| **Criterion** | **Example of text related to this criterion** | **Rating** |
| --- | --- | --- |
| **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. | “Baylor College of Medicine Children’s Foundation Malawi, in collaboration with the Malawi Ministry of Health (MOH), initiated a pilot community-based intervention”  “Prior to the programme intervention, consultative meetings were conducted with community leaders. CHWs conducted daily education sessions in the health centres and held ongoing sensitization meetings in the community. The main focus of education was promoting the utilization of PMTCT, EID and paediatric HIV treatment services.” | 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." | “The intervention was designed to create a new paradigm in PMTCT service delivery and end the compartmentalization of services into distinct PMTCT, EID and paediatric HIV subunits. Tingathe CHWs ensured longitudinal care throughout the full PMTCT cascade, starting with diagnosis of the mother at antenatal care (ANC) and ending with final diagnosis and treatment of the infant.” | Fair |
| **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 | “Programs in high burden countries, including Malawi, often subdivide aspects of this cascade into separate PMTCT (vertical transmission), antiretroviral therapy (ART), early infant diagnosis (EID) and paediatric HIV programs, frequently with different providers and service locations for each component. Resulting poor utilization of available services, lack of coordination between providers and high rates of loss to follow-up have led to persistent high infection rates in exposed children. It has been shown that, even with highly efficacious combination antiretroviral interventions, only marginal reductions in childhood HIV infections can be achieved without improved retention of pregnant mothers and infants within the PMTCT cascade of services.  Task shifting with the use of community health workers (CHWs) has been suggested as one strategy to address these challenges within resource-limited settings. (REFs)” | Fair |
| **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. | “In 2011, UNAIDS announced a call to eliminate new paediatric HIV infections among children by 2015.” | Fair |
| **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)  g. Adherence or fidelity to delivery protocols | “Criterion for CHW selection included living within the community, completion of primary schooling and ability to read and write in English and Chichewa, ability to ride a bicycle and HIV-infected or affected. Both men and women were recruited.”  “Pregnant women living with HIV and their exposed infants”  “The Tingathe-PMTCT pilot programme took place in Area 25 and Kawale, two large peri-urban communities in Lilongwe. The estimated population is 310,000 people, with 15,000 deliveries/year, 2000 HIV-exposed infants delivered/year and 12% adult HIV prevalence.”  Face to face. “CHWs ensured that mother-infant pairs received all necessary PMTCT services. They followed their clients at their homes and at health centres, from initial diagnosis up until confirmation of definitive HIV-uninfected status after cessation of breastfeeding or successful ART initiation for HIV-infected infants.”  Varies  “From initial diagnosis up until confirmation of definitive HIV-uninfected status after cessation of breastfeeding or successful ART initiation for HIV-infected infants.”  “All PMTCT clinical care was provided in accordance with MOH and WHO guidelines.” | Good  Fair  Good  Good  Fair  Good  Poor / None |
| **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. | Not reported. | 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. | “We used three sources for preintervention data. The first was a published report of maternal and infant utilization of PMTCT, EID and paediatric HIV services at five sites (including our two intervention sites) within Lilongwe between 2004 and 2008 (REF). This source contained preintervention comparison data for PMTCT prophylaxis, infant PCRs and ART initiation for HIV-infected infants. For information not included in this report, we used the 2004 Malawi Demographic and Health Survey, which provided national statistics for numbers of women accessing ANC, location of delivery and infant feeding choice after birth.” | Good |
| **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." | “The strongest predictors of successful completion of the PMTCT cascade were enrolment in the third trimester (OR, 0.37; 95% CI, 0.24 to 0.58), having newly diagnosed HIV infection (OR, 0.50; 95% CI, 0.33 to 0.75) and having a partner who was not involved (OR, 0.43; 95% CI,  0.24 to 0.78).” | 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." | Community Health Worker curriculum:  1. Basics of HIV/AIDS  2. PMTCT: what are the steps and how to promote utilization of services  3. Caring for the exposed infant: importance of early infant diagnosis and cotrimoxazole prophylaxis  4. Diagnosing HIV infection  5. Nutrition: exclusive breast feeding, complementary feeding, and malnutrition screening  6. Children with HIV: identification, care and treatment  7. Anti-retroviral therapy and adherence counseling  8. Reducing stigma and discrimination  9. Counseling and community mobilization and education skills  10. Conducting the patient home visit” | Good |
| **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)." | “An individual patient mastercard was used to facilitate patient case management, and a patient register was used to monitor CHW activities. The mother-infant mastercard was opened on programme entry, updated after every visit and key data entered into registers weekly. Information from registers was entered into a Microsoft Access database bimonthly.” | Fair |