

Supplemental Table 1: Components of the theory of change and some examples (list not exhaustive of the examples of activities)

	Examples
Assumptions	Providers are engaged with the project and willing to document participants record using electronic platform (PNMS) CHW are engaged in the program and willing to collect weekly and/or monthly follow up data as required for the project Data collectors are engaged and willing to collect data at different time points
Rationale	Evidence from systematic reviews that mhealth can be effective in improving maternal health services Evidence form the literature indicate cost is an impeding factor in accessing MNCH in Africa Contextual evidence illustrates difficult in accessing and reaching health facilities during emergency
Intervention	Training of health care providers on using PNMS Training of CHW on using the mobile app Training of women on using the mobile app to communicate with providers Women are provided e-vouchers and mobile phones Awareness campaigns on family planning, ANC, skilled birth delivery, exclusive breastfeeding conducted by intervention coordinators Women received reminder text messages, Transporters trained on using GIS for geo navigation and geo-localization Women received and can listen to uploaded family planning messages embedded within the app
Indicators	Number of providers trained on using PNMS Number of CHW trained Number of ANC visits Number of skilled birth delivery Number of participants enrolled Number provided e-vouchers and mobile phones etc.
Intermediate outcomes	Increase awareness on family planning, Change in providers attitude in using electronic platforms and mhealth
Long term outcomes	Improve access and utilization to emergency services in the intervention areas Improve quality of care delivery in the intervention area Reduce maternal mortality deaths in the intervention area
Impact	Improve access and utilization to emergency services in the district Improve quality of care delivery in the district Reduce maternal mortality deaths in the district