

# Using implementation research to improve the acceptability of an adapted emergency medical referral protocol in two districts in Ghana

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Research Question: How can project implementors leverage implementation research to improve the acceptability of adapted emergency medical referral forms and better integrate standardized, quality emergency obstetric services into a continuum of care?

## BACKGROUND

While Ghana has made significant strides toward reducing maternal and neonatal mortality, rates remain high. The ACERS project, operating in two districts in Ghana, was designed to address the “Three Delays” of maternal mortality by integrating emergency obstetric services into a cross-cutting continuum of care. [1] This paper examines two ACERS interventions related to the delay in reaching care: 1) adaptation of emergency referral forms to better document referral time indicators to identify quality improvement opportunities, and 2) harmonization of patient outcome dissemination mechanisms between Ghana Health Service (GHS) and National Ambulance Service (NAS) to improve out-patient care management at the community level. ACERS leveraged the implementation research RE-AIM framework to conduct mid-course intervention adaptations informed by baseline and on-going assessments. [2]

## DESCRIPTION OF ORGANIZATION

Columbia University’s sidHARTE - Strengthening Emergency Systems Program partners with governments, universities, and local organizations to ensure timely, integrated, adaptive emergency health systems strengthening throughout an effectively linked continuum of care. It promotes timely, data-driven solutions in resource-limited settings that are grounded in implementation research.

## FIGURES

Figure 1: ACERS Adapted Ghana Health Service Emergency Referral Form

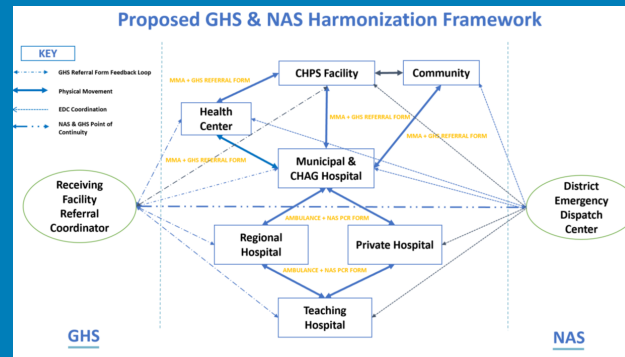


Figure 2: ACERS Proposed harmonization framework between GHS and NAS to standardize referral coordination and facilitate patient outcome dissemination

## METHODS

Baseline qualitative surveys were distributed to 31 health personnel. Two mid-course workshops captured feedback from 110 GHS and NAS administrators and healthcare providers. Following the pilot of the referral interventions, facility appraisal visits will be conducted to measure key RE-AIM Acceptability indicators, such as completeness of finished forms.

Qualitative assessments identified challenges in referral documentation, advance referral notification, and provision of patient outcome feedback. The referral protocol and harmonization framework were iteratively refined in response to healthcare provider input. Appraisal visits are still ongoing, so the final impact of the adaptations on implementation Acceptability cannot yet be measured.

## DISCUSSION

Successful application of an embedded Acceptability lens for mid-course adaptations of the referral form and harmonization framework underlines the necessity of Implementation Research (IR) to ensure sustainable project impact.

## REFERENCES

[1] Thaddeus, S., & Maine, D. (1994). Too far to walk: maternal mortality in context. *Social science & medicine* (1982), 38(8), 1091–1110. [https://doi.org/10.1016/0277-9536\(94\)90226-7](https://doi.org/10.1016/0277-9536(94)90226-7)  
 [2] Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *Am J Public Health.* (1999) 89:1322–7. doi: 10.2105/AJPH.89.9.1322