification

ASHAs can identify warning signs and facilitate contact with health services, but they are not substitutes for skilled clinical professionals. Community health nurses and auxiliary nurse midwives can assess blood pressure, anaemia, nutritional status, gestational progress, maternal and fetal risk, postpartum complications, newborn problems, and childhood illness within their professional

scope of practice. Collaboration is strongest when the ASHA's recognition of vulnerability triggers timely nursing assessment. The collaborative pathway should progress from identification and communication to clinical assessment, risk classification, intervention or referral, follow-up, and documentation of the outcome.

Navigation and referral

Referral failure is a major point at which preventable maternal and child complications may worsen. A referral is not complete merely because advice has been provided. The woman or child must understand the need for referral, reach the appropriate facility, receive the required care, and return to community follow-up with relevant clinical information.

The ASHA can address household-level barriers and facilitate navigation, while the nurse can determine urgency, communicate clinical concerns, prepare referral information, and coordinate with the receiving facility. Together, they can establish a closed-loop referral pathway in which the outcome of every important referral is known.

Continuity after facility-based care

After delivery, hospitalisation, or specialist treatment, families often return to the community without consistent follow-up. ASHAs are well positioned to identify whether the mother or child has returned home and whether treatment advice is being followed show in table 1. Nurses can reassess clinical status, interpret discharge recommendations, and escalate unresolved concerns. This combination is particularly important for women with high-risk pregnancies, postpartum complications, low-birth-weight infants, preterm newborns, and infants discharged from specialised newborn care units.

Table 1: Complementary functions of ASHAs and community health nurses.

Maternal and child health domain	ASHA contribution	Community health nurse contribution	Collaborative value
Pregnancy identification	Household surveillance and early identification	Confirmation and registration support	Earlier entry into antenatal care
Antenatal care	Mobilisation and appointment reminders	Clinical assessment and risk screening	Improved attendance and early detection
High-risk pregnancy	Recognition of warning signs and social barriers	Clinical risk stratification and referral	Faster escalation
Birth preparedness	Family counselling and transport planning	Individualised clinical birth planning	Reduced delays
Institutional delivery	Mobilisation and facilitation	Clinical coordination and facility linkage	Improved continuity
Postnatal care	Scheduled household contact	Assessment of maternal complications	Earlier recognition of deterioration
Newborn care	Home visits and caregiver education	Clinical assessment of vulnerable newborns	Stronger home-to-facility linkage
Breastfeeding	Reinforcement and family engagement	Skilled assessment of feeding problems	Earlier resolution of difficulties
Immunisation	Tracking and mobilisation	Vaccine delivery and clinical assessment	Reduced missed opportunities
Growth and development	Household follow-up	Assessment and referral	Earlier intervention
Digital tracking	Updating household information	Clinical validation and action	Improved continuity and accountability

MECHANISMS THROUGH WHICH COLLABORATION MAY IMPROVE OUTCOMES

Early identification and registration

The first collaborative mechanism is reduction of the time between the onset of pregnancy and entry into formal care. Early identification enables timely registration, baseline assessment, nutritional counselling, screening, and care planning. ASHAs can identify pregnancies through regular community contact, while nurses can ensure that identified women enter a structured antenatal pathway.

Improved completion of antenatal care

Evidence indicates that exposure to ASHA services is associated with improved utilisation of maternity services. A nationally representative longitudinal analysis reported that ASHA exposure was associated with a 17% increase in the utilisation of at least one antenatal care visit, a 26% increase in skilled birth attendance, and a 28% increase in facility birth.[7] However, attendance alone

does not guarantee quality. Collaboration allows the ASHA to support attendance while the nurse ensures that each contact includes appropriate assessment, counselling, documentation, and follow-up.

Earlier recognition of high-risk pregnancy

High-risk pregnancy management requires both household vigilance and clinical competence. ASHAs may recognise severe weakness, bleeding, swelling, reduced fetal movement, or failure to attend scheduled care. Nurses can assess these concerns, identify hypertension, anaemia, gestational diabetes, infection, or other complications, and determine the need for referral. The collaborative principle is that community identification should trigger clinical action. A woman identified by an ASHA as vulnerable should not remain merely a name on a household list; she should enter a documented pathway of assessment, risk classification, intervention, and follow-up.

Reduction of referral delays

Delays contributing to maternal and newborn harm include delays in deciding to seek care, reaching an appropriate facility, and receiving adequate care after arrival. ASHA-qwnurse collaboration can influence each stage. Joint counselling may improve recognition of urgency, advance planning can address transport and family decision-making, and pre-referral communication can improve readiness at the receiving facility.

Reinforcement of health information

Health messages are more effective when they are consistent across providers. Conflicting advice can reduce confidence and trust. When ASHAs and nurses use shared counselling messages, the ASHA can reinforce at home what the nurse has explained during clinical contact. Repetition across settings may strengthen understanding, adherence, and appropriate care-seeking behaviour.

IMPACT ON MATERNAL HEALTH OUTCOMES

Antenatal care utilisation

ASHAs have contributed substantially to connecting marginalised women with maternity services. Evidence suggests that ASHA exposure can increase the likelihood of antenatal care utilisation, skilled birth attendance, and facility delivery.[7,15] Their impact is likely to be stronger when community mobilisation is linked to accessible and responsive clinical services. A collaborative model can improve not only whether women attend antenatal care but also whether identified risks are acted upon. An ASHA may ensure attendance, but the nurse must identify abnormal findings and establish a follow-up plan. The ASHA can subsequently determine whether investigations, treatment, or referral have been completed.

Institutional delivery and skilled attendance

Institutional delivery is influenced by knowledge, trust, household decision-making, transport, previous healthcare experiences, and perceived quality of care. ASHAs play an important role in counselling and facilitating access to facilities. Nurses contribute to birth planning, risk classification, and coordination with appropriate facilities.[15] Trust and teamwork among frontline workers influence community confidence and timely access to care. Coordinated action between ASHAs and auxiliary nurse midwives can support women in reaching facilities during labour and navigating the formal health system.[10]

High-risk pregnancy management

High-risk pregnancies require intensified surveillance rather than routine scheduling alone. The collaborative team should maintain a shared record of women with hypertension, severe anaemia, diabetes, previous obstetric complications, adolescent pregnancy, advanced maternal age, multiple pregnancy, or other clinically significant risks. Women with routine risk can receive standard ASHA follow-up and scheduled nursing assessment. Women with moderate risk require increased contact and documented nursing review. High-risk women require an individualised care plan, confirmation of the referral facility, transport planning, and active follow-up. Emergencies require immediate escalation and referral without waiting for routine review. Such an approach shifts care from uniform contact frequency towards risk-based continuity.

Postnatal maternal care

The postnatal period is characterised by rapid transition from facility-based care to the household. Complications such as haemorrhage, infection, hypertension, wound problems, breastfeeding difficulties, and psychological distress may emerge or worsen after discharge. ASHAs can maintain household contact and recognise changes in maternal condition. Nurses can assess symptoms requiring professional evaluation and initiate referral when necessary. A coordinated postnatal plan should ensure that information from the place of delivery reaches the community team and that unresolved risks remain visible until appropriately addressed.

IMPACT ON NEWBORN AND CHILD HEALTH OUTCOMES

Home-based newborn care

Home-based newborn care is a major community strategy centred on scheduled ASHA visits. These contacts support assessment of newborn well-being, breastfeeding, warmth, hygiene, recognition of danger signs, and timely referral.[16,17] However, the effectiveness of home visits depends on the ASHA's knowledge, confidence, supervision, and access to responsive referral services.[18]

Nursing collaboration can strengthen home-based care through case review, targeted joint visits, skills reinforcement, and rapid assessment of concerning findings. Joint visits need not be routine for every newborn. They should be prioritised for preterm infants, low-birth-weight infants, newborns with feeding difficulties, maternal illness, post-discharge vulnerability, or repeated warning signs.

Breastfeeding support

ASHAs are well positioned to provide repeated encouragement, reinforce recommended practices, and engage family members. Nurses can assess attachment, positioning, milk transfer, breast problems, maternal illness, and newborn factors affecting feeding. Collaboration becomes particularly important when basic counselling does not resolve the problem.

Immunization

Missed vaccination may result from migration, misinformation, family hesitancy, inadequate tracking, or service-access barriers. ASHAs can identify children who are due or overdue for vaccination and mobilise families. Nurses can deliver vaccines, assess clinical concerns, and ensure accurate documentation. A shared defaulter-tracking process can prevent children from becoming lost between household lists and facility records. Effective collaboration can therefore strengthen both coverage and continuity.

Table 2: Collaborative pathways and expected maternal and child health outcomes.

Collaborative mechanism	Immediate process effect	Expected health benefit
Shared pregnancy tracking	Fewer unregistered pregnancies	Earlier antenatal care
Joint high-risk review	Better prioritisation	Earlier management of complications
Standardised danger-sign communication	Faster escalation	Reduced delay in seeking care
Closed-loop referral	Confirmation of arrival and outcome	Reduced loss to follow-up
Joint high-risk home visits	Combined social and clinical assessment	Improved continuity
Shared immunisation tracking	Identification of missed children	Improved completion
Post-discharge communication	Earlier community follow-up	Reduced post-discharge deterioration
Regular case-based meetings	Collective learning	Better team performance
Shared digital tracking	Real-time visibility of risk	Improved accountability

Growth, nutrition and development

Child health requires longitudinal surveillance rather than isolated service contacts. ASHAs can identify feeding problems, illness, missed appointments, and family concerns. Nurses can assess growth patterns, developmental concerns, and clinical signs requiring further evaluation. Collaboration with Anganwadi workers is also important because nutrition and growth monitoring extend beyond the health sector show in table 2.

BARRIERS TO EFFECTIVE ASHA–NURSE COLLABORATION

Role ambiguity and hierarchical relationships

Collaboration weakens when responsibilities are assumed rather than explicitly defined. Tasks may be duplicated, neglected, or shifted between workers. Written role expectations should specify who identifies a problem, who performs clinical assessment, who initiates referral, who confirms completion, and who remains responsible for follow-up. ASHAs may possess less formal authority than professional healthcare personnel. Excessively hierarchical relationships can discourage them from raising concerns or reporting uncertainty. Research on community health workers in India has identified tensions between multiple roles, programme expectations, supervision, and health-system relationships.[8,19] Effective collaboration requires a working environment in which an ASHA can communicate a concern without fear of dismissal.

Workload, training and motivation

Both ASHAs and nurses manage expanding responsibilities. New programmes and reporting requirements are often added without integration of existing tasks. Excessive documentation and fragmented reporting can reduce the time available for meaningful coordination and patient-centred follow-up. Knowledge and competence also vary. A recent systematic review and meta-analysis estimated pooled maternal health knowledge among ASHAs at approximately 62%, with substantial heterogeneity across studies.[20] Training alone is insufficient when it is infrequent and disconnected from real clinical situations. Case-based refresher learning facilitated by nurses can strengthen recognition of danger signs, referral decisions, communication, and practical problem-solving. Motivation may be affected by delayed payments, complex verification processes,

workload, insufficient recognition, and limited career progression.[21,22]

Weak referral feedback and health-system readiness

One of the most important system failures occurs after referral. The community team may not know whether the woman reached the facility, what diagnosis was made, what treatment was provided, or what follow-up is required. This produces an open care loop. A closed-loop system should record the reason for referral, urgency, destination facility, confirmation of arrival, care received, discharge or return plan, and assigned responsibility for subsequent follow-up. The referral should remain active until the outcome is known. Community mobilisation cannot compensate for unavailable transport, inadequate facility readiness, workforce shortages, or disrespectful care. When referred families repeatedly encounter service failures, trust in both ASHAs and nurses may decline show in table 3.

Table 3: Major barriers to collaboration and recommended responses.

Barrier	Potential consequence	Recommended response
Role ambiguity	Duplication and missed tasks	Written collaborative protocols
Hierarchical relationships	ASHA concerns may be ignored	Respectful team communication
Excessive workload	Reduced follow-up	Risk-based prioritisation
Fragmented records	Information loss	Shared tracking mechanisms
Weak referral feedback	Open care loops	Mandatory referral closure
Uneven knowledge and skills	Delayed recognition	Case-based refresher education
Delayed incentives	Reduced motivation	Transparent and timely payment
Transport barriers	Delayed access	Pre-arranged emergency pathways
Poor facility responsiveness	Loss of community trust	Escalation and accountability mechanisms
Digital burden	Duplicate documentation	Simplified and interoperable systems

DIGITAL HEALTH AS AN ENABLER OF COLLABORATION

Digital health has the potential to strengthen collaboration, but technology should reduce fragmentation rather than create additional reporting burdens. The most useful digital system is not necessarily the one with the greatest number of features. It is the system that makes clinically important information visible to the appropriate worker at the appropriate time. A shared maternal and child health platform could identify newly registered pregnancies, women overdue for antenatal care, high-risk pregnancies, expected dates of delivery, postpartum follow-up requirements, low-birth-weight or preterm infants, missed home visits, incomplete immunisation, and unresolved referrals.

The ASHA could update household-level information, while the nurse could validate clinical risk and record required actions. Automated escalation could be considered when high-risk women miss scheduled appointments or when important referrals remain unconfirmed. However, digital systems must address connectivity, device availability, digital literacy, privacy, data quality, interoperability, and duplicate entry. Technology should strengthen professional judgement and communication rather than replace them.

THE PROPOSED CONNECT-MCH MODEL

This review proposes the CONNECT-MCH model as an original practice-oriented framework for organising ASHA-community health nurse collaboration across the maternal and child health continuum. The model integrates seven interdependent functions: community identification, ongoing information exchange, nursing assessment and risk stratification, navigation and timely referral, escalation for high-risk cases, closed-loop continuity, and team learning with supportive supervision. Community identification represents the entry point of the model. Through household visits and community interactions, the ASHA identifies pregnant women, postpartum mothers, newborns, vulnerable children, missed services, danger signs, and household barriers. This function ensures that individuals at risk become visible to the formal health system.

Ongoing information exchange ensures that clinically relevant information moves rapidly between the ASHA and community health nurse. Shared and regularly updated records enable both workers to recognise missed services, emerging risks, and unresolved care needs. Communication is therefore treated as a continuous process rather than an occasional administrative activity.

Nursing assessment and risk stratification convert community information into clinical action. The nurse evaluates concerns identified by the ASHA and classifies the woman or child according to the urgency and intensity of care required. Risk stratification allows limited resources to be directed towards individuals requiring enhanced follow-up.

Navigation and timely referral connect identification with actual receipt of care. The ASHA addresses household, communication, and access barriers, while the nurse initiates referral and coordinates with the appropriate facility. This dual responsibility reduces the possibility that a referral remains only an instruction without confirmed service utilization.

Escalation for high-risk cases ensures that women and children with significant vulnerability receive intensified follow-up, joint review when feasible, and rapid escalation when deterioration occurs. The intensity of collaboration should therefore be proportional to clinical and social risk. Closed-loop continuity is the central accountability mechanism of the model. Information regarding referral, treatment, discharge, and follow-up is shared back with the community team. Responsibility for follow-up remains explicit until the outcome is known and the care loop is completed. Team learning and supportive supervision strengthen the model over time. Regular case-based meetings, feedback, and supportive supervision enable ASHAs and nurses to learn from difficult cases, improve communication, strengthen skills, and address recurring system barriers show in figure 1.

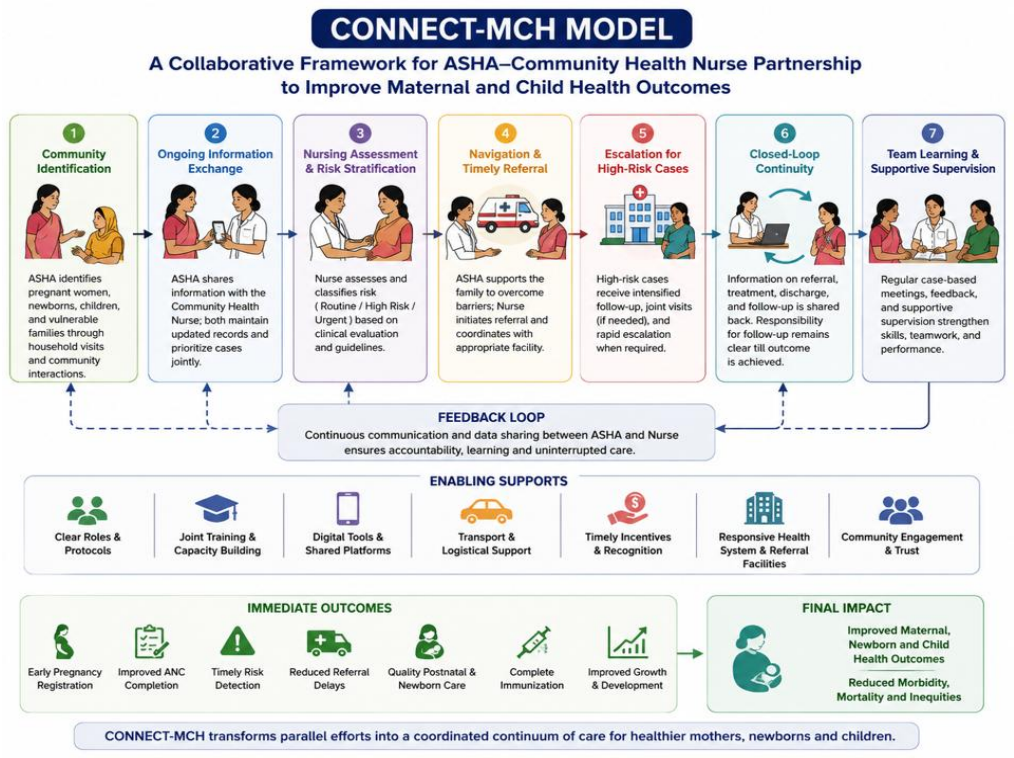

Figure 1: The CONNECT-MCH Model for ASHA-community health nurse collaboration.

*The CONNECT-MCH model illustrates a seven-stage collaborative pathway linking community identification with clinical assessment, referral, continuity, and team learning. A continuous feedback loop connects ASHAs and community health nurses throughout the pathway. Enabling supports include clear roles and protocols, joint training, digital tools, transport and logistical support, timely incentives, responsive referral facilities, and community engagement. The model is expected to improve service continuity and maternal, newborn, and child health outcomes.

The seven functions are connected through a continuous feedback loop supported by clear roles and protocols, joint training and capacity building, digital tools and shared platforms, transport and logistical support, timely incentives and recognition, responsive referral facilities, and community engagement. The immediate expected outcomes are earlier pregnancy registration, improved antenatal care completion, timely risk detection, reduced referral delays, better postnatal and newborn care, improved immunisation completion, and stronger growth and developmental surveillance. The final anticipated impact is improved maternal, newborn, and child health with reductions in preventable morbidity, mortality, and inequity.

DISCUSSION

This review identifies the relationship between ASHAs and community health nurses as an underdeveloped but strategically important mechanism for strengthening maternal and child health in India. The two cadres possess different forms of knowledge, expertise, and access. ASHAs understand households, communities, behaviour, and practical barriers. Nurses contribute clinical judgement, risk assessment, skilled care, supervision, and referral coordination. Neither form of expertise alone is sufficient to ensure a complete continuum of care.

Evidence demonstrates that ASHAs can improve connection to maternity services, particularly among marginalised women.[7] Home visits may also contribute to equity by bringing information and support to families who might otherwise remain disconnected from services.[13,14] However, ASHA performance is influenced by individual, cultural, organisational, and wider health-system factors.[8,9,24] The effect of ASHAs therefore cannot be separated from the responsiveness of the health system to which they connect communities.

The same principle applies to nursing. A clinically competent nurse cannot prevent community-level delays if pregnancies, danger signs, missed appointments, and household barriers remain invisible. Collaboration creates value by combining community reach with clinical competence. The central finding of this synthesis is that collaboration should be understood as a sequence of linked actions rather than as occasional meetings or informal communication. Information must move from household identification to clinical assessment, risk classification, intervention, referral, and follow-up. Failure at any transition can weaken the entire pathway.

The proposed CONNECT-MCH model responds to this challenge by emphasising shared information, nursing assessment, risk-based escalation, closed-loop referral, feedback, and team learning. Its practical advantage is that it can potentially be integrated into existing maternal and child health structures without creating another parallel programme.

Nevertheless, collaboration should not be presented as a solution to all health-system limitations. Frontline teamwork cannot compensate for absent transport, inadequate staffing, unavailable emergency services, disrespectful care, or insufficient referral capacity. Collaboration is most effective when embedded within a responsive and adequately resourced health system.[25]

The review also highlights the need to shift from activity-based measurement towards continuity-based measurement. Counting home visits or referrals provides limited information about whether care was completed. Future monitoring should determine whether the appropriate patient received the required response within an appropriate time and whether professional responsibility remained clear until the care loop was closed.

This review has limitations. As a narrative synthesis, it does not provide pooled estimates of the independent effect of ASHA–nurse collaboration. Direct intervention studies evaluating this specific collaborative relationship remain limited, and the operational meaning of community health nursing varies across Indian settings. Much of the available evidence evaluates individual cadres or programmes rather than collaboration itself. The proposed CONNECT-MCH model is conceptually derived from the synthesis and requires prospective implementation, feasibility testing, and outcome evaluation before effectiveness can be established.

CONCLUSION

ASHA-community health nurse collaboration has substantial potential to strengthen the continuum of maternal and child healthcare in India by connecting household-level engagement with skilled clinical assessment and responsive referral. ASHAs provide community trust, local knowledge, mobilisation, and sustained household contact, while nurses contribute clinical judgement, risk stratification, skilled care, supervision, and coordination. The greatest benefit is likely to emerge when these functions operate as a single care pathway rather than as parallel activities. Effective collaboration can support earlier pregnancy registration, improved antenatal care, timely recognition of high-risk conditions, birth preparedness, institutional delivery, postnatal surveillance, home-based newborn care, breastfeeding support, immunisation, and referral completion. However, these benefits are limited by fragmented communication, role ambiguity, hierarchical relationships, excessive workload, uneven training, weak referral feedback, delayed incentives, and inadequate health-system responsiveness.

The proposed CONNECT-MCH model provides a practice-oriented framework centred on community identification, ongoing information exchange, nursing assessment and risk stratification, navigation and timely referral, escalation of high-risk cases, closed-loop continuity, and team learning with supportive supervision. Strengthening these functions may improve equity, continuity, and accountability without requiring the creation of a new workforce cadre. Future research should evaluate the feasibility, effectiveness, implementation requirements, and cost-effectiveness of structured collaborative interventions.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not electrician

REFERENCES

1. Office of the Registrar General & Census Commissioner, India. Sample registration system (SRS)-special bulletin on maternal mortality in India 2021-23. New Delhi: Government of India; 2025. Available at: https://censusindia.gov.in/nada/index.php/catalog/46177/study-description. Accessed on 29 May 2026.
2. World Health Organization. Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. Geneva: World Health Organization; 2023. Available at: https://www.who.int/publications/i/item/9789240068759. Accessed on 29 May 2026.

3. International Institute for Population Sciences (IIPS), ICF. National Family Health Survey (NFHS-5), 2019-21: India. Mumbai: IIPS; 2021. Available at: https://iipsindia.ac.in/content/national-family-health-survey-nfhs-5-india-report. Accessed on 29 May 2026.
4. National Health Mission. About Accredited Social Health Activist (ASHA). New Delhi: Ministry of Health and Family Welfare, Government of India. Available at: https://www.nhm.gov.in/nhm/about-nhm/index1.php?lang=1&level=1&lid=226&sublinkid=150. Accessed on 29 May 2026.
5. Scott K, George AS, Ved RR. Taking stock of 10 years of published research on the ASHA programme: examining India's national community health worker programme from a health systems perspective. Health Res Policy Syst. 2019;17:29.
6. Ministry of Health and Family Welfare, Government of India. Indian Public Health Standards: Health and Wellness Centre-Sub Health Centre. Volume IV. New Delhi: Government of India; 2022. Available at: https://nhm.gov.in/images/pdf/guidelines/iphs/iphs-revised-guidlines-2022/04-SHC_HWC_UHWC_IPHS_Guidelines-2022.pdf. Accessed on 29 May 2026.
7. Agarwal S, Curtis SL, Angeles G, Speizer IS, Singh K, Thomas JC. The impact of India's Accredited Social Health Activist (ASHA) program on the utilization of maternity services: a nationally representative longitudinal modelling study. Hum Resour Health. 2019;17:68.
8. Saprii L, Richards E, Kokho P, Theobald S. Community health workers in rural India: analysing the opportunities and challenges Accredited Social Health Activists (ASHAs) face in realising their multiple roles. Hum Resour Health. 2015;13:95.
9. Chawla S, Kumar C, Bose M, Shrivastav SM. Performance and challenges of Accredited Social Health Activists (ASHAs) in delivering key maternal and newborn health services in India: a systematic review and meta-analyses. SSM Health Syst. 2025;5:100134.
10. Mishra A. 'Trust and teamwork matter': community health workers' experiences in integrated service delivery in India. Glob Public Health. 2014;9(8):960-74.
11. National Health Mission. ASHA module 6: simple skills that save lives. New Delhi: Ministry of Health and Family Welfare, Government of India. Available at: https://www.nhm.gov.in/images/pdf/communitisation/asha/book-no-6.pdf. Accessed on 29 May 2026.
12. Ministry of Health and Family Welfare, Ministry of Women and Child Development, Government of India. National guidelines for Village Health, Sanitation & Nutrition Day (VHSND). New Delhi: Government of India; 2019. Available at: https://www.nhm.gov.in/New_Updates_2018/NHM_Components/RMNCHA/CH/Guidelines/National_Guidelines_on_VHSND_English_High_Res_Print_ready.pdf. Accessed on 29 May 2026.
13. Blanchard AK, Ansari S, Rajput R, Colbourn T, Houweling TAJ, Isac S, et al. Understanding the roles of community health workers in improving perinatal health equity in rural Uttar Pradesh, India: a qualitative study. Int J Equity Health. 2021;20:63.
14. Blanchard AK, Colbourn T, Prost A, Ramesh BM, Isac S, Anthony J, et al. Associations between community health workers' home visits and education-based inequalities in institutional delivery and perinatal mortality in rural Uttar Pradesh, India: a cross-sectional study. BMJ Open. 2021;11(7):e048202.
15. Paul PL, Chellan R, Sahoo H. Association between maternal health service utilisation and institutional delivery in India: a secondary analysis of India Human Development Survey 2012. BMC Public Health. 2020;20:1071.
16. National Health Mission. Home based newborn care: operational guidelines (revised 2014). New Delhi: Ministry of Health and Family Welfare, Government of India; 2014. Available at: https://nhm.gov.in/images/pdf/programmes/child-health/guidelines/Revised_Home_Based_New_Born_Care_Operational_Guidelines_2014.pdf. Accessed on 29 May 2026.
17. Ministry of Health and Family Welfare, Ministry of Women and Child Development, Government of India. Home based care for young child (HBYC): strengthening of health & nutrition through home visits: operational guidelines. New Delhi: Government of India; 2018. Available at: https://nhm.gov.in/New-Update-2022-24/CH-Programmes/HBNC-%26-HBYC-Resource-%20Material/HBYC-Operational-Guidelines.pdf. Accessed on 29 May 2026.
18. Newton-Lewis TA, Bahety G. Evaluating the effectiveness of community health worker home visits on infant health: a quasi-experimental evaluation of Home Based Newborn Care Plus in India. J Glob Health. 2021;11:04060.
19. Dhaliwal BK, Gupta M, Nadda A, Singh S, Shet A, Scott K, et al. Urban community health workers in Punjab, India: a qualitative study of ASHAs' roles in the health system. PLOS Glob Public Health. 2025;5(8):e0003210.
20. Singh S, Tiwary B, Barik M, Arora H, Abraham SS, Majumdar P, et al. Knowledge of Accredited Social Health Activists in India: a systematic review and meta analysis of evidence drawn from primary studies published between 2005 and 2022. BMC Health Serv Res. 2025;25:58.
21. Gopalan SS, Mohanty S, Das A. Assessing community health workers' performance motivation: a mixed-methods approach on India's Accredited Social Health Activists (ASHA) programme. BMJ Open. 2012;2(5):e001557.
22. Tripathy JP, Goel S, Kumar AMV. Measuring and understanding motivation among community health

workers in rural health facilities in India: a mixed method study. BMC Health Serv Res. 2016;16:366.
23. World Health Organization. WHO guideline on health policy and system support to optimize community health worker programmes. Geneva: World Health Organization; 2018. Available at: https://www.who.int/publications/i/item/9789241550369. Accessed on 29 May 2026.
24. Kok MC, Dieleman M, Taegtmeyer M, Broerse JEW, Kane SS, Ormel H, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review. Health Policy Plan. 2015;30(9):1207-27.
25. World Health Organization. Standards for improving quality of maternal and newborn care in health facilities. Geneva: World Health Organization; 2016. Available at: https://www.who.int/publications/i/item/9789241511216. Accessed on 29 May 2026.

Cite this article as: Dixit S, Valarmathi. C, Trivedi D, Gurupada K. P., Thirunavukarasu U, Kumar P. ASHA-community health nurse collaboration for improving maternal and child health outcomes in India: a narrative review. Int J Community Med Public Health 2026;13:5494-504.