Appendix 1. Programme theories represented by Context (C) – Mechanism (M) – Outcome (O) Configurations
These configurations were theorised based on the first wave of data collection and tested with the data collected in the second wave of data collection. Mechanisms are broken down into Resources and Reasoning. Arrows indicate how a set of CMO is hypothesised to impact the context of another set of CMO.

Programme theories: In the community

Gender Roles / Postpartum family planning
- Women are not empowered to take decisions about the healthcare that they receive (Context)
- Acceptance from women will depend on the presence and/or agreement of the husband (Reasoning)
- Women may or may not accept the care offered within a healthcare setting (Outcome)
- There is widespread fear of the effects of FP amongst the community including men and wider family and community leaders. Women who wish to limit family size need to be given "permission" from the community before they will seek contraception (Context)
- Interventions (Resource) that work to motivate community leaders to become involved (Reasoning)
- Are more likely to be successful (Outcome)

Social capital – Influence of the community
- Women and their families rely on informal sources of information about health and socio-cultural traditions. They have little formal education on health and have not perceived a need for PPC. Community level events amongst women (and their families) create social cohesion and social capital – Shared decision making context (Context)
- Promoting PPC in community events (Resource) – influencing behaviours are adopted (Reasoning)
- The information is more likely to generate changes in belief systems of individuals and communities (Outcome)
- Critical mass of women within the community who believe in/attend for are more aware of an accepted healthcare strategy (e.g. facility based delivery, ANC, PPC) so that it becomes the community "norm" (Context)
- Women lessen informally through their interactions with other women (Resource) and are motivated to behave similar ways (Reasoning)
- All women in the community will then accept the healthcare strategy (Outcome)
- Change in the belief system about the value of PPC amongst communities with a strong shared bond creates a context for change amongst women and their families (Context)
- Information disseminated to other family members about benefits of PPC (Resource) may or may not generate a response such as "treat" in the key decision maker (Reasoning)
- May or may not positively affect or negatively alter gender relations within the family, which will determine the degree of support that women receive for attending the health facility for PPC (Outcome)

Barriers to healthcare access
- Women and their families do not believe that routine PPC is needed if they do not feel unwell – they face significant socio-cultural barriers to attending for care + fears about poor treatment from HF (Context)
- The risk-benefit analysis decision making across the whole family unit, of not attending for PPC is weighted against the structural barriers to reaching (Reasoning) generated in response to the information provided through health promotion activities (Resource 1), including those related to care for their babies (e.g. vaccinations) when care is integrated (Resource 2)
- Will determine whether women attend or not for care (Outcome)
- User fees and/or other financial costs of visiting HF (Context)
- Is a major influence on whether interventions are effective (Resource) in motivating attendance for PPC (Reasoning)
- Women may or may not go to the HF to receive PPC (Outcome)
Programme theories: The link between the community and the health facility

### Trust between the community and CHWs
- Acceptance of PPC depends on the trust and relationship between the women and the formal healthcare system. Women and their families rely on the community and traditional healthcare system for healthcare.
- CHWs who come from the same community may be perceived as more trustworthy and provide a bridge to the formal healthcare sector, breaking down fears (Reasoning). CHWs deliver the information to the community or visit women and provide information (Resource).
- May influence their view on benefits of PPC differently from other source of advice (Outcome).
- CHWs are members of the community (Context).
- Educational activities directed at the CHWs (Resource) increase their belief in their own role in improving the improvement of PPC (Reasoning).
- They develop mutual trust (Outcome).

### CHWs as a bridge to the health facility
- Mutual trust between communities and their CHWs (Context).
- Provides a means of bridging between the community and the healthcare sector (Resource) removing some barriers to attending for healthcare such as fears of the formal healthcare sector (Reasoning).
- Influences attitudes to whether or not they attend the HF (Outcome).

### Motivation of CHWs
- CHWs value their elevated role in the community (Context).
- Different elements of support provided for CHWs in terms of infrastructure, training and supportive supervision, access – financial and non – (Resource) reinforce their position and build allegiances with the formal healthcare system and motivate CHWs (Reasoning).
- To provide effective bridging function (Outcome).

Programme theories: In the health facility

### Motivation of health facility workers
- The system is set up in a way that HFWs have tight boundaries to their responsibilities for delivering care, often compounded by separate managerial and financing arrangements for maternal and child healthcare, vaccination and FP (Context).
- Organisational change and training (Resource) that supports shared responsibilities may enable service providers (Reasoning).
- To take on additional roles as part of usual care (Outcome).
- The wider policy context and health facility culture for delivering a change to PPC, particularly from a district level perspective is important (Context).
- In determining whether HCWs at the frontline are accountable for (Resource) and therefore motivated (Reasoning).
- To deliver the PPC interventions (Outcome).
- Different programmes abound within the HF and HCWs do not have a strong belief that this one will remain (Context).
- Therefore their desire and motivation (Reasoning) to make changes (Resource).
- To deliver new patterns of PPC maybe lacking (Outcome).

### Organisation of the health facility
- The health facility context can be both facilitative and inhibitory to providing opportunistic PPC (Context).
- If the organisation at health facility level is structured in a way so that no additional steps for mothers or HFWs (Reasoning) are required for receiving PPC to both mother and child (Resource).
- Then this change is likely to be delivered as planned (Outcome).
- Increasing demand for PPC through community interventions creates additional pressures on the health facility limiting opportunity to deliver opportunistic care (Context).
- Even when capability and motivation are facilitated (Resource) – Poorer experiences for women (Reasoning).
- May have negative consequences at community level (Outcome).
Programme theories: From the health facility towards sustainability

Factors with an impact on sustainability

- HFWs are not motivated or skilled to deliver PPC (Context)
- Interventions increasing the quality of PPC provision (Resource) lead to more positive experiences for women (Reasoning)
- Which further embeds the changed culture of attending care through a shared community experience (Outcome)

- District facilities are responsible for training and supervision (Context)
- Interventions that facilitate key members of the district to champion PPC (Resource) and develop a positive culture (Reasoning)
- Influence motivation of HCWs at the frontline (Outcome)

- Monitoring systems place emphasis on processes (Context)
- Understanding the consequences of action or gaps in knowledge that have been associated with poorer postpartum outcomes through coaching and supervision (Resource), help HFWs (Reasoning)
- To respond appropriately when they identify problems (Outcome)

- HFWs do not feel motivated or empowered to provide emergency or routine PPC due to a range of health system constraints including lack of training and knowledge (Context)
- Training (Resource) may increase self-efficacy and enable the HCWs to obtain more job satisfaction (Reasoning)
- Through delivery of comprehensive PPC, which in turn are more likely to become embedded (Outcome)
- However training (Resource) may also be perceived as an opportunity for financial reward (Reasoning)
- And not lead to improved behaviours and outcomes (Outcome)

Leadership for the change in the organisation of PPC from district and local facility levels is a key factor (Context)
- In whether HFWs feel enabled (Reasoning) to make the changes to PPC (Resource)
- And whether these changes remain embedded in usual practice (Outcome)

Programme theory: Embeddedness

The impact that MOMI intervention exert, and their potential sustainability depends on the strength with which they have been implemented and whether this has led to an embedded institutional shift at district level or above leading to their continuation independently from the project team.