# **Additional file 2: Theories and concepts used in the design of the Targeted Client Communication (TCC) intervention**

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| Theories/  concepts | Components | Theoretical assumptions | Theories/concepts guided the development of the TCC content to be sent via SMS |
| Model of Actionable Feedback (MAF) | Timeliness | The recipient has to receive the SMS at an appropriate time to be able to act upon it | * All the SMSes were sent within one week of the scheduled visits (intended behavioral action),to empower women to attend the Antenatal Care visit in a timely manner * States the exact date of the scheduled/missed antenatal care visit in the SMS * Use the most recent information, i.e. in the MCH eRegistry * The eRegistry was scheduled to send the SMS at 17:00 hour, informants recommended this time |
| Individualization | The recipient will understand the content of the SMS and be able to act upon it, if it is specific for her | * Tailored to individuals based on gestational age, selected risk-conditions(anemia, hypertension, diabetes, and fetal growth restriction), and selected risk factors (age, BMI, previous hypertension, diabetes, and anemia) to the risk-conditions risk factor messages will only be sent the woman with specific risk factor/s * States the recipient’s name in a direct speech * Directed to the recipient as an individual, not generic contents |
| Non-punitive | The recipient will change behavior if the instructions are communicated with positive reinforcement | * Positive tone; not dictating from top down; states mutual agreement * States that the woman participated in the decision (e.g. phrase like “*as agreed*” was included in the messages), empowering * Does not imply negative consequences in future ANC services if they fail to attend. * Serious losses, e.g. death of the baby, were not mentioned |
| Customizable | The recipient will find the information in the SMS meaningful and acceptable if it is customized for her | * Each recipient receives the messages pertaining her conditions * Any dynamic variable (gestational age, risk-status, risk-factors) are customized based on the routinely collected data at each visit * Name of the recipients and name of the clinic as a sender |
| Behavioral science concepts | Enhanced Active Choice | The recipient will be empowered to make consciously informed decisions/ informed health choices and commit to them if they are provided with benefits of adopting the instructions, and consequences of not. | * Provides information about the benefits of timely attendance and consequences of not attending timely. Does not state fear-inducing or loss-framed content to avoid side-effects (pregnancy worries) |
| Calling by name | The recipient’s name is preferable in communication | * First name of a recipient is included * Culturally acceptable greeting |
| Using “trusted sources” as a sender | The recipient will welcome and accept the SMS if it is signed off by a trusted sources | * The name of the recipient’s primary healthcare clinic is included as a sender |

BMI: Body Mass Index; SMS: Short Text Message; TCC: Targeted Client Communication