**MONITORING AND EVALUATION MODEL FOR BICYCLE AMBULANCE PROJECTS**

**About this tool:** This tool is to be used for effective Bicycle Ambulance project implementation because it helps the user to develop a model of the project implementation process. It also contributes to learning and development by extracting lessons and best practices for design of future projects and providing adequate data for evaluation of program impact.

**The Elements of the M&E Model**

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| **This M&E model is designed specifically to monitor the following 6 project areas:**  |
| * design and inputs
* the implementation process
* outputs
* impacts
* sustainability
* replicability
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| **Three factors which are outside the control of the project but still relevant when considering outcomes and replicability are:** |
| * The economic and political context within which the project is implemented
* The institutional context
* The social and economic characteristics of the local communities affected by the projects
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**Defining Indicators**

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| A project must define a set of measurable indicators for each stage of the project cycle. The purpose of indicators is to obtain accurate and consistent estimates of project performance and the changes and impacts produced. Consequently, this requires that all concepts are sufficiently and precisely defined to be measured and that it is possible to collect the required information. |
| **Good indicators should:**  |
| * Measure the key elements they are intended to study or describe
* Be clearly defined and unambiguous so that different people will give the same rating or value
* Numerical or quantifiable (where possible) so that changes can be measured
* Be simple and economical to use
* Be easy to interpret and understand
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| **Project design and inputs indicators****These include the resources put into the project such as:** |
| * Financial inputs; funds raised, fund allocations
* Physical inputs; raw materials, transport services used
* Human inputs; time committed by ambulance manufacturers and other stakeholders
* Technical inputs; skills and knowledge utilised by all stakeholders
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| **Project implementation indicators****Indicators at this stage are meant to monitor the way in which the resources are used to achieve the project objectives. Examples include:** |
| * The institutional arrangements and delivery systems through which the inputs will be utilised
* Participatory consultation with communities on project planning; qualitative understanding of community and client viewpoints
* Methodology for construction and distribution of assets
* The training, capacity building and methodologies used for introducing bicycle ambulances e.g. training of apprentices
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| **Project outputs indicators****Indicators under this measure the outputs produced versus the inputs:**  |
| * Number of ambulances produced
* Number of ambulances distributed
* Number of apprentices trained
* Durability of ambulances
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| **Project impacts indicators****Project impacts can either be short-term or long-term:** |
| * Number of patients transported
* Average distance patient transported
* Reduction in time taken to receive health services
* Increase in number of individuals able to access health care
* Improved health
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| **Project sustainability and replicability indicators****Indicators include:** |
| * The strengthening of community organisations capable of contributing to the operations and maintenance of the project
* The capacity of the community to manage the project on-going
* The provision and efficient utilisation of community labour in routine maintenance
* Access to the project and its benefits by all sectors of the target population.
* Continued contribution of outside groups (both government and NGOs) to their agreed responsibilities for operations and maintenance.
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| **Indicators for analysing the economic and political context****Key areas to monitor include:** |
| * The major travel and transport patterns and needs of the community
* The major economic activities of the communities and how effectively current transport systems respond to these needs
* The changes in the local economy, availability of raw materials, loans for agricultural activities, employment patterns, etc.
* Government policies and laws affecting the transport sector
* The new development agencies being introduced in the area and the impact of their work on the project
* The strength of existing health transport services
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| **Indicators for analysing the institutional context****Possible indicators include:** |
| * The frequency with which each agency visits the community or meets with community representatives
* Do agencies use participatory approaches (for example: holding some meetings in the community rather than requiring the community to visit their office, do they encourage the community to express their views)?
* The degree of compliance with the agreed commitments
* Do the agencies have staff speaking the local languages and do they have female staff?
* Coordination and communication among the agencies
* Has there been any political or administrative change (such as elections, staff reorganisation) which has affected the operation of any agencies?
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| **Indicators of the social and economic characteristics of the communities affected by****the projects****Projects with similar designs and resources may operate differently and have different impacts in different communities due to the social and economic characteristics of each community. Some of the indicators or variables to be taken into consideration in the analysis include:** |
| * The tribal and/or ethnic characteristics of the community
* The degree of tribal/ethnic diversity or cohesion
* Household composition and particularly the proportion of single-parent households due to war, disease (particularly HIV/AIDS) or migration
* The economic dynamism of the community, which includes: the level of male and female unemployment or under-employment, average household income, trends in prices and income from primary products, etc.
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**Checklist for the main stages of the design and implementation of a monitoring or evaluation study**

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| **Key questions to answer:** |
| * Why is the study being conducted?
* Who are the clients?
* What is the problem or what information is needed?
* What decisions or actions will be taken?
* When are the results needed?
* Who are the stakeholders and what are their views and priorities?
* Conduct exploratory study (if necessary) to understand the problem.
* What type of study is required (input monitoring, process monitoring, output monitoring, etc.)?
* What is the time-frame and when are the results needed?
* Can the study be conducted at one point in time or is it necessary to collect information at different points in time?
* Exactly what information is needed and how will it be used (collecting information to understand a problem, feedback on problems, evaluating the impact of a project, assessing the accessibility to different population groups)?
* How precise must the information be?
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| **Designing the study - Define the group (or groups) to be studied and select a sample which will cover all of the groups:** |
| * List of information to be collected
* Select the data collection methods
* Preferably use a multi-method approach
* Design and test the data collection instruments
* Prepare an interview guide (if required)
* Include budget and time to return to the field (if necessary) once the draft report has been discussed
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| **Conducting the study:** |
| * Select the supervisors and interviewers and organisation of training (if required)
* Conduct the data collection, including quality checks.
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| **Data analysis, report preparation and dissemination:** |
| * Conduct the data analysis
* Include consistency check to assess the validity of the information
* Prepare a draft report
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| **How to ensure the study will be used:** |
| * Discuss the draft report with stakeholders and obtain feedback
* Include consultations with the community if necessary
* Develop a dissemination strategy to ensure the report will reach and will be understood by all stakeholders and possibly the general public
* Combine written reports with workshops or briefings
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**The M&E Tool**

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| **Type of Indicator** | **Indicator** | **Quantitative or Qualitative** | **Definition** | **Means of Verification** | **Collection Frequency and Reporting Criteria** |
| **Project design and inputs indicators** | Total Cost of Project | Quantitative | Total value of financial inputs | Finance Records |  End of Project |
|        | Cost of materials used | Quantitative |  Value of materials used for the construction of ambulances | Finance Records |  End of Project |
| Clients and their responsibilities | Quantitative | Who are the end users of the ambulances | Log Books  | End of Project |
| Quantities of materials used  | Quantitative |  Quantities of materials used | Interviews |  End of Project |
| Types of services required e.g. Transport | Quantitative |  Details of any paid or unpaid services required during the project | Finance Records |  End of Project |
| Cost of services required | Quantitative |  Cost of services required |  Finance Records |  End of Project |
| Human hours required  | Quantitative |  Amount of commitment required by project staff | Interviews  |  End of Project |
| Skills and knowledge required | Qualitative |  Capabilities and competencies required by project staff | Interviews |  End of Project |
| Maintenance for the Bicycle Ambulance | Qualitative | How frequently was maintenance required and what specifically was needed? | HBC interviews |  End of Project |
| How were maintenance funds obtained | Qualitative | How were maintenance funds obtained | HBC Interviews  |  End of Project |
| Terrain | Qualitative | How was the terrain where the ambulance operated? Hilly/flat/sandy/muddy/paved etc. | HBC Interview  |  End of Project |
| **Project implementation indicators** | Project methodology |  Qualitative |  Project methodology |  As per proposal |  End of Project |
|  | Project Adaptations and Evolution | Qualitative | Project Adaptations and Evolution | End of Project Evaluation |  End of Project |
| **Project outputs indicators** | Number of ambulances produced |  Quantitative |  Number of ambulances produced |  End of Project Evaluation |  End of Project |
|             | Number of ambulances distributed |  Quantitative |  Number of ambulances distributed |  End of Project Evaluation |  End of Project |
| Average distance patient transported  |  Quantitative | Km travelled  | Log books | Baseline, M&E 1 and M&E 2 |
| Time spent for referrals  |  Quantitative |  Duration of travel on ambulance | Log Books | Baseline, M&E 1 and M&E 2 |
| Running costs |  Quantitative |  Maintenance cost per km |  Log Books and HBC Interview |  M&E 1 and M&E 2 |
| Lifespan |  Quantitative |  Duration of useable life (months) |  Health worker interviews |   M&E 1 and M&E 2 |
| Availability |  Quantitative |  Time that the ambulance is not under repair |  Log Books |   M&E 1 and M&E 2 |
| Utilisation |  Quantitative |  Available time that the ambulance is actually used |  Log Books |   M&E 1 and M&E 2 |
| Reasons for Use | Qualitative | Why was the ambulance used? Patient transfer/moving medical supplies/ other | Health worker interviews and log book |  M&E 1 and M&E 2 |
| Outcome for Patient | Qualitative | Medical problem dealt with | Health worker interviews | M&E 1 and M&E 2 |
| Design Appropriateness |  Qualitative |  Feedback from users |  Health worker interviews |  M&E 1 and M&E 2 |
| Needs Satisfaction |  Quantitative |  Feedback from operator | Health worker interviews |  M&E 1 and M&E 2 |
| Number of apprentices trained | Quantitative  |  Number of apprentices trained |  End of Project Evaluation |  End of Project |
| Cost of Maintenance | Quantitative | Cost of Maintenance | Health worker interviews |  M&E 1 and M&E 2 |
| Durability of ambulances |  Qualitative |  Durability of ambulances |  End of Project Evaluation |  End of Project |
| **Project impacts indicators** | Number of patients transported |  Quantitative |  Number of patients transported | Log Book |  M&E 1 and M&E 2 |
|     | Reduction in time taken to receive health services |  Quantitative |  Reduction in time taken to receive health services |  Client Interview |  M&E 1 and M&E 2 |
| Increase in number of individuals able to access health care |  Qualitative | Increase in number of individuals able to access health care |  Health worker interviews |  M&E 1 and M&E 2 |
| Improved health |  Quantitative |  Improved health | Health worker interviews |   |
| **Project sustainability and replicability indicators** | Community organisations strengthened |  Qualitative |  Community organisations strengthened |  End of Project Evaluation |  End of Project |
|    | Community capacity |  Qualitative |  Community capacity |  End of Project Evaluation |   End of Project |
| Access to the project and its benefits |  Qualitative |  Access to the project and its benefits |  End of Project Evaluation |   End of Project |