| **Criterion** | **Example of text related to this criterion** |  |
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| **Criterion #1**  **Intervention Characteristics:** Intervention/Program source (From CFIR, Damschroder, 2009)2  **Explanation/Example:**  Is the intervention/program externally or internally developed? An intervention/program may be internally developed as a good idea, a solution to a problem, or other grass roots effort, or may be developed by an external entity (such as a foundation or a NGO). Interventions or programs that arise internally from the populations who will be impacted are sometimes more sustainable than externally developed programs dependent on external funding. The perceived legitimacy of the source may also influence implementation. | Together with the Bangladesh Rural Advancement Committee (BRAC), Mitra and Associates, Ecuadorian and Bangladeshi physicians, nurse-midwives, and KMC experts, the study team adapted KMC so that it can be feasibly implemented as a community-based intervention (CKMC).  (*This seems to imply that the intervention was externally developed)* | Good |
| **Criterion #2**  **Intervention Characteristics:** A description of why the intervention was hypothesized to have an impact on the outcome, according to theory. (From CReDECI, Mohler 2012; also mentioned in Michie, 2009)3,4  **Explanation/Example:**  The theoretical basis of the intervention should be clearly stated. This includes the theory on which the intervention is founded as well as, if available, empirical evidence from studies in different settings or countries. For example, "The implementation was based on Rogers’ Diffusion of Innovation theory, which posits 5 factors of innovation that influence a decision to adopt or reject an innovation: relative advantage, compatibility, complexity or simplicity, trialability, observability. A similar intervention, also based on Rogers’ Diffusion of Innovation theory, was successfully implemented in other countries." | Kangaroo mother care (KMC) is a method whereby the hospital-born stabilized LBW newborn is placed in skin-to-skin (STS) contact on the mother’s breast to promote thermal regulation, breastfeeding, and maternal–infant bonding. Traditional KMC reduces the incidence of morbidity but not mortality in LBW infants, because it is generally applied to clinically stabilized newborns and most neonatal mortality occurs in the first 2 days of life before stabilization. A single adequately designed study found a 43% (not statistically significant) lower infant mortality rate (IMR) associated with traditional KMC. Two small African studies of early (as soon as possible after birth) KMC in hospitals with little neonatal intensive care capacity reported reduced mortality within 24 hours of birth and before discharge; however, important differences in study group characteristics were not controlled in analysis.  *(Describes the rational for why the intervention should work (Thermoregulation, breast feeding, bonding) and describes prior data from similar studies)* | Poor / None |
| **Criterion #3**  **Intervention Characteristics:**  Rationale for the aim/essential functions of the intervention/program’s components, including the evidence whether the components are appropriate for achieving this goal.  This differs from the need to articulate the theory behind the intervention in that the theory posits the general principles (such as Rogers Diffusion of Innovation) while this item is about specific components of the intervention and the effects of the component on specific targets. (From CReDECI, Mohler, 2012; also mentioned in Michie, 2009)3,4 | No text was found. | Poor / None |
| **Criterion #4**  **Outer Setting:** External policies and incentives (From CFIR, Damschroder, 2009)2  **Explanation/Example:**  How does the health service, intervention, or program relate to country and global health goals? Is the program part of a larger strategy? If so how is it strategically aligned? A country's health policies may influence the implementation of a particular intervention or program. | Not explicitly stated. | Poor / None |
| **Criterion #5**  **Intervention Characteristics:**  Detailed description of the intervention/program (From WIDER as described in Michie, 2009)4  **The detailed description should include:**  a. Characteristics of those delivering the intervention/program (such as a nurse or lay health worker)  b. Characteristics of the recipients  c. The setting  d. The mode of delivery (such as face-to-face)  e. The intensity of the intervention/program (such as the contact time with participants)  f. The duration (such as the number of sessions and their spacing interval over a given period) | A physician who had participated in the pilot study trained 12 BRAC  supervisors and, along with 1 supervisor, trained all 63 community nutrition workers and their 25 NNP supervisors serving the intervention group in 5 groups of 6 to 22 people during a 2-month period.  A detailed table of characteristics of the recipients is included in Table 1.  Bangladesh has a population of 140 000 000 administratively divided into  6 divisions that, combined, contain 64 districts and 496 subdistricts called upazilas, each of which has a capitol city. Each study subdistrict contains 8 to 14 unions, and each union contains 5 to 25 villages. The sample includes the 42 unions that participated in the NNP, all that are supervised by our study partner BRAC in the Dhaka and Sylhet divisions. Dhaka and Sylhet divisions are located in northern Bangladesh, where NMR was 5.2% and 8.2% and IMR was 11.5% and 16.2%, the highest in the nation, when the study was designed.  Although not stated, it is implied that the intervention is developed face-to-face.  No text was found.  No text was found. | Fair  Good  Good  Fair  Poor / None  Poor / None |
| g. Adherence or fidelity to delivery protocols | The training and intervention delivery processes that were used in the pilot study were only partially transferred to the full trial, with unplanned substitution of experienced trainers with individuals who were not trainers, less frequent contact between community workers and mothers in the last month of pregnancy, and unplanned emphasis on CKMC for LBW infants.  The nested qualitative study found that >35% of CKMC women were erroneously taught that STS was to be provided to LBW or preterm infants rather than to all infants, and only 30% were correctly taught to hold all  infants STS. Less than 40% of CKMC mothers were taught to provide CKMC to infants who were ill, and >25% were erroneously taught to breastfeed on schedule (not on demand). Women had numerous views  about the number of hours and days they should provide STS, indicating that they received variable and frequently incorrect messages from the community workers and supervisors. | Good |
| **Criterion #6**  **Intervention Characteristics:**  Costs of the intervention and costs associated with implementing the intervention (From CFIR, Damschroder, 2009; CReDECI, Mohler, 2012)2,3  **Explanation/Example:**  The cost of the intervention and implementation can influence the adoption and sustainability; interventions maybe more difficult to sustain if they were supported as part of a research study. | All participating community workers received $7.50 a month.  *(Only cost data identified)* | Poor / None |
| **Criterion #7**  **Population needs**  (From CFIR, Damschroder, 2009)2  **Explanation/Example:**  The extent to which population needs, as well as barriers and facilitators to meet those needs, are accurately known and prioritized. This could include population-based data on causes of morbidity and mortality, political or cultural barriers or facilitators, and/or more locally focused data about local needs, barriers or facilitators. | No text was found. | Poor / None |
| **Criterion #8**  **Process of implementation:** Description of facilitators or barriers which have influenced the intervention or program’s implementation (see #10) revealed by a process assessment.  In contrast to the criterion #7 above which assesses barriers and facilitators as inputs to developing the intervention strategy, this criterion assesses the actual barriers and facilitators identified during and after the implementation.  (From CReDECI, Mohler, 2012; also mentioned in Michie, 2009)3,4  **Explanation/Example:**  "The attitudes of the nursing home managers turned out to be an important factor supporting or impeding the success of the intervention's implementation. The more the managers agreed with the interventions’ aim, the better the nursing staff felt supported." | Field visits confirmed that some of those who were employed to conduct the CKMC training believed that CKMC was intended for small infants.  Thus, some intervention group mothers may not have provided CKMC because they were mistakenly taught that CKMC is for small infants. CKMC implementation and effect depend on both the quality of CKMC training and the mother’s behavior modification, making it difficult to know whether the intervention does not have effect in larger, more mature infants or whether the uptake was suboptimal as a result of insufficient training or poor maternal adherence.  *(This indicates that insufficiently trained CKMC trainers decreased the effectiveness of the intervention)* | Good |
| **Criterion #9**  **Description of materials:** Description of all materials or tools used for the implementation  (From CReDECI, Mohler, 2012)3  **Explanation/Example:**  "The primary enablers of behaviour change were paid community-based health workers, who were recruited from the local community based on 12 years or more of education,  proficient communication and reasoning skills, commitment towards community work, and references of community stakeholders. They received a combination of classroombased and apprentice ship-based field training over 7 days on knowledge, attitudes, and practices related to essential newborn care within the community, behaviour change management, and trust-building. After training, suitable candidates were closely mentored and supervised by a regional programme supervisor (n=4) responsible for 6–7 trainees, for an additional week before final selection was made." | No text was found. | Poor / None |
| **Criterion #10**  **Process of Implementation:** Description of an assessment of the implementation process  (From CReDECI, Mohler 2012)3  **Explanation/Example:**  Process assessment is a prerequisite for determining the success of the intervention's implementation and should be an integral part of an assessment of the intervention’s effect. For example, "To gain insight into the dissemination and the delivery of the intervention and to draw conclusions about potential barriers and facilitators to implementing the intervention in other settings, data on the implementation process were collected alongside the randomized-controlled trial. Therefore, we assessed the quality of delivery of the interventional components (observed by members of the research team not involved in the delivery of the intervention) and the adherence to study protocol (number and type of deviations from the protocol, using a pilot-tested standardized form). We also analyzed barriers and facilitators for the delivery of intervention’s components (focus group interviews with intervention participants)." | The training and intervention delivery processes that were used in the pilot study were only partially transferred to the full trial, with unplanned substitution of experienced trainers with individuals who were not trainers, less frequent contact between community workers and mothers in the last month of pregnancy, and unplanned emphasis on CKMC for LBW infants.  The nested qualitative study found that >35% of CKMC women were erroneously taught that STS was to be provided to LBW or preterm infants rather than to all infants, and only 30% were correctly taught to hold all  infants STS. Less than 40% of CKMC mothers were taught to provide CKMC to infants who were ill, and >25% were erroneously taught to breastfeed on schedule (not on demand). Women had numerous views  about the number of hours and days they should provide STS, indicating that they received variable and frequently incorrect messages from the community workers and supervisors.  *(Indicates implementation was not as successful as planned)* | Good |